

**THE RISE OF PRIVATE HIGHER
EDUCATION IN POLAND:
POLICIES, MARKETS AND
STRATEGIES**

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THE RISE OF PRIVATE HIGHER EDUCATION IN POLAND: POLICIES, MARKETS AND STRATEGIES

PROEFSCHRIFT

ter verkrijging van

de graad van doctor aan de Universiteit Twente,

op gezag van de rector magnificus,

prof.dr. W.H.M. Zijm,

volgens besluit van het College voor Promoties

in het openbaar te verdedigen

op woensdag 11 oktober 2006 om 15.00 uur

door

Wojciech Duczmal

geboren op 15 Maart 1978

te Oława

Dit proefschrift is goedgekeurd door de promotor en assistent promotor:

Prof. Dr. J. Enders

Dr. B.W.A. Jongbloed

To my wife, son and parents

Overige leden van de promotiecommissie:

Prof. P.G. Altbach

Prof. Dr. P.B. Boorsma

Prof. Dr.hab. M. Kwiek

Prof. Dr. M.J.M. Vermeulen

Prof. Dr. M.C. van der Wende

Preface

Finally, after more than four years, this study on marketization and privatization in Polish higher education has come to an end. Like most of the other PhD students at CHEPS I feel both relief and somehow sadness. Relief – because completing this PhD thesis relieves me from an ever-present workload that constantly competed with other tasks and responsibilities I had in my official job and in my private life.. Sadness – because it brings an end to the enriching and often wonderful time spent in the company of the people from CHEPS.

The last four years I have been in CHEPS off and on to work on this PhD thesis. During these stays abroad for four months every year I experienced both moments of joy and sorrow. Being a fresh husband and now a father, I often felt sorry to leave my wife and family, but on the other hand, it provided a great opportunity to pursue a doctoral study at one of the most prestigious centres of higher education research. Although it was sometimes difficult to combine the teaching and administrating I do at my university here in Poland with the research for my PhD, this book proves that it can be done.

The subject for this thesis was a relatively easy one for me to choose. Since 1990, Poland has been witnessing a rapid growth of the private higher education sector, combined with a liberalization of the higher education market. Working in a private university myself, I found a topic that combines higher education marketization policies and private higher education an interesting one and worthy of further exploration. The understanding of the phenomenon of private higher education in Poland, in my view, could be improved by the application of economic principles to university behaviour. It might take away some of the prejudices that many people have when it comes to private higher education. This provided me the rationale for a doing an exploratory analysis of the relationships between the strategies of higher education institutions – the private ones in particular – and the injection of market elements into the Polish higher education system.

This preface provides me with the opportunity to thank all those without whom finishing this work would not have been possible. First of all, I would like to thank my supervisors: Ben Jongbloed and Jürgen Enders. Ben, thank you for the many hours you spent on reading and discussing my text and for giving me wonderful guidance during the writing of this PhD. I would like also to thank your family, which helped me feel like at home during my stay in the

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Finally, a special word of thanks goes to my wife, family and friends in Poland. Kate – thank you for your continuous support and motivation during the entire four years of writing this big book, especially in the moments of doubts. Thank you for our son – Paul, who brought a wonderful addition to our life and made me finish my PhD on time although he is still too young to realize that. A final word of gratitude goes to my parents, who always believed in me and showed me the right way in my life.

Wojciech Duczmal
Opole, August 2006.

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Part I Setting the stage

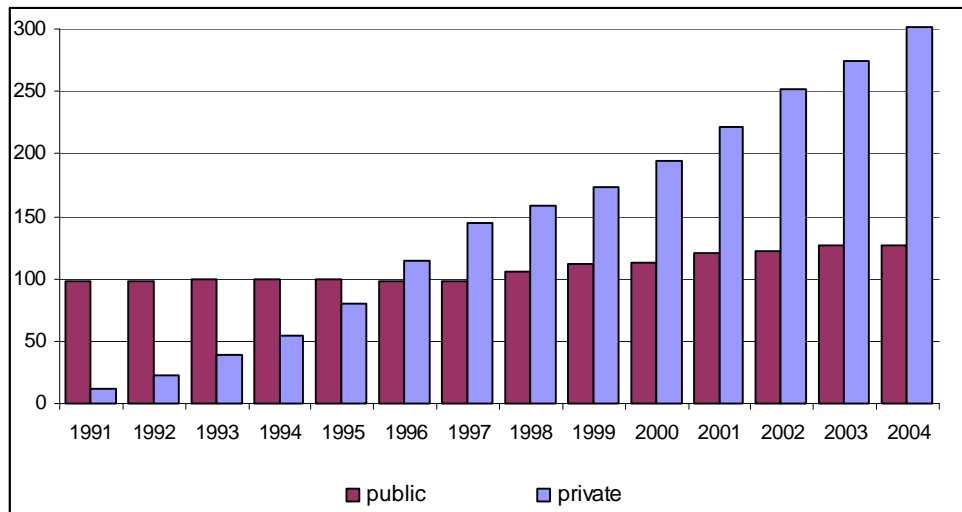
1 Research questions

1.1 Introduction

The rationale for this study lies in our wish to understand the rapid rise of private higher education in Poland and the effects this has had on the dynamics of the Polish higher education system as a whole. After 1989, the year when Poland was freed of its communist ties, Polish higher education, like other sectors in the economy, went through a rapid period of reform that may be characterized by the words liberalisation, marketisation or privatisation.

For higher education, the policy stance changed from a centralized, state-steered approach to a more decentralized, market-competitive one. The new law on higher education, passed by parliament in 1990, provided the basis for a number of far-reaching changes in the system. Major innovations included the devolution of authority from the government to institutions, allowing private providers of higher education to establish themselves alongside the incumbent public providers, and the introduction of tuition fees.

Figure 1.1: Number of higher education institutions in Poland: Public and non-public; 1991-2004



Source: own analysis based on Yearbook of Higher Education (1991 – 2004)

One of the most visible, indeed radical results was the emergence of a huge private higher education sector in Poland¹. This led to the most extensive system of private higher education in Europe. The number of private providers rose from 3 in 1990 to 280 in 2004, with more than half a million students (see figure 1.1). At the time of writing, students attending institutions run by private providers account for 28% of all students. As illustrated by the table below, in other CEE countries like Romania, Moldova and Estonia, private higher education has also become an important part of the higher education sector.

Table 1.1: Private higher education institutions in Central and Eastern Europe

Country	Number of institutions	Number of students
Armenia	69	20 000
Bulgaria	14	33 000
Croatia	14	4 200
Czech Republic	27	8 000
Estonia	22	12 600
Hungary	36	53 300
Latvia	17	25 900
Lithuania	13	7 260
Poland	195	471 400
Romania	70	138 000
Slovak Republic	1	560
Slovenia	17	3 100

Source: Scott, P. (2000) Ten years on and looking ahead. In: *Review of the transformations of higher education in Central and Eastern Europe*. Bucharest: CEPES Studies on Higher Education

The public universities also adapted quickly to the new climate. Besides their supply of places that were free of charge, they started to engage in the supply of full-fee- paying study places to students on part-time and weekend programs. The result was that the number of paying students in both private and public higher education institutions now exceeds the number of non-paying students (figure 1.2).

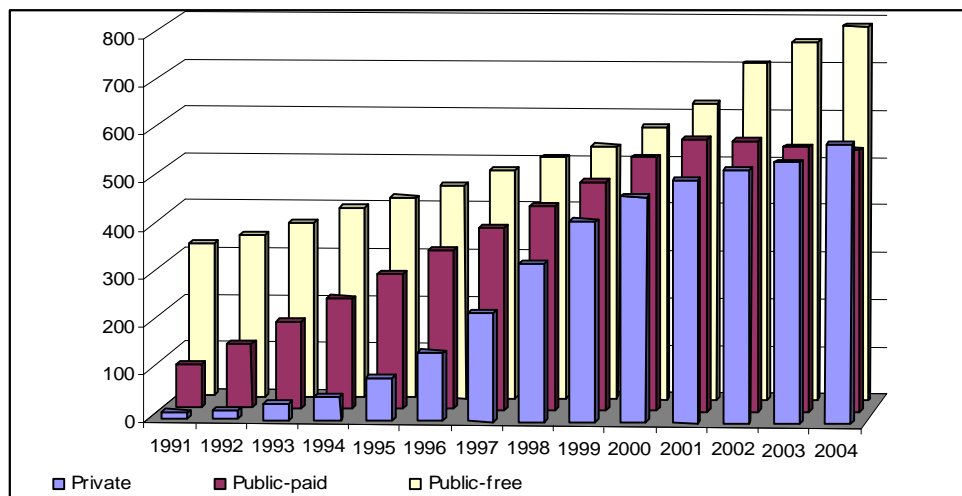
All of this may be said to be part of an on-going process of privatisation in higher education. This is a trend that may be observed world-wide and relates to a process in which universities and colleges (both public and private) take on characteristics of, or operational norms associated with private entities (Johnstone, 2002). The term privatisation has several distinct dimensions which will be discussed further on in this thesis. For the moment we merely state that privatisation has proponents as well as opponents. Proponents claim inter alia

¹ The data in this chapter are derived from the 'Strategy of Development in Polish Higher Education to the year 2010'; the strategy was elaborated by the Polish Ministry of Education and Sport in 2003. The strategy is available online: <http://menis.gov.pl/szk-wyz/strategia/strategia.html>.

that privatisation makes universities more responsive to the needs of students, while generating efficiencies. Opponents claim that privatisation distorts and subverts the public mission of universities, turning universities into profit-oriented businesses that charge high fees and offer a narrow range of programs, often of sub-standard quality.

The emergence of a large private sector and the market-oriented behaviour of public higher education institutions is therefore an exciting object of study. The topic has already been studied by higher education researchers (Altbach, 1999; Geiger, 1986, 1988a, 1988b; Levy, 1986a, 1986b, 1992, 2002;), but many of these are from the Anglo-Saxon world and have studied the phenomenon in their own higher education systems, often outside Central or Eastern Europe. It would seem an appropriate moment to analyse the privatisation movement in one of the biggest Eastern European countries, Poland, where the phenomenon has been studied relatively rarely.

Figure 1.2: Number of higher education students in Poland in fee-paying and non-paying forms of studies, 1991-2004 (students in thousands)



Source: own analysis based on Yearbook of Higher Education (1991 - 2004)

With Polish private higher education institutions seeking a greater legitimacy there is a need for empirical analyses of the relationships between key policy variables and the performance of the private higher education sector. Since one of the dominant themes in Polish higher education over the last period has been marketization, there is a need for in-depth analysis of the outcomes of such a policy. This will improve our understanding of whether universities compete, how they compete, and the consequences of that competition for university input, output, and production and price decisions. Attention is paid in particular to the

public policies affecting the private higher education providers. This regulatory framework includes issues of competition, conditions under which state funding is received, institutional autonomy and regulations affecting the transparency of the system, the freedom of students to choose their educational provider and their ability to receive state scholarships.

This thesis also focuses on the behaviour of individual higher education institutions. Our goal is not to restrict the analysis to the system (or macro-) level, but to discover more details about the behaviour of individual providers of higher education. The empirical work therefore focuses in particular on the type of programs offered by private providers, the fees charged, and the characteristics of the student population (geographical backgrounds, parents' occupation and education, etc.) in private institutions – all of this in comparison with the public higher education institutions. In this sense the study provides a wealth of material on the Polish HE system. Despite the immense growth in private sector enrolments in Poland, the private higher education sector is still poorly understood and equally poorly analyzed. Reliable data about the sector in Poland are very scarce (Kwiek, 2003) and public policy for private higher education in Poland has hardly been subjected to research (Reisz, 2003).

1.2 Rationale for this study

This study focuses on the influence of the higher education institutional framework on the structure and performance of Polish higher education institutions. It places special emphasis on the development of the private higher education institutions, of which there are many nowadays.

The year 1989 marked a watershed in the political and economic development of the Central European countries. After the roundtable meeting of January and February 1989, when the ruling socialist party met with the independent workers' union Solidarity, the transition from a centrally planned economy to a political democracy and a market economy truly began. Against the backdrop of an economic downturn, soaring unemployment and inflation of up to 700 %, a set of economic reforms was introduced. Like other Central European countries, Poland implemented a series of far-reaching economic reforms, which included the privatization of a number of state-owned companies, elimination of regulations and barriers to entry for new private enterprises in almost all sectors of the economy, and the introduction of competitive mechanisms into the economy. At the national level, the power of the Communist Party was removed and new, independent regulatory governmental bodies were established.

It is in this context that we study the reforms in higher education. Over the past two decades one of the dominant themes in higher education policy throughout

the world has been the trend toward the introduction of market-type mechanisms in higher education systems (see: Jongbloed et al., 2004; Dill 1997, Jongbloed 2003; Williams, 1995; Weimer & Vining, 1999). The global trend towards marketization is associated with deregulation, decentralization, and privatization. Marketization is believed to encourage an effective use of resources, enhance efficiency, contribute to the country's national productivity, and increase diversity and responsiveness in the higher education sector (Stein, 2001; Dill, 1997; Dill, Teixeira 2000). In combination with the cutbacks in government funding, it reduces the higher education institutions' financial dependence on government, and opens the market to new private providers. Competitive funding and deregulation shift the decision authority and responsibility from the state to the organizational level of universities and colleges and students, which is believed to contribute to the motivation of academics and students and increase their attention to efficiency.

The literature associates the reasons for the emergence of markets in higher education with two phenomena (Jones, 1992; Steier, 2003): First, the reduction of the state budget implied a pressure to decrease public spending on higher education. Most governments were politically inhibited from increasing taxes. As a result, higher education providers entered a period of financial stringency and were increasingly asked to justify their operations and account for the use of public resources to various external bodies. The second phenomenon is associated with the popularity of market ideologies in general. Governments' activities in both democratic and post-socialist countries involved privatization (the selling of publicly-owned industries and assets) and the encouragement of individual responsibility and private initiative. Many governments, by introducing market-oriented practices, sought to decrease the cost of higher education and enhance the quality of the services provided by their public universities and colleges.

The development of market-type approaches in policy-making for the public sector increased the interest in private higher education institutions. Researchers, scholars and policy-makers were increasingly discussing such topics as the roles and functions of the private higher education sector. The new higher education policies were based on a declining faith in the government's abilities to steer and regulate. Levy (2002, p.2) suggests that, whereas in the second and third quarters of the twentieth century reliance was placed on public institutions, the contemporary trend is otherwise. However, while the literature advances numerous rationales for the introduction of market-type mechanisms, outside the United States it provides little information about the performance of the emerging private higher education sector and the challenges the private sector poses to the public system. As Levy states: 'While interest and debate surround the roles that private higher education plays, analysis lags far behind...When it comes to private higher education and the roles it plays, the gap is large between self-serving or ill-informed views and more complex reality... functions of higher education are most poorly understood in countries where private higher

education has recently entered to the market and often gained dominance, which is much of the world. A few decades ago, private higher education was absent in most countries, while today it captures a major or fast-increasing portion of enrolments in Eastern and Central Europe, the Middle East and both North and Sub-Saharan Africa, East and South Asia, and Latin America.' (Levy, 2002, p.2).

Studies of the relations between state policies and the development of private higher education have been conducted mainly in the United States, where private education has a long, rich history and, in addition, the structure of the private sector is diversified (Zumeta, 1996; 1997; Geiger, 1996;). A few studies have addressed other regions across the world where a sizeable private higher education sector has emerged: Latin America, Asia, et cetera (Levy, 1986b, 1999, 2002; Geiger 1988a, 1988b, 1991; Altbach 1998, 1989). Although outside the United States there are countries with equally heterogeneous private higher education sectors, the environment in which private higher education operates in the United States is unusual. Its history and contribution has led to a strong position and strengthened the legitimacy of private higher education. Private, non-profit institutions are incorporated into the higher education system. State scholarships and loan schemes are available to students in the private sector. Various grants from the state are also channelled to private schools. In Europe, in particular in the Central European countries like Poland, the situation of the private sectors is quite different.

After the Second World War, Poland was late to start private higher education. Before 1989 there was only one private higher education institution, established in 1918. This was the Catholic University of Lublin, funded by the Church and the people of Poland. Before the Second World War there was a significant private higher education sector in Poland, consisting of several economic and artistic institutions. However, the pre-War higher education system was a relatively elite one with low enrolment rates and did not reflect structure of society. The great majority of students came from higher income families, usually the aristocracy and upper classes. The cost of the study prevented less wealthy students from attending higher education. The system of state support for students was underdeveloped, consisting mainly of student loans. Therefore, while the system experienced broad academic and institutional freedom and enjoyed prestige, it was not perceived as something that contributed to the nation's wealth and development. In contrast, compared to the pre-War elite higher education system, the composition of the student body during the socialist period was more diversified. The Preferential Points System for admittance to higher education granted additional points according to social origin in both the higher education entrance exams and the tuition-free system, increasing the participation of students from lower socio-economic backgrounds (Sorensen, 1997). In general, public higher education claimed to serve the broad public interest. The norms of quality, governance, curricula and provision of higher education at the beginning

of 1990s were strongly in favour of state higher education. After 1989, private higher education developed rapidly. After the fall of communism, the share of students in private higher education in many CEE countries jumped from zero to 30 percent in fifteen years. As Levy (2005) emphasizes, the novelty and suddenness can lead to shock and lack of comprehension and often to many quick stereotypes. As it is unplanned, the rise of private education is especially problematic where populations have been nurtured on cultures of central planning, like Poland.

In Poland, as in many other CEE countries, the rapid reforms and the global transformations in higher education have intensified the discussion about private higher education. The rapid rise of new private institutions soon invited questions about quality and legitimacy. And despite the fact that, unlike the existing public institutions, these new private colleges and universities are untainted by the communist past and are part of the broader transformation process from a planned state economy to a market oriented one, they still continue to grapple with social acceptability (Kwiek, 2003; Slantcheva 2005).

Moreover, factors that have contributed to weak legitimacy also stem from external contexts, given how much the liberated CEE countries tended to look to their western counterparts for norms. First, Western Europe in 1989 was a region where the classic university model remained the dominant, high status norm and that model was public, with little private higher education. Second, and still today, Western Europe has been the world's major region that remains closest to public monopoly, with very little significant private higher education. More than 95 percent of students in Western Europe attend public institutions. Outside the U.S., the "non-profit private" has not been a widespread or a well-understood concept in higher education, where "private" is often associated with "business", suggesting an "intrusion" into higher education. So the norms in Europe were at odds with many things the privates would represent and undertake.

However, after more than a decade of providing higher education in parallel public and private institutions, the situation in CEE countries is changing. The newness and suddenness are slowly abating. Enrolment growth is stabilizing. Society is no longer unfamiliar with private education and for some student groups private schools situated in small towns have significantly increased their opportunities. All of this has led society and to some extent government to a greater acceptance of the private sector, understanding that private institutions 'serve a particular constituency or end well, even if they do not attempt to serve all' (Levy, 2005).

In general, given this shift towards market and private activity in higher education, illustrated by the enormous enrolment growth particularly in the private sector in Poland, and on the other hand the lack of understanding of this

phenomenon, with little theoretical attention given to the effects of the application of economic principles to university behaviour, there is a need for a comprehensive analysis of the relationships between the performance of higher education institutions – the private ones in particular – and the injection of market elements into the higher education system.

We believe that this lack of understanding may affect the evaluations by opinion-leaders and policy-makers in the field of higher education. The aim of the research reported in this thesis is to advance the analysis of private higher education's roles and functions in society, to learn about the impact of market forces in higher education, as well as to provide the theoretical and practical tools for the improvement of policy-making on higher education. The next section further elaborates some specific research questions.

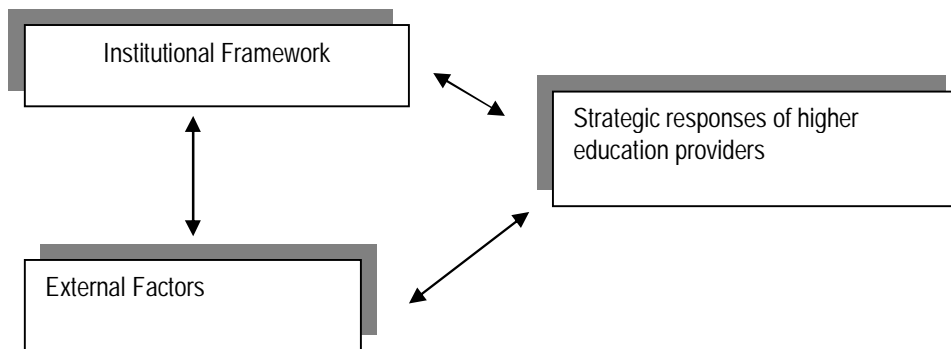
1.3 Research objectives

As Kwiek (2003) suggests, in Poland the interrelations between the post-1989 transition process and global transformations in mainstream educational policies are strong. Transition involved structural reforms that were part of broad social and economic reforms, politically supported, and carried out rapidly compared to other developed countries. Global changes, in the sense of a long-term shift in state/market relationships, often involved an increasing role for the private sector. All this has resulted in a series of very drastic changes in the funding, organization and regulation of higher education in Poland, and has reshaped the structure of the higher education sector. Privatization is one of the most important elements. Our intention in this study is to analyze the influence of the state regulatory framework on the performance of private and public higher education providers. Given the lack of research on private higher education in Poland, the objective of this study is as follows:

How have marketization policies and other institutional reforms in Polish higher education, together with other rapid changes in the external conditions, impacted the behaviour of both public and private providers of higher education in the period 1989-2004?

To address this central research question we have constructed a research design. We will use neo-institutional theory (North, 1996; Ostrom 1999) and industry analysis (Porter, 1998; Dill, 1997) to construct an analytical framework and identify the key concepts for exploring the link between the structure and performance of the higher education system and the regulatory policy framework. The linkages, derived from our theoretical framework, are shown in figure 1.3:

Figure 1.3: Analytical framework



Neo-institutional theory states that the behaviour of organizations (their strategies, or strategic responses) is to a large extent determined by the available resources and technology in the economy (the external factors) and the regulatory framework (the institutional arrangements). While the arrows shown here are bi-directional, we treat the emergence and performance of the higher education providers as the phenomenon to be analyzed – the dependent variable. For the purpose of this research, the institutional framework is treated as an independent variable. It is understood as the regulatory framework that consists of laws, regulations, and the enforcement mechanisms that affect the higher education providers' 'room to manoeuvre'.

Industrial economics suggests that the performance of organizations is also influenced by elements of the industrial structure, such as supplier and buyer power, the degree of rivalry between providers, the presence of substitute products. Industry analysis provides a systematic framework for determining and interpreting how shifts in the external forces will affect the nature of competition and the structure of an industry. This will also hold true for providers of higher education.

Having defined our research objective as the analysis of the impact of market-type mechanisms and privatization in higher education on the operation of higher education institutions, we first need to define the concepts of marketization and privatization policies. To do so, the higher education literature offers a rich array of theoretical perspectives to frame the investigation of state policies on higher education (Volkwein, 1987; Zumeta 1992, 1996, 1997; Ostrom, 1999; Johnstone, Bain, 2001; Jongbloed, 2003), with market failures being the main rationale for government intervention in higher education. Using the market failure concept, we identify the main ingredients of market-type mechanisms.

The central topic of our study is the performance of the higher education sector. Performance is understood in terms of the outcomes of the universities' operations and the strategies that public as well as private education providers have chosen to achieve these outcomes. Where are they based; what courses do they offer; what fees do they charge; and what type of students do they serve? As Levy (2002) suggests, private higher education's functions and roles seem to emerge as if they are mostly unanticipated. There does not seem to be a broad preconception or systemic design underlying the emergence of the private sector in higher education. Governments rarely launch private higher education sectors by specifying what functions and roles private higher education should play. On the contrary, roles have more often emerged from a generally uncoordinated multiplicity of choices and constraints. However, one could argue that both the private and the public higher education institutions develop and evolve in directions, and engage in activities which fit within the institutional arrangements and external factors.

The central concepts and research objects having been introduced, it is time to turn to the research questions. These are derived from the general research question introduced above. We specify three research questions:

- 1. In the context of an analysis of the institutional framework affecting the behaviour of providers of higher education, how can we define privatization and marketization in higher education, and what can we learn from the research literature about the impact those processes have on the development of higher education?***
- 2. What are the changes in the institutional framework in Polish higher education and what are the changes in external conditions that have shaped the emergence of the private higher education sector in Poland after 1989? To what extent can we speak of a privatization of higher education?***
- 3. In response to the changes in the institutional framework and external conditions that took place after 1989, what strategies did public and private higher education providers in Poland use to position themselves on the higher education market?***

The first question asks about the theories that are available to address the central phenomenon of our study, that is: privatization in higher education. The second and third questions look at the development of the Polish higher education system after 1989. Question 2 addresses the system level. Based on the theoretical framework, which combines elements from institutional theory and industry analysis, we analyze the developments in the Polish higher education sector. Question 3 goes into greater detail about the specific responses of individual higher education providers to the changing conditions and opportunities in their environment. We shall take account of the location of private institutions, the fees they charge, the students they enrol, the programs they offer and the types of degrees they supply. The responses of public institutions will also be analysed. In other words, the strategies of the providers will be identified and analyzed. To

do so we employ a number of hypotheses that state what type of reaction may be expected given a particular set of circumstances. Since the post-1989 period may be broken down into two very distinctive sub-periods, we perform the analysis for the period 1989-1997 and 1997-2004.

1.4 Plan of the book

This study consists of five parts: introduction, theory, operationalization, empirical analysis and reflections.

After having presented the rationale for conducting this study in this (first) chapter, the first part of this study provides a brief introduction to the role and functions of private providers. In this part we present a taxonomic and analytic description of the functions of private higher education.

The second part of this thesis provides the answer to the first research question. We review the theories and relevant literature on both the state and the market forces in higher education, focusing on the relationships between the higher education institutional framework and their effect on an organizations' behaviour. We approach the topic from a theoretical perspective, using the "microeconomic theory of non-profit enterprises" developed by Estelle James and William Massy (James, 1986; Massy, 1996, 2003). We also make use of industrial economics to analyze the changes in the external conditions and their influence on the performance of higher education providers. To address the Polish situation, we formulate several expectations, or hypotheses, concerning the competitive standing of private higher education providers and the situation of the higher education system in general.

The third part of the thesis consists of our research design and the operationalization of the variables that feature in our hypotheses. The building blocks of the model are laid out by means of their constituent variables, along with their operationalization. We also introduce the sample of public and private providers for which the third research question is answered.

The fourth part of the study presents the results of our empirical research. Here, our hypotheses are addressed to provide an answer to the second and third research question of this study. The empirical results are presented in five chapters. After presenting a brief history of Polish higher education, the four chapters that follow each address a specific building block in our analytical model: institutional arrangements, external conditions and strategies of private, respectively public providers of higher education. The analysis focuses on two periods: the first phase of the transformation process addresses the years between 1989 and 1997. The second period covers the years 1998-2004.

In the last part of the study we summarize the answers to the research questions and discuss the hypotheses. This chapter also contains some reflections on the topic of privatisation, what we can learn from a study like this, and some recommendations for designing marketization policies in higher education.

2 Private higher education: types and functions

2.1 Introduction

In this chapter we will set the stage of our analysis of the emergence of a large private higher education sector in Poland by surveying the literature on the role and functions of private higher education in general. Clearly, this role is very much affected by the room given by the state to a private sector in higher education. This policy stance is one of the central issues in this chapter as it is believed also to determine the performance of the private – as well as the public – higher education institutions.

2.2 Functions of private higher education

The work of Jones (1992), Geiger (1986, 1991), Levy (1986b) Altbach (1998) and Zumeta (1992; 1996; 1997) on private higher education has paid a great deal of attention to the issue of state higher education policies affecting private higher education, and hence to the rationales and functions of private higher education within the given state policy.

Geiger (1986) has developed the taxonomic and analytic description of the functions of private higher education. He identified three roles and functions of private higher education.

First is the 'mass private sector'. This type may be found in Brazil, Japan and Romania). Here, a mass private higher education sector has emerged in response to an increase in demand for higher education and the inability of public higher education to accommodate this demand. For most private education systems with majority or even large minority enrolments in the private sector, this quantitatively dominant cause is caused by excess demand. Levy suggests that in this category the private providers are usually very specialized, vocationally oriented and usually non-elite institutions. The public institutions that co-exist with these privates will often be restricted in size and often selective in their admission policies. This situation, together with the open entry system in private institutions, may lead to conflicts of massification (Reisz, 2003) with regard to the quality of private education. Such private institutions are called demand-compensating; their main function is *more* higher education. The non-elite option is a characteristic of developing rather than developed countries, where the nations lack the resources to fund the expansion of the public higher education sector facing increasing demand based on ideologies of educational development, middle-class emergence and growth in population. According to Levy (1986b),

government subsidies in developing countries usually make up less than ten percent of the total income of private providers, and is often closer to zero. Usually there is also little state aid to students in the private sector institutions, either in the form of merit- or means-based scholarships or student loans. In general, the state will allow privates to enter the market, but it leaves private institutions to themselves.

The second discernible function of private higher education is to provide *different* education than that which is made available by the public providers. Where the states' plural public sector has allowed for specialist institutions alongside larger, public ones and where cultural and/or religious groupings insist upon separate and equal educational institutions under their own control, those groups seek to encourage private initiatives. Thus, the private higher education sector provides different education under the auspices of various cultural-ethnic or religious interests. The obvious example is a religious-based provider. The religious type was most important in the early growth period of private higher education, as in the United States, Latin America, Belgium and the Netherlands. Private institutions in these societies reflect the 'deep-seated cultural preferences of religious communities' (Geiger, 1986). However, for these religious and cultural communities, private education would be less worthy if it were not fully equivalent to education offered by the state. For that reason, in Belgium and in the Netherlands, the governments in the 1970s came under pressure to adopt the policy of financing virtually the entire cost of operating these independent universities. This did not mean that private education sacrificed autonomy. One can say that it exists "on an equal footing with those run by the state ... (with) function of providing culturally different higher education" (Geiger, 1986). The government usually fully incorporates private institutions into the higher education system in terms of state subsidies, state scholarships for students, safeguarding quality, and gathering and disseminating information about private institutions.

The third function of private higher education identified by Geiger is to provide *better* education. This kind of private higher education can emerge under several sets of circumstances. In Latin America (e.g. Mexico and Venezuela) the quest for better higher education is a response to the politicization and decline in quality of the public higher education sector. Students from middle-class families sought private, politically safe schools, which often prepare students directly for a career in private industry. The private education there is usually qualitatively superior in terms of academic faculty and program offerings, and provides a different composition of students in terms of their social backgrounds. The other kind of high quality, private higher education occurs where students face severe competition to enrol in the best public higher education institutions. In the face of this competition, they turn to private providers. Such high quality, private higher education institutions exist in Japan and France. In this case, private institutions

are also partly financed by the state and incorporated into higher education systems.

In the case of the United States, Geiger (1986) distinguishes the following categories: The private research universities, which fulfill the 'better' function; liberal arts colleges as 'different'; and large urban universities as 'more' higher education. Geiger (1986) emphasizes that "the amount and kind of higher education provided by government is the single most important determinant of the size and character of private higher education in each national system".

2.3 Another classification by Geiger

Alongside the classification of the rationales and functions of private higher education as presented in the previous section, Geiger (1986) proposed a similar classification of structural types of higher education systems, where he took account of the patterns of public – private differentiation. According to Geiger there are three basic types of mixed public-private systems, related to the state provision of public higher education: mass private sectors with restricted public sectors, parallel public and private sectors, and comprehensive public sectors with peripheral private sectors. Each represents a distinctive configuration of private higher education.

Mass private sectors are present in countries where the provision of public higher education has been limited to relatively few institutions of high academic standing. The excess demand for higher education in these systems has been absorbed through the rapid expansion of private institutions. In most mass private sectors the majority of students are enrolled in private institutions. However, it is not size that matters but the character of the private education that is decisive. The distinctive feature of mass private sectors is the accommodation of a large portion of students in low-cost, low-selective, and usually low-quality institutions. Following Geiger, "hierarchy is a prominent and inherent feature of mass private sectors. The peak institutions are usually the flagship national universities, but below the peaks institutional stratification depends upon much more than public or private status". However, other older, mature public universities and colleges usually enjoy greater prestige and are usually perceived as being of higher quality than private providers.

Private higher education institutions in mass private sectors are heavily dependent on tuition fees, demand-absorbing, and market-oriented. They usually offer few study programs, vocationally oriented, in high demand study fields, with mostly part-time academic staff and low tuition fees. The state plays a decisive role in the emergence and existence of such mass private sectors. States take such a course for a time in order to meet the demand for higher education,

which the public sector is not able to absorb. In the majority of mass private sectors, the state does not provide any subsidies for private colleges and universities. Following Geiger, mass private sectors face a cruel policy dilemma. Because private institutions can draw only upon the tuition fees of their not-too-affluent students, they will be limited in the extent, depth and intensity of the education offered. Only in Japan has the government provided subsidies for private providers, which strengthened the private colleges and universities. Therefore, the policy problem for mass private sectors is whether low-quality higher education is preferable to no higher education for large number of students, mostly from lower socioeconomic backgrounds. The response of government to the proliferation of low quality private higher education has generally been extensive regulation of the content and method of instruction in an effort to uphold minimum standards, usually with the introduction of state accreditation. Governments also attempt to rein-in the proliferation of new private higher education by introducing more strict requirements for opening private institutions.

In order to have *parallel* private and public sectors, three conditions are required: (1) the existence of legitimate cultural groups whose interests are represented in the government; (2) a single, high national standard for university degrees; and (3) extensive government subsidies for private institutions in order to equalize conditions with the public sector. In general, in order to provide equal access to higher education for cultural or religious subgroups and to maintain high academic standards, the state decides to provide extensive subsidies for institutions originally funded by these groups. Usually, the reliance upon government support has a tendency to make private providers less dependent and sensitive to the cultural or religious groups that established the institutions. Moreover, as Geiger points out, the result has often been a reduction of the autonomy of private institutions and a loss of freedom to innovate and, finally, the non-distinctiveness of the system. But in most cases private universities and colleges have more opportunities and choices about how to position themselves on the market and compete successfully with public institutions. Systems that could be included here are the Netherlands, Belgium or Chile.

The third sector identified by Geiger is called a *peripheral* private sector. Peripheral private sectors emerge where public sectors are designed to fulfill all of the recognized demand for higher education. Private institutions are tolerated, but all the government's support for higher education is concentrated on a comprehensive public sector, leaving peripheral private institutions to finance themselves. This is the case for the higher education systems in Germany, France, Sweden and the UK. These financial restrictions, in terms of lack of state support, have two consequences: private institutions tend to be closely associated with sponsoring groups or specific student segments, and are thus particularly responsive to the needs of those sponsors or students; and second, private

providers are unable to compete academically with the public sector institutions. Privates usually focus on the selected student niches and enrol only a very small percentage of all students.

2.4 The Levy classification

Yet another framework that analyzes the private-public blends in higher education is provided by Levy (1986b). His typology involves the following questions:

1. Is a given system composed of just one sector or a dual private-public one? The structural question refers simply to whether the system has one sector – it is a '*Single*' system or it is a '*Dual*' system.
2. If it is a single system, what is the contribution of private funds to the public sector? If the institutions are fully publicly funded, it is a '*Statist*' pattern. If the providers have mixed public and private funding the system can be characterized as '*Public-Autonomous*'.
3. If it is dual, what is the size of each sector, and what is the contribution of private and public funds to each sector? The question is whether the sectors are financed in a similar way: if yes it is a '*Homogenized*' system; if not and sources of funds are different, then it is a '*Distinctive*' system.
4. If distinctive, what is the enrolment share in private higher education? Where the privates enrol less than half of the total enrolment the system is called '*Minority Private*'; if the share is more than a half it is '*Majority Private*'.

The boundaries of each category are somewhat arbitrary, but Levy notes that 'Although the center of gravity in Pattern I (Statist) is far removed from the center in Pattern II (Public-Autonomous), there is ambiguity on the border; the same applies to Pattern II and Pattern III (Homogenized). Especially as some systems evolve over time, questions may arise over which category is most appropriate. I am admittedly trying to order, even force, complex and far-flung data into simplifying categories. In any case, the main purpose is to provide the reader with an orienting guide to the major international policies and rationales, not to pinpoint every case within a finely tuned schema' (Levy, 1986b). We shall now provide a brief guide to the characteristics of the five policy patterns that relate to the various systems distinguished here.

The *Statist* pattern in many states can be characterized as a 90% - 90% operational guideline: at least 90% public enrolments and 90% of funding coming from the state. The government generally allocates funds directly to institutions, which have little autonomy in distributing the funds internally; the differences in autonomy differ greatly across the countries, though. Most nations in this pattern do not allow institutions to charge students tuition fees, while there is a variety of

state aid student programs, such as student loans, scholarships, etc. However, in many such systems, governments, facing budget cuts and debates about the private/public benefits from education, have started to introduce tuition fees, albeit at moderate levels. Many Western European countries fit this pattern. Private institutions, if any, still play a minor role in the statist higher education system.

The second pattern, the *Public-Autonomous* pattern, differs from the first one most importantly in terms of the state's higher education financing policy. On the one hand, public policy allowed institutions to remain comparatively autonomous in the internal allocation of funds, and on the other hand they introduced competitive mechanisms in the process of granting the public funds to providers. In the first case, government funds are not targeted to specific destinations, in the latter they are not given directly to the institution. Without going into detail, public funds for higher education are channelled through students attending particular institutions or are granted by various public agencies in a competitive manner. Examples of Public-Autonomous systems are Great Britain and Australia. Very few private higher education institutions are almost completely funded by the state, and are treated by the governments in the same way as their public counterparts.

In the third – *Homogenized* – dual sector system, equal state funding exists for each sector. The private and public sector are both funded in a very similar way. Historically, the private sector income came mainly from private sources, like tuition fees. However, the private sector was no longer able to perform its functions solely on the basis of private funds and successfully laid claim to public funding. The governments in countries like Belgium and the Netherlands perceived private higher education as socially valuable and distinctive from the public higher education system, thus decided 'not to see them perish due to insufficient funds' (Levy, 1986). While public subsidy often means strong public regulation, some public-private distinction has remained in systems like the one in Belgium. In this pattern, private enrolments usually account for more than ten percent but less than half of all students. Private institutions are perceived as high quality competitors to the public system and offer a wide array of study programs.

The fourth pattern presented by Levy, the *Distinctive* system, is characterized by dual sectors, where a smaller private sector is funded privately and a larger public sector receives subsidies from the state. Private enrolments are usually around ten to twenty percent of total, with funds coming entirely from non-government sources, mostly in the form of tuition fees. Most of the private institutions have been established fairly recently, only a few existed before the 20th century. This pattern is found in almost all Latin American nations (except Chile, Brazil, Cuba and Uruguay). The public sector remains almost completely

funded by the state subsidies, usually only deriving less than five percent of income from private sources. Most of the private institutions, especially the lower quality ones, are fully dependent on tuition fees. Only some private institutions, mostly prestigious ones, can attract other private sources, in particular from donations or endowments. Nevertheless, even the prestigious private institutions cover more than two-thirds of their costs from tuition fees. In this pattern we may see the large differences among private institutions. Some high quality private institutions attract the best academics and best students on the market and compete successfully with public institutions. On the other hand, most private institutions are perceived as low quality and non-selective. The reason underlying this is the political situation in these countries, and intense politicization within public sectors. Well-to-do families are willing to pay high tuition fees in order to prevent their children from attending public sector institutions. As Levy suggests, major policy debates about private-public financing often emerge in this pattern. One debate concerns the question whether the private sectors should receive any public funds. Usually the private sectors emphasize the need for such subsidies and emphasize the great public educational benefits and cost effectiveness. A second policy debate concerns tuition fees in the public sector. Most governments, policy-makers and economists are in favour, but fierce student opposition still prevails in almost all cases.

The last pattern – *majority* private – characterizes systems where the majority of enrolments are found in the private sector. This pattern is similar to the Geiger mass private higher education. The state either cannot or chooses not to expand the public sector in the face of a rapid growth of demand for higher education. In most systems of this type, private enrolments capture nearly three-quarters of total enrolments. Again, public institutions are funded almost exclusively by government, while by contrast, private institutions are funded mostly by private funds. Public institutions enrol the best students, most of them coming from higher socioeconomic classes, whereas the private sector offers lower quality study courses, mostly to students from lower socioeconomic backgrounds.

2.5 Policy postures towards private higher education

The relationship between state policies and the performance of private higher education was analysed by Zumeta (1992, 1996, 1997). Based on empirical work conducted in the United States, he presents interesting implications of different models of public policy postures toward private higher education and the implication of these policies for the development of the private sector.

His research refers to the following subsets of higher education policy: levels of state student support; absence/presence of direct state payments to independent private institutions; tax exemptions for private institutions as well as for students

paying fees in private institutions; policies regulating public higher education tuition fees; extent of private sector involvement in the state higher education planning; and absence/presence of duplication of private institution programs as a criterion in state review of public institutions' new study program proposals. Zumeta identified three possible policy postures towards private education:

laissez-faire
central-planning
market-competitive

(1) *Laissez-faire* is a policy stance where state policies ignore the private sector. In practice it means that little or no state funding is channelled either directly or indirectly to private education, there are no tax incentives for students to attend to private higher education, no state scholarships for students in the private sector, and private institutions are free to set their level of tuition fees. To summarize, the private sector is excluded from playing a meaningful role in state-wide higher education planning, the state collects only minimal information about independent private institutions, and the state regulation of private institutions is limited mostly to licensing institutions to operate and the enforcement of general state laws not specifically targeted at higher education. According to Zumeta, the consequences of a state's pursuit of *laissez-faire* policies vis-à-vis its private higher education sector leads either to a relatively small private sector (in terms of enrolment share), or the private sector enrolling a meaningful part of all students but usually in low quality institutions. Those private institutions lacking large pools of surplus candidates and substantial private endowments often represent low quality standards, narrow, vocationally-oriented curricula, insufficient infrastructure, and in some cases eventually loss of capacity to enrol students.

(2) The second policy posture, *central-planning*, is one where private institutions are treated by the state much like the public and play planned roles in the higher education system. It is a posture in which the divide between private and public higher education is rather blurred. The state funds for privates are usually allocated in the form of direct subsidies, as in the case of The Netherlands, where the state in the 1970s decided to offer financial support to a great part of education providers, so the majority of private institutions started to receive the same level of state financial support as their public peers. This pattern is at the opposite end of the conceptual continuum from the *laissez-faire* posture. In this pattern, private institutions are incorporated integrally in the extensive state planning and management of higher education, get their share of attention when new state initiatives affecting higher education are planned, and, most importantly, receive a substantial share of the state's higher education budget. The *central-planning* approach usually implies little distinction being made between private and public institutions. Private institutions, dependent on state

money and subject to various formal and informal state controls, are less likely to be capable of sustaining diversity of mission and approach, maintaining flexibility and rapid market responsiveness. Following Zumeta, they become quasi-public. In terms of enrolment share, the privates usually represent less than fifty percent of total enrolment - often it is closer to ten or twenty percent. Thanks to their non-tuition source of funding they are able to compete successfully with public institutions.

Finally, the third policy posture (3) *market-competitive*, is one in which public institutions operate in an environment deliberately designed to be like that faced by the privates. The state introduces market elements into the higher education market, seeks to create a competitive, open market structure, and stresses the importance of individual student choice by allocating “portable” student aid grants, which enable students to ‘vote with their feet’. In this pattern, state intervention is limited. Students from both private and public institutions qualify for student grants and tuition equalization grants are made available to students in private institutions. The state encourages private-public competition by gathering and disseminating comparative information about institutions’ characteristics and performance. In this model, in contrast to the previous one, public and private institutions are more autonomous in terms of academic issues. Following Zumeta, one might summarize the differences between these two models by observing that in the former the private institutions are treated by the state much like the public ones, while in the market-oriented model the public institutions face an environment deliberately designed to be like that faced by private institutions.

The work of Zumeta provides some useful ideas and concepts that may assist us in understanding the state higher education policies and the institutional framework that affects private higher education. We note, however, that many of the ideal types defined here will differ from real-life situations. The empirical reality of actual state policy configuration often displays many intermediate configurations.

2.6 Summary

To summarize the typologies presented in this chapter it is useful to look at the work of Jones (1992), who presents an analysis of the reasons invoked by the government for implementing market forces in higher education. He also shows the likely consequences for the performance and characteristics of a private higher education sector.

First, the government’s interest in private education is a result of the high and increasing cost of higher education, the increased demand for education, often

accompanied by economic recession. The introduction of some market elements in higher education, in particular in terms of allowing private providers to enter the market, is to substitute for government funds or substitute for further increases in public funding. Marketization is also considered as shifting a burden from taxpayers' shoulders, which corresponds to the belief that higher education brings private benefits to students as well as positive externalities for society at large. New or enlarged private institutions are necessary to enhance the educational opportunity at no public cost. Private institutions draw almost all their income from private sources, tuition being their largest source of revenue. The inability of the public sector to comply with increasing demand results in private education attracting a share of ten to more than fifty per cent of total enrolments. Where the government's priority is to boost access to higher education without an increase in public expenditure, the private institutions' functions are to provide more education. There is little room for elite private alternatives that target the high end of the market, because the quality of public universities is protected by limited access and selective entrance exams. On the other hand, in times of declining student demand, private institutions may go bankrupt or have to merge in order to survive. The state is predominantly interested in supporting the public sector, leaving privates to their own devices.

The second virtue of marketization as indicated by Jones relates to the efficiency argument. Governments will implement market mechanisms in the higher education market and allow privates to operate because private providers are thought to increase the responsiveness and efficiency in a predominantly publicly funded and ordered system. Private institutions are associated with competition and quasi- markets. The link between privatization and competition is often more psychological than economic. Recalling Jones (1992) 'Fear of competition, hope of emulation or aggrandizement, and so on, as a result of privatization may all provide a salutary shock to the thinking of academics and administrators within a complacent and largely public system...'. When the government's aim is to increase the efficiency and competition of the higher education market, the government will implement a policy in which public institutions operate in an environment deliberately designed to be like that faced by private businesses. The state seeks to create a competitive, open market structure and stresses the importance of individual student choice. It will incorporate private institutions into the higher education system and channel some public subsidies to private providers. In such a system, private institutions will have more options to position themselves on the market and to compete with public institutions.

The policies that were briefly introduced in this chapter serve as a first step towards a more thorough analysis of the higher education market and the type of higher education providers that may be found on such a market. We have indicated that, depending on the policy framework – the policy posture – adopted by the government, there is room for the public and private providers to compete

successfully for students and government grants. In other words, the positioning and functioning of the providers on the market will largely depend on the institutional framework, consisting of laws, regulations and funding mechanisms. The next chapter addresses these issues more extensively.

Part II Theoretical background

3 Neo-institutional theory, industry analysis and marketization in higher education

3.1 Introduction

Having discussed the roles and functions of the private higher education sector, it is now time to investigate the conditions and factors that underlie their development. The central questions of this thesis focus on the impact of marketization policies and institutional reforms on the development of Polish higher education. It is therefore useful to identify the theories that may assist in providing an explanation of the Polish higher education providers' behaviour and strategies. This chapter looks at neo-institutional theory (North, 1996; Ostrom, 1999) and industry analysis (Porter, 1980, 1998; Dill, 1997, 2003) to provide a framework for studying the complex relationships between higher education providers' strategies and various elements in their environment, including laws, government policies, demographic conditions and socio-economic factors. Neo-institutional theory points at the institutional arrangements, viz., the whole complex of laws, regulations, policies, norms, and codes of conduct that shape the behaviour of organizations. According to neo-institutional theory, the introduction of market-type mechanisms in the higher education system is a key element that affects the organizations' (including higher education providers') room for manoeuvre – their opportunity set or strategies. On a similar note, industry analysis points out the importance of external forces (e.g. demographic and socio-economic conditions) for understanding the performance of businesses, firms and – we argue – higher education providers.

In this chapter we integrate these two theories and construct a theoretical framework that can be used to study the development of Polish higher education. The next section (3.2) outlines the relevance of both neo-institutional theory and industry analysis for studying higher education reforms. In section 3.3, elements from both theories are combined into a theoretical framework, leading up to the analytical model that is used throughout this thesis. Section 3.4 then looks at the justification governments invoke for introducing a new set of institutional arrangements in higher education. This justification is related to the presence of *market failures*, a familiar topic in the economics of higher education. Section 3.5 presents a definition of marketization in higher education along with various dimensions of the privatization phenomenon. These dimensions are taken up further in other chapters in this thesis. Industry analysis is the topic of section 3.6. In five sub-sections we translate the five forces – after Porter (1980,1998) – to the case of higher education.

3.2 Neo-institutional theory and industry analysis: a brief look at two theories

According to neo-institutional theory (North, 1996), 'Institutions are the composition of rules, property rights, norms of behaviour, and the way they are enforced. They provide an opportunity set in the economy that determines the kinds of purposive activity embodied in the organizations that will come into existence'. Individuals or individual organizations, given their preferences and the various constraints determined by institutional arrangements, optimize their welfare, selecting from the available choices. Ostrom (1999) defines institutions as rules, norms and strategies, adopted by individuals. Rules are understood as shared prescriptions, that is: must, must not, or may. Rules are enforced by bodies or agents responsible for monitoring performance and for imposing sanctions. Norms refer to shared prescriptions that are enforced by participants themselves through externally and internally imposed costs and inducements. Strategies are defined as the regularized plans that individuals make within the structure of incentives produced by rules, norms, and expectations of likely behaviour of other players (Ostrom, 1999).

In the case of higher education, the institutional framework includes national regulations, policies, norms and traditions that have an impact on academics' and students' behaviour. Some of the institutional arrangements considered in this thesis are barriers to the entry of higher education into the higher education market, funding mechanisms used by the government for the allocation of resources to universities, rules and regulations affecting the higher education providers' degree of autonomy, the regulations concerning the collection and dissemination of information about the universities' activities and performance, the freedom of the students to choose their preferred university, program, or program content, respectively. All of these examples of institutional arrangements affect the choices made by providers of higher education. Therefore, when trying to understand the development of higher education in Poland, it is only natural to take these arrangements into account. We are interested in the impact of the abovementioned institutional arrangements on the strategies adopted by higher education providers and how this works out on the system as a whole.

Following Scherer and Ross (1990), Dill (1997, 2003), Collis (1997) and Porter (1998), the choices made by higher education providers are also affected by external factors. External factors refer to the supply and demand conditions, such as the characteristics of (competing) providers, the power of clients (students) and the socio-economic situation in which they operate. In order to analyze the influence of external forces on higher education we use a systematic industry analysis approach, developed by Porter (1980, 1998) and Collis (1997). This approach, drawing from Industrial Organization Economics, looks at determinants of industry performance.

Following Collis (1997), industry analysis starts from the premise that all industries create value. The questions are what amount of value the industry can create – the size of the industry – and who captures the value that is created. Two forces affect the size of the industry: threat of entry of new providers and threat of substitute products. Three forces determine the division of the industry: power of buyers, power of suppliers, and the degree of rivalry. Together these five forces are believed to determine the average profitability of an industry, and the shape of the competition within that industry.

In this thesis we use a modified form of industry analysis, using the work of Dill (1997, 2003) and Scherer and Ross (1990). The underlying drivers of change in the 'higher education industry' relate to the special characteristics of higher education and government regulations. In higher education, the threat of entry is determined primarily by government regulations. This is in contrast to the situation of commercial industries, where entry barriers are erected primarily through technological issues, such as cost advantages, economies of scale, capital requirements or brand identity. In higher education it is government regulations that to a large extent determine the options for entry. Where barriers to entry are regarded as part of the elements of an industry's structure in Porter's five forces approach, we include barriers to entry as part of the institutional arrangements. Following Dill (1997), we divide industry elements into basic supply and demand conditions that influence the higher education industry.

The basic supply conditions include:

1. threat of substitutes. These are understood as the availability of demand for substitute products. For higher education we may identify two substitute products; vocationally oriented courses offered by various non-higher education institutions and the labour conditions for secondary school graduates.
2. supplier/academics' power. In the case of higher education these are; the number of academic staff, the threat of forward integration, the attractiveness of an academic career to young higher education graduates; the academics' employment agreements; and academic organizations and their bargaining power.
3. degree of rivalry, understood as concentration of higher education providers and program differentiation between providers.

The most important demand conditions for higher education are:

4. buyer/student power, in terms of: the student organizations (their number and bargaining power), demographic factors, the rate of growth and variability over time in the demand for higher education, and the size and structure of the secondary school system.

5. overall economic development, in terms of the average unemployment rates, the unemployment rates for student-age cohorts, the unemployment rates for higher education graduates.

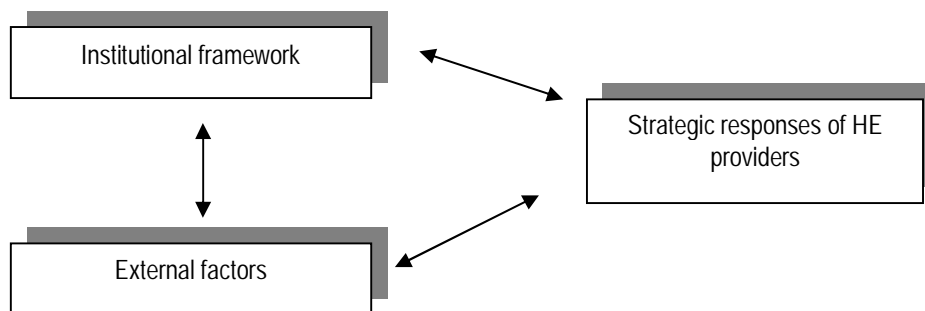
Industry analysis is often used to predict the average level of profitability of an industry (Collis, 1997). Some industries are inherently more profitable than others because of fundamental differences in their structure. Understanding whether one is competing in an industry in which it is easier to make good returns is important for managers when developing their business strategies. Industry analysis provides a systematic framework for interpreting how underlying shifts in demand, economic development, etc., will affect the nature of competition in the industry. The Porter framework provides a checklist of items that need to be considered when assessing an industry's development.

When studying higher education, the merit of industry analysis lies in its pointing at the various drivers of change that operate directly or indirectly through the 'five forces'. Rather than considering the impact of individual forces or drivers, the framework allows us to consider what collective changes they will bring about, and how the resulting changes may reconfigure the higher education industry.

The conceptual model used for studying the research questions identified earlier focuses on the links between basic external conditions, institutional arrangements, and the performance of higher education institutions. Performance is understood here as the strategies of higher education providers and the way they work out at the level of the higher education system as a whole. The central argument of neo-institutional analysis is that higher education providers will move into the directions and engage in activities that are rewarded by or comply with the institutional arrangements. According to industry analysis, higher education providers' behaviour will also be shaped by the external conditions.

The combination of neo-institutional theory and industry analysis provides us with a framework for analysis. This is illustrated by means of the 'interdependency model' shown here (Figure 3.1). The model is inspired by the more elaborate model conceived by Edward S. Mason, which takes into account 'basic conditions', 'market structure', 'conduct' and 'performance' (Mason, 1939).

Figure 3.1: Interdependency model



The institutional framework affects the structure of the relevant market by establishing or abolishing barriers to entry, preventing the emergence of a monopoly, subjecting particular organizations to specific demands and rules, imposing taxes or subsidising activities, issuing regulations (national and/or international), controlling prices, providing information, and so forth. Institutional arrangements affect the performance of the sector by their effect on the cost of transactions and production. The government can intervene to try and adjust behaviour by means of policies that affect either basic conditions or the responses of individual organizations. In general, institutional arrangements influence the structure and performance of a particular organization by determining incentives that reward particular outcomes of the organizations' activities. Organizations develop their structures in response to these arrangements and transaction costs.

On their part, individual organizations will compete not only to maximize their utility within a given set of rules; they will also seek to change the rules in order to be able to achieve more favourable outcomes. Organizations with sufficient bargaining power will do so through personal relationships, political pressure, lobbying and the media. In other words, there is a bi-directional relationship between institutions and organizations. Thus, such feedback effects may gradually alter the institutional constraints themselves. The change can also be indirect, by encouraging society to invest in the kinds of skills that in the long or medium term may indirectly contribute to the organizations' profitability. The process of changing state laws and regulations will often be incremental and slow.

Organizations reshape the basic conditions in their market in the same way as they influence the institutional framework. In other words, they may choose to

devote part of their resources to trying to change the basic conditions. Certainly they can only do so if they have sufficient market power, or through collusion. In terms of the diagram above, the external conditions will then become endogenous rather than exogenous. For instance, the organizations' pricing policies can either encourage entry of new providers or may drive other providers out of the market. This will change the characteristics of the market structure. Yet another example is the adoption of a new (for instance, capital-intensive) production process, which may transform other basic conditions.

In other words, one may argue that basic conditions, institutional framework, and organizations' responses are endogenous. They are determined within the whole system of relationships and not fixed by outside forces. However, for the purpose of this study, we select a uni-directional perspective, focusing only on the effects of institutional arrangements and external basic conditions, respectively, on the responses of higher education providers. The response is selected as our main dependent variable.

It is worth noting that the choice of institutional framework will partly determine the type of activity undertaken by organizations. While such activity may be efficient from the organization's point of view, it may not be efficient from society's point of view. In fact, institutions exist to encourage a particular kind of activity or performance. For instance, economic growth will not automatically result from a proper market structure and sufficient basic conditions. From North (1996) we know that economic growth is made possible thanks, among other things, to the evolution of complex institutions. Institutional arrangements make it possible to measure and signal what is being produced and exchanged and enforce agreements across time and space at lower costs – that is why institutions matter. Therefore, if we want to assess the performance of an economy, or for that matter the providers of higher education, we have to take into account the dimensions that comprise the institutional framework for that economy or organizations, respectively.

The reasons why governments sometimes provide a less than optimum (efficient or productive, say) institutional framework or property rights protection will often be due to a specific structure of the political system (Wolf, 1993). First, the government wants to avoid offending powerful organizations or stakeholder interest groups (North, 1981). The authorities can create a property rights structure favourable to such groups. These reasons derive from the characteristics of political systems. Modern societies are experiencing a decoupling of burdens from benefits, which means there is a distinction between those who enjoy the benefits of government programs and those who pay the costs of such programs.

We may distinguish “micro-decoupling” and “macro-decoupling”. The former arises where the benefits from governmental decisions are concentrated on a particular group, while the costs are broadly dispersed among the general public, like taxpayers or consumers. The beneficiaries, who may be better organized, may pursue politically more effective efforts. The result may lead to government regulation, which is inefficient to the economy as a whole, but may bring profits to some powerful interest groups or sectors in the economy. “Macro-decoupling” arises because politicians rest on the voting majority, while the minority – the high-income individuals and owners of profitable industries – provides most of the tax base (Wolf, 1982). This mechanism provides incentives to expand redistributive programs, since the demand depends on the majority, while the supply of revenues stems from the minority. Stated in terms of socio-economic strata, one may argue that for higher education, the benefits are received primarily by students from middle and upper class families, while the burden is shared among all taxpayers. This equity argument shows up later in our thesis, where we look at the social origin of students in public and private higher education institutions.

The next reason for a particular, inefficient institutional framework is a consequence of the political reward structure and the short terms of office our elected politicians serve. The rate of time-discount for politicians is often higher than that of society. This leads to a disjuncture between the short time horizons of the political actors and the longer time required to analyze and experience the outcomes of policies. Thus, future costs and benefits are usually discounted and ignored, while current benefits and costs are magnified. In case of higher education, the short term within which an elected minister of education remains in office may lead to similar disturbances. The education minister may focus more closely on activities that bring benefits in the short term rather than the long one.

Summarizing, there is a rationale for the government to see to it that a proper institutional framework exists. Stated in economic terms, there is a rationale for government intervention, not just in the market, but also in the rules – the institutional framework – that govern the market. This is why the next section investigates more thoroughly the situations in which the market fails.

3.3 Market failure in higher education

Having outlined the basic features of our conceptual model, we now proceed to theories about governments and markets in higher education. We define the various manifestations of market failure that provide the justification for government intervention in higher education. Markets may fail for a variety of

reasons, yielding performance that falls below the norms that are considered acceptable. Government agencies may then choose to intervene by means of various types of regulatory interventions and subsidies. If the higher education market were to be left alone, without state intervention, it would produce a level and variety of higher education services that, from society's point of view, falls short of the optimum. In other words, higher education is experiencing market failures, and therefore government may attempt to remedy this by applying policies that affect the higher education providers' performance (see the arrow in Figure 3.1).

One can identify the following market failures in higher education:

- externalities, social benefits
- information imperfections
- increasing returns, monopoly and market power
- distributional equity
- 'merit good' argument.

Externalities, social benefits

Historically, the rationale for awarding state subsidy to higher education has been based mostly on the external effects argument (Fenton, Gardner, Singh, 2001), which states that if someone takes up a degree course in higher education, the benefits will not just accrue to that person, but also to others who did not enjoy higher education. Stated differently, the benefits to society as a whole (i.e. the social benefits) exceed the benefits that accrue to the individual recipients of the education (i.e. the private benefits). Where activities create such spillovers (or externalities), whether positive or negative, that are not appropriable by or collectible from the producer, then market outcomes will not be efficient in allocative terms. These externalities are not taken into account during the production decisions. Therefore, when compared to socially efficient output levels, too little may be produced in the case of positive externalities, or too much when there are negative externalities (Wolf, 1993). In the case of higher education, individuals do not take into account that their investment in higher education will yield positive externalities for society at large. These external benefits provide a rationale for government intervention. The government may provide subsidies, it may choose to provide education through public providers, or it may choose another instrument of government intervention to remedy the under-investment in higher education.

Table 3.1 lists the various types of financial and non-financial benefits that are derived from higher education. The externalities cited most frequently are the effect of higher education on economic growth, social cohesion and society's ability to adapt. Higher education, in common with basic and secondary education, is necessary to permit the functioning of a developed economy. It

promotes trust in social institutions and appreciation of diversity in gender, ethnicity, and religion (Singer, 1972). In modern economies, which rely on the generation and application of knowledge, a higher productivity is achieved through the development and diffusion of technological innovations, which in many cases are the result of applied or basic research undertaken in higher education institutions. Greater productivity is also achieved through a higher quality labour force, which can apply these innovations (World Bank, 2002). There is evidence that in countries where participation in higher education has increased, the citizens' dependence on government financial support has declined (OECD, 1996). Higher education raises an individual's future earnings, thus increasing the future tax payments of educated citizens. When considering the public benefits of higher education, some authors have pointed at the link between higher and lower levels of education. Education specialists with higher education qualifications often participate in designing curriculum reforms or setting the standards for primary and secondary school.

Table 3.1: Benefits from Higher Education

Benefits	Private	Social
Financial	Higher salaries Employment Higher savings Improved working conditions Personal and professional mobility	Greater productivity National and regional development Reduced reliance on government financial support Increased consumption Increased potential for transformation towards knowledge-based economy
Non-financial	Improved quality of life of oneself and one's children More informed decision making Improved personal status Increased educational opportunities Healthier lifestyle and higher life expectancy	Nation building and development of leadership Democratic participation Greater social cohesion Reduction in crime rates Improvement in other levels of education Social mobility

Source: After World Bank (2002)

Some have argued that the external benefits of education are lower for higher levels of education (Psacharopoulos, 1973; 1980; Psacharopoulos, Woodhall, 1985; Glennerster, 1998). More education sometimes may even create negative spillovers. When graduates perform low-skilled jobs they can crowd out workers with lower qualifications. However, in general, the positive externalities are believed to outweigh the negative ones.

However, while there is support for public investments in higher education, this does not imply that higher education should be publicly supplied. Non-profit accredited private higher education providers may also be supported financially by the state. Private producers of education will also provide social benefits. This may give some support to allowing a private higher education sector to emerge.

Information imperfections

Information imperfections relate to characteristics of higher education as a service. Unlike other services, higher education is often traded at zero prices or highly subsidised ones. This means that any tuition fee paid by the student does not reflect the scarcity or value of the service traded. Furthermore, there are important information deficiencies when it comes to assessing the quality of the higher education programs on offer. Higher education is an 'experience good'. This implies, *inter alia*, two information-related problems. The first relates to the absence of a well-functioning capital market for student loans (Canton, Venniker, 2001). If the costs of higher education were fully borne by the students, then some students, in order to finance their education, would have to borrow. However, commercial banks will be reluctant to offer them loans, because banks do not know about the students' abilities to pay off their loan. The students' characteristics that affect their capacity to obtain a university or college degree and, later on, a position on the labour market, cannot be assessed and monitored effectively by the banks that might be willing to provide such loans. Banks may therefore be inclined to charge high interest rates as insurance against the 'bad risks', *i.e.*, those students who are unlikely to pay back their loan. The second obstacle relates to the absence of appropriate collateral for the loans. There is no 'human resource market' that would make the human resource suitable collateral for the loans. Consequently, the banks require students to submit collateral in the form of parental income or mortgages on houses or cars. This may pose a problem for students from poorer families.

These imperfections and information asymmetries which characterize the student loans market constrain the ability of individuals to borrow for their education. This will undermine the participation of able but economically disadvantaged students in higher education (Steier, 2003). A government role, then, is to set and create the conditions and the regulatory framework that would reduce the information asymmetries and also to protect students from high bank interest rate charges by subsidizing part of the interest charges or by providing loans themselves. Thereby, government intervention removes the financial constraints and lowers the price of student loans.

Returning again to the experience-good character of higher education, we note that students cannot adequately assess the outcomes and the value of investment in higher education. The quality of educational programs cannot be observed in advance by students. They can only do so during their study or after completing

it. Lack of information about the effects of acquiring knowledge may discourage students from investing in higher education. This may lead to an under-investment in higher education. This is made all the worse, because students from low-income families will often have even less knowledge about the private benefits of higher education than the students from high income backgrounds. There is evidence that the low-income students' rate of time-preference is higher than the rate for the student population at large (Hansen, Weisbrod, 1969a, 1969b; Vossensteyn, 2005).

Some authors have pointed out the cultural reasons for the less than optimum participation of students from lower socio-economic groups (Biffl & Isaac, 2002; Blossfield and Shavit, 1993). Cultural reasons may also be grouped under the heading of information deficiencies. A report of The National Committee for Inquiry into Higher Education (Robertson & Hillman, 1997) talks about a 'cultural deficit' here, since higher education is perceived as 'culturally alien terrain' for low-income students. Moreover, parents with little education often have less information than better-educated parents when making decisions about their children's education. Robertson and Hillman (1997) summed it up as follows: 'Students from lower socio-economic groups appear to be guided from an early age, by reason of habit, culture and professional or peer expectation, to anticipate entry into the labour market rather than higher education.' To deal with the under-representation of disadvantaged groups in higher education, public authorities may provide information about the returns that students can expect from different levels of education. Public policy may concentrate on improving the quality of information of this type, instead of offering blanket support for all types of higher education (Singer, 1972).

Information about the quality of higher education products is often scarce, unreliable and costly for students to acquire. In particular in the case of an excess demand for higher education, higher education institutions have no incentives to resolve this information gap. However, higher education institutions that provide high quality courses want to advertise their exceptional quality. The information problem might be solved if the buyer could easily observe the quality of the service. However, this is difficult in the case of higher education. Where the provision of direct information about product quality is inadequate, the consumers tend to seek, and producers try to provide, 'indirect or symbolic indicators of product quality' (McPherson, Winston, 1997). Colleges and universities may engage in marketing activities to provide customers with information that influences their choice. Some will engage in signalling activities, such as taking care to present their campus, its buildings and facilities. These are things that students can easily observe. 'Theaters, athletic facilities, computer centers, museums, and the like would rank high on the list of such facilities, and the prestigious colleges and universities have been energetic in developing such facilities in recent years' (McPherson, Winston, 1997). Often this information is

not related to information on the quality of instruction, but many students will regard it as the best information they can get. Clearly, there is a role for government when such market failure exists.

Increasing returns, monopoly and market power

When long-run, average costs decrease as output rises, we speak of increasing returns to scale (Begg, Fischer, Dornbusch, 1991). In such a situation marginal costs are decreasing. The market will then fail to achieve an efficient outcome. Under these conditions, the threat of a monopoly appears; a single producer that uses the lowest cost mode of production will wipe out any competitors. In the case of higher education, economies of scale are a real possibility. Substantial costs have to be incurred to establish a new higher education institution. Some of these costs are fixed – like infrastructure or administration costs – because they do not vary with student enrolment. There are increasing returns to scale, because these fixed costs can be spread over more students as student numbers increase. This may reduce incentives for innovation and push providers to charge high tuition fees. In this case, the aim of government interventions is to encourage competition mainly through abolishing the barriers to entry for new competing providers. Alternatively, the government may introduce a new method for the funding of universities; a funding mechanism that is student-driven and that does not provide direct subsidies to education providers but leaves it to the students to decide where the public funds will flow. However, even in such a case, the high fixed costs will remain. According to the theory of contestable markets (Baumol, Panzar, Willing, 1982; Baumol, 1982, Mansfield, 1991), on those markets that are open to new entrants, with few barriers to entry, the producers are disciplined by potential entry of competitors, who would contest the monopolized market unless profit margins are kept low and output is maintained at high quality. For the higher education market, this means that the potential entry of new providers encourages the incumbent providers to maintain high quality or to charge modest tuition fees. This issue touches on the choice of strategy for the providers. Later on in this thesis we devote an entire chapter to the issue of strategic responses of providers.

Distributional equity and the “merit good” argument

Where the distributional results of ‘well-functioning’ markets are not in accord with socially accepted standards of equity and with society’s preferences for reducing excessive disparities in the distribution of income, we may speak of a market failure. Government interventions can then aim to bring about a more equal distribution of opportunities. For instance, basic education is regarded as a merit good. Merit goods are goods that government or society feels people ought to consume, regardless of their income or status.

When it comes to higher education, many governments feel that talented people should be able to consume it, regardless of their social status and parental

income. Education – in all its forms – enables people to raise their potential and future income (private returns) and contributes to an equitable redistribution of income (social returns). Several studies have attempted to measure the private and social rates of return (OECD, 1998; Blöndal & Girouard, 2001; Carnoy, 1995; Jongbloed, 2004).

It is worth noting that different ways of providing state subsidies have different distribution effects. Subsidies allocated directly to higher education institutions may be less redistributive than subsidies targeted directly to students from lower socio-economic groups. Generally, students from the middle and upper classes make up the majority of students in the higher education institutions. Government subsidies to higher education providers will therefore will lead to subsidizing students drawn primarily from high-income backgrounds who would have entered higher education anyway. Targeting subsidies directly to lower-income students is therefore assumed to enhance equity of opportunity.

3.4 Government failure

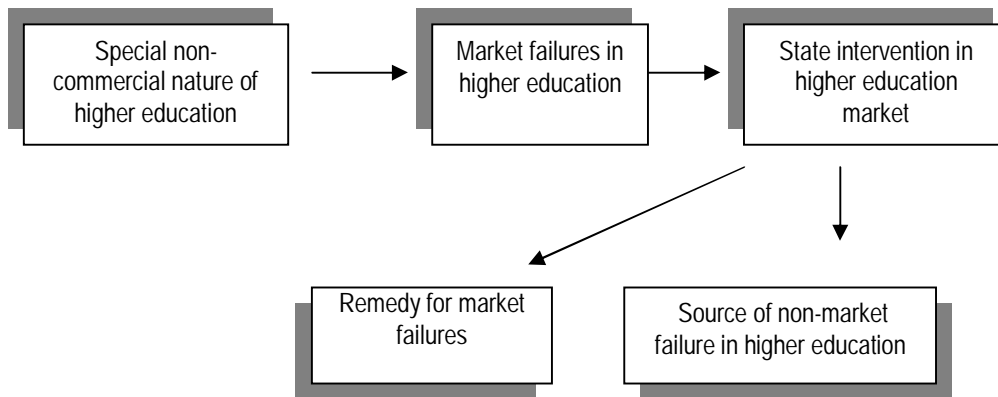
Higher education receives public subsidies and tax benefits, because it is expected to further the public good. Having discussed the various examples of market failure that warrant government intervention by means of subsidies and regulations, this section devotes some attention to the fact that government interventions may fail, too. They may fail to achieve a more ‘correct’ (i.e. efficient, equitable) market equilibrium, because governments may set the wrong objectives or pursue them the wrong way. Government failure also arises because of the cost of government regulations, including the monitoring costs. How seriously governments fail is still a matter of dispute over the measurement of costs and benefits of policies. A position in this matter of government (or non-market) failure will often depend on one’s attitude to the government’s role in the economy. Neo-liberal ideology puts a greater weight on both market forces and on government or non-market failures.

Wolf (1993) has developed a theoretical framework of government failures. He compared market and non-market failures. Non-market organizations (e.g. subsidised organizations) operate in environments that are quite remote from competitive markets. When evaluating their performance, they do not observe the bottom-line of market organizations, viz., the profit and loss statement. They lack a direct performance indicator and have no mechanism or sanction that makes them terminate their activities when they are unsuccessful. Non-market organizations are protected by various state regulations that result in an environment of ‘restricted competition’. Their environment is driven by the budget mechanism, not by the price one, meaning that there is no link between the cost of production and the consumption of output.

The country's legislative framework determines whether higher education providers operate in a protected, regulated system or a quasi-market type environment. In the latter case they will often have to compete with one another for budgets. In the former, they receive state support and face little competition.

In short, state intervention in the higher education market has two faces (figure 3.2). On the one hand, the intervention is supposed to be a remedy for market failure, but on the other hand it may create non-market failures.

Figure 3.2: Government intervention in higher education



If observers perceive many instances of government failure, they may call for the (re-) introduction of 'more markets and less government' in higher education. The introduction of market forces by governments into higher education does not mean that governments should retreat from subsidizing and regulating higher education altogether. However, in some areas, market forces do better than government regulation. Market forces may help higher education institutions operate more efficiently; they may promote the providers' responsiveness and articulation to the supply and demand factors. In order to present a framework for the analysis of market forces, the next section provides a set of dimensions of higher education systems in which various elements of markets are implemented to varying degrees. Such a framework is necessary for studying market forces and other types of institutional arrangements in higher education.

3.5 Dimensions of marketization and privatization in higher education

This section specifies the concept of market mechanisms in higher education and the various dimensions of marketization and privatization in higher education. It provides the elements of institutional arrangements that are evaluated in the

empirical part of this thesis, where we focus on the Polish higher education institutional framework.

At the outset it is important to emphasize that privatization and marketization are distinct concepts with different meanings. Privatization is the transfer of the ownership of assets from the government to the private sector. So privatization can be a phenomenon taking place in public higher education institutions if public universities come under private ownership as government sells its assets to private entities. Marketization (or liberalization as it is sometimes known) is the opening up of a market to competitive forces. Public ownership does not automatically imply a state monopoly or a lack of competition. Equally true is the statement that private initiative does not automatically encompass competition. Notwithstanding this, private higher education and marketization are often intertwined in policy debates and public perception (Whitty, Power, 2000; Johnstone, Bain, 2001). Some authors mix the concept of privatization with liberalization and treat private institutions as one form of privatization (Jones, 1992).

Privatization in higher education is an aspect of the general, historical phenomenon of a shifting balance between public and private higher education. At first glance, private institutions are organizations that have a private ownership or private founder. However, in the higher education market this definition is not sufficient to characterize the private higher education institutions, because the legal definitions related to ownership do not define the actual functioning and organization of the institutions. When it comes to their functioning, several studies give examples where private institutions are equivalents to public institutions, differing only in terms of ownership or funding.

We now review the key literature on privatization and marketization in higher education. This literature often sees privatization as a shift in the balance of finance in higher education from the state to the students, or their families or employers. Private higher education is generally privately funded and the institutions are privately owned. According to Levy (1986), in developing nations the state subsidies often account for less than ten percent of income. They may even be close to zero. In developed countries the governments often provide more funds to private providers, but the rule is that privates depend much less on public money than the publics. The private sources of funds are narrow and specialized payments, most of them paid by a direct user in the form of tuition fees. Non-elite private institutions in the developed world typically depend on tuition fees to a large degree, whereas in developing and transition countries every private provider is sustained by tuition fees only. The list of private institutions that receive public funds does not go much beyond the Netherlands,

Belgium, France and Chile, and some individual private religious institutions in other countries.

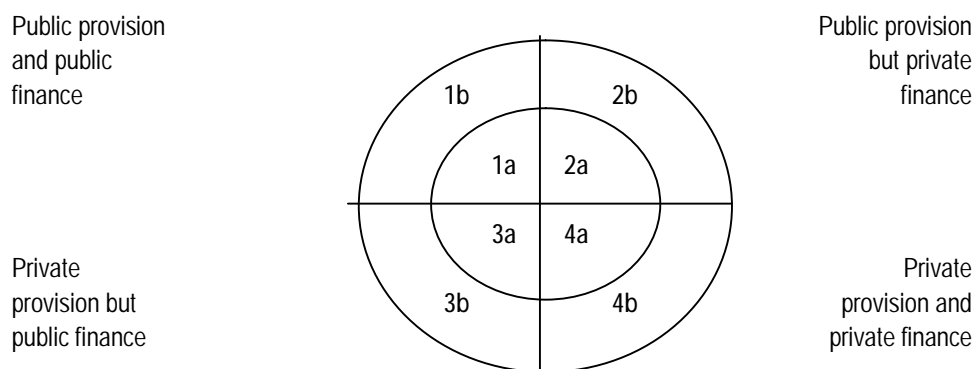
While Levy looks at the sources of funding, Altbach (1999) introduces another criterion. He argues that a higher education provider is private if it is responsible for its own funding, no matter what the sources are. For this reason the privately founded universities in the Netherlands and Belgium are not considered private, because state regulations allow them to receive direct state funding.

A second criterion for privatization is the autonomy of the providers in terms of governance. Private higher education is usually much more free from government rules and regulations than public higher education. Levy states: 'Privateness characterizes private higher education governance.' Public funding justifies government oversight. However, there are publicly funded institutions that may have non-government trustees or governors (Jones, 1992) or private providers that are heavily regulated by the state. But in general, within any dual higher education system, the private institutions manage themselves more autonomously than the public ones. Private institutions are usually free to choose a strategy consistent with their institutional profile. In general there will be strong links between public funding and public regulation, because the spending of tax revenues needs to be accounted for.

Marketization is a more broad term. It is the adoption of market practices or market-type mechanisms that increase the competition, orientation to clients, and introduce management practices associated with private enterprise, while at the same time lessening the financial dependence on government. Jongbloed (2003) defines marketization policies as 'policies that are aimed at strengthening student choice and liberalizing markets in order to increase quality and variety of services offered by the providers of higher education.' We note that marketization may include privatization. Marketization is thus a complex, broad development.

Burchardt, Hills and Proper (1999) have cast these considerations into a sophisticated map that shows the different combinations of public and private provision of higher education (Figure 3.3). In the inner circle, decisions are made by the state, while in the outer, decisions are in private hands. In general, the marketization processes may be described as a move from the inner part to the outer part, whereas privatization is a move from the upper part of the circle downwards to the bottom half. According to his typology, the introduction of market elements into higher education moves the decision-making from state to students, by introducing a portable voucher system, for instance. In such a system, students decide which higher education providers will be subsidized by the state by 'voting with their feet'. Students (in economic terms: 'clients') decide. Such a voucher system is an alternative to the traditional systems where the state provides direct payments to selected higher education institutions.

Figure 3.3: Classification of public and private welfare activity



Key:

Inner circle – public decision	Outer circle – private decisions
1a – ‘pure public’ services	1b – publicly provided services bought with vouchers
2a – publicly provided services paid for by user charges	2b – publicly provided services bought by individuals
3a – contracted out services purchased by the state	3b – privately provided services bought with vouchers, tax reliefs or grants
4a – contracted out services paid by consumer	4b – ‘free market’ services

Source: Burchardt, T., Hills, J. and Proper, C. (1999) *Private Welfare and Public Policy*, York: Joseph Rowntree Foundation.

In the case of marketization we have to refer to the **market** concept. The market is usually defined as ‘an area where buyers and sellers negotiate about the exchange of a well-defined commodity’ (Steiner, Lipsey, 1969). Begg et. al. (1991) understands the market as a set of arrangements by which buyers and sellers contract to exchange commodities. Using these definitions, two distinct parts of the market can be distinguished: the producer’s side and the consumer’s side. Therefore, to understand the concept, both sides of the market must be discussed. It is worth noting that there are several different markets in higher education, (Jongbloed, 2003; Dill, Soo, 2004), such as the market for students, academic staff, research grants, donations, and so on. In this thesis we refer to the combination of all of these markets, following to some extent the perspective adopted by Jongbloed (2003) from Onderwijsraad (2001) and Johnstone (2003).

From the producer's side, the introduction of market mechanisms in higher education in particular refers to three areas of regulation (Jongbloed, Dill, Amaral, Teixeira, 2003):

1. enhancing competition between higher education providers,
2. diversification of income sources for institutions, in particular in terms of raising private contribution, and
3. increasing the institutions' autonomy.

In the first case – enhancing competition in higher education – providers are made to compete for students and for funds. This takes place through the elimination of various legal and political barriers that prevent new providers from entry into the higher education market. In terms of figure 3.3, this relates to the privatization of higher education, where the public authorities permit and encourage the growth of the private higher education sector. Examples of the second type of market-type elements are the introduction of tuition fees in a hitherto zero-fee higher education system. Third, the promotion of the providers' institutional autonomy means both relieving the provider from particular measures of government authority or control and allowing them more freedom to formulate their own policies (Johnstone, Bain, 2001). This involves devolving control from a government body to the university level. There are many domains within which authority can be delegated, such as human resources policy, financial affairs, curriculum matters, admission policies, et cetera. These issues are addressed in a subsequent chapter.

Market mechanisms in higher education also relate to the demand side – the side of the student. On the demand/student side, an important issue is the information available to students to help them choose what and where to study. Information relates to program offer, program quality, costs and other relevant characteristics of the education providers. Market competition presumes that consumers have the freedom to choose the provider of the service or product and to specify the type of service they would like to receive (Jongbloed, 2003). These issues of information, freedom and autonomy will be discussed more extensively in chapter 5.

In describing the types of market forces that are introduced in higher education, Johnstone (2002) presents the scheme given below (table 3.2), which portrays marketization as a movement taking place along several related dimensions. The reader should note that Johnstone uses the terms privatization and marketization interchangeably. Looking at the dimensions (i.e. the rows) in the table, we can group the five dimensions of marketization into two groups:

- (1) relations involving the government and other players on the market – dimensions 2, 3 and 4; and (2) internal norms in the universities and colleges – dimensions 1 and 5.

The first dimension relates to the mission of higher education institutions. Johnstone understands that the mission of providers that operate in a market-like environment is focused on the private interests of students and other clients. In terms of ownership (dimension 2), in a system with high market reliance providers are privately owned, some taking the shape of for-profit organizations. Dimension 3 portrays marketization as a shift of the balance between the provider's sources of public and private revenues. Government control over higher education (dimension 4) in a high market reliance model is similar to control methods applied to any other business. Dimension 5, finally, shows the balance between academic norms and profit-driven norms – roughly speaking between traditional public management and new public management.

Table 3.2: Market Forces in Higher Education (after Johnstone)

Dimensions	Low Market Reliance (High 'Publicness')	High Market Reliance (High 'Privateness') →		
	Continua of Reliance on Market Mechanisms Greater Privatization (Marketization)			
1. Mission or Purpose	Serves a clear "public" mission as determined by the faculty or the state.	Mission is avowedly both public and private, but as defined by faculty.	Mission is mainly to respond to student's private interests, mainly vocational.	Mission serves private interests of students, clients, and owners.
2. Ownership	Publicly owned: can be altered or even closed by state.	Public corporation or constitutional entity.	Private non-profit: clear public accountability	Private for-profit
3. Source of Revenue	All taxpayer, or public, revenue.	Mainly public, but some tuition, or "cost sharing."	Mainly private, but public assistance to needy students.	All private revenue: mainly tuition-dependent.
4. Control by Government	High state control, as in agency or ministry.	Subject to controls, but less than other state agencies.	High degree of autonomy; control limited to oversight.	Controls limited to those over any other businesses.
5. Norms of Management	Academic norms; shared governance, anti-authoritarianism.	Academic norms, but acceptance of need for effective management.	Limited homage to academic norms; high management control.	Operated like a business; norms from management.

Source: Johnstone, D. B. (2002) 'Privatization' In: J. F. Forest and K. Kinser (eds.), *Higher Education in the United States: An Encyclopedia, Vol. II*. ABC-Clio. Santa Barbara.

To portray the full spectrum of state mechanism regulations in higher education we combine the Johnstone typology with the framework established by the Dutch

Education Council (Onderwijsraad, 2001), which presents the conditions of marketization policies separately for higher education providers and higher education consumers (i.e. students). Table 3.3 below shows the outcome. This list of marketization elements may serve as a framework for studying institutional reform policies in Polish higher education. In the next chapter we provide a more thorough theoretical analysis of this list of conditions.

Table 3.3: Market mechanisms in the higher education institutional framework

Conditions on the supply side for HE providers			Conditions on the demand side / for students		
Dimensions	Low market reliance	High market reliance	Dimensions	Low market reliance	High market reliance
Barriers to entry	High barriers to entry	Low barriers to entry	State financial support to higher education	Traditional blanket state support	Student - targeted state support
Institutional autonomy - Academic autonomy - Appointive autonomy - Financial autonomy	Authority on the state level and high state control	Authority devolved on the institution level, high degree of autonomy, limited control	Information on prices and quality	Low reliance on measurement indicators	Higher reliance on measurement indicators
			Consumer freedom to choose and specify the product	Limited choice in terms of providers and program content	Students can choose the provider and influence the program content

Source: After Johnstone, D. B. (2002) and Onderwijsraad (2001)

As illustrated in the table, we focus on market mechanisms in higher education from the supply side and the demand side. For the supply side, the first dimension to take into account is barriers to entry of education providers. Marketization policy aims to decrease the barriers that new providers may face when considering entry into the higher education market. This element is about institutional barriers that new (usually private) providers have to meet in order to be an officially recognized higher education provider. The second dimension on the supply side relates to institutional autonomy. In market-oriented higher education systems, authority is devolved to the institutional level. The three sub-dimensions of autonomy are discussed further in chapter 6.

Looking at the demand side we take into account the way in which government distributes the subsidies for higher education. Implementation of market mechanisms relates to the role of student-targeted mechanisms of state support versus that of direct payments to selected higher education providers. Marketization policy also affects the accountability procedures and enhances the

gathering and dissemination of information about higher education providers to allow students to make better choices about what and where to study. Finally, market mechanisms increase the students' freedom to choose in terms of provider and program contents. Again, the various elements of market mechanisms in higher education are elaborated further in chapter 5, along with the expected outcomes of marketization policies.

3.6 Industry analysis in higher education

3.6.1 *Five forces*

In the 'interdependency model' that contains the theoretical framework for this study, we also pointed out that the responses of an organization (e.g. a higher education provider) are affected by the economic conditions they face on the market. Along with the institutional arrangements, the economic conditions determine the opportunity set for organizations – their options and potential for growth. The economic conditions, and how they affect the providers of higher education, are presented in this section. Different conditions in the higher education market will produce different outcomes in terms of the responses and behaviour of public and private higher education institutions.

Higher education institutions operate in a particular environment, and are an integral part of a national economy. Therefore, their operation and performance are influenced by a variety of external conditions. Therefore, it is of great importance that higher education providers identify and recognize these external conditions. In other words, they have to closely monitor their relative position – their competitive advantage – vis-à-vis other institutions. In this section we make use of the work of Michael Porter to assess the changes of an organization in response to external pressures. We provide theoretical as well as empirical insights into the influence of a variety of external conditions on higher education market.

The economic framework that pictures an industry as being influenced by external factors is provided by Porter (1980, 1998), who presents a diagram showing 'five forces' that shape the industry structure and the behaviour of individual organizations. The five forces are:

- (1) supplier power, in terms of their concentration, differentiation, presence of substitute inputs, impact of inputs on cost or differentiation, cost relative to total purchases in industry, and threat of forward integration;

(2) buyer power, such as bargaining level, buyer volume, buyer information, brand identity, price sensitivity, threat of backward integration, product differentiation, buyer's incentives, or buyer concentration vs. industry;

(3) threat of substitutes, in terms of switching costs, buyers' inclinations to substitutes, price-performance trade-off of substitutes, and substitutes' volume;

(4) degree of rivalry, in terms of exit barriers, industry concentration, fixed costs/valued added, industry growth, intermittent overcapacity, fluidity of competitors, product differences, diversity of rivals, or brand identity; and

(5) barriers to entry, such as absolute cost advantages, proprietary learning curve, access to inputs, government policy, economies of scale, capital requirements, switching costs, expected retaliation, proprietary products, or access to distribution.

Using the Dill (1997, 2003) methodology of external factors, which have an impact on higher education institutions, the list of basic conditions for higher education can be divided into two categories; the *basic demand conditions* and second, the *basic supply conditions* affecting higher education. Our re-interpretation of Porter's five forces on higher education and Dill's methodology leads to the following list of elements of industry analysis for higher education:

The demand conditions are:

(1) economic situation, in terms of the structure of industry, demand for graduates, state budgets for higher education, average unemployment rates, the unemployment rates for student age cohorts, the unemployment rates for higher education graduates; the private rate of return for higher education graduates; and the change in the Gross Domestic Product;

(2) demographic factors/student power, in terms of student unions and organizations (number and bargaining power), student information, number of students, the rate of growth and variability over time of demand for higher education, the size and structure of the secondary school system, demographic statistics and prognoses, as well as the level of contributions made by students towards the cost of their education.

In terms of the basic supply conditions for higher education we can formulate the following indicators:

(3) threat of substitutes, such as the availability and cross elasticity of demand for substitute products, particularly for vocationally oriented courses offered by various non-higher education institutions, students' inclinations to

substitutes, as well as the opportunities of employment for secondary school graduates which can be also identified as a substitute product for higher education.

(4) supplier/academics' power, in terms of the numbers of academic faculty (in particular academics with higher scientific degrees), threat of forward integration, attractiveness of an academic career for young higher education graduates, pay scales and working hours of academics, employment agreements (e.g. tenure systems), academics' organizations and their bargaining power, academics' possibilities of taking up jobs on the labour market outside higher education;

(5) degree of competition, in terms of higher education industry concentration, program differences, diversity of rivals and switching costs.

We now discuss these five forces in more detail and also discuss the impact of these forces on higher education providers.

3.6.2 General economic situation

One of the most important external conditions for higher education providers is the overall economic, social and cultural environment. General economic development determines the structure and growth of each industry, including higher education. There is a general rule, observed across countries, that a higher Gross Domestic Product per person pushes up student enrolments. As such, we are not interested in the question whether a better economic situation entails more graduates, or the other way around. We just note that in developed countries the structure of the labour market is leaning towards services, trade, and knowledge-intensive industries, where most employment positions require higher education degrees. Attempts to explain the expansion of higher education as a function of variations in societal characteristics have stressed internal economic, political and cultural dimensions. The dominant functional theory links higher education expansion to a socio-economic development process of industrialization and modernization. Industrialism and other forms of modern economic growth are seen as requiring job skills of an increasing range and complexity (Ramirez, Riddle, 1991). This perspective suggests that both the individual value and social value of higher education are recognized in more developed countries. Increases in economic production cause a growing demand for highly qualified employees. Human capital theory suggests that young people enrol in colleges and universities to acquire the skills they believe will lead to the highest wages, which in turn are offered by employers using the most advanced technologies. The 'screening' theory explains that occupationally ambitious persons crowd into universities to acquire the diplomas that will "signal" to employers their potential productivity and compliance with the employer's

needs. Dominant groups in a nation also allocate tax monies and private wealth to higher education to promote the increasingly sophisticated skills necessary for economic development (Ramirez, Riddle, 1991). These assumptions evoke reciprocal causation imagery: socioeconomic development promotes a growth of higher education, and the expansion of the latter in turn fosters greater economic growth (Ramirez, Riddle, 1991). In general, researchers found that in most cases the bigger the GDP, the higher are state expenses on higher education, as well as private spending on education.

Related political theories emphasize the ties between the rise of political democracy and higher education expansion. This suggests that a civic-minded culture and formal representative institutions facilitate access to higher education, while more authoritarian regimes and less representative policies block higher education growth. Cross-national studies show a positive correlation between the socio-economic development, political democracy and the level of higher education. Studies also show that the increase of GDP per capita increases the private rate of return for higher education graduates (OECD, 1993, 1998). On the other side, there are studies that show that the increase in the proportion of highly educated persons in the labour force decreases the private rate of return for graduates (Soo, 2004). The reason why we observe a negative effect is the oversupply of highly qualified workers. Most developed countries have experienced an increase in student numbers, which has operated as a counterforce to the increasing private rate of return. The balance between economic growth and the change in the labour market determines the direction of private returns, which in turn has an effect on higher education enrolments.

Another indicator of the demand for higher education is the unemployment rate. One can look at the average rate, the rates for particular student age cohorts, or the unemployment rates for higher education graduates. The impact of unemployment on higher education demand is not clear. In general, high unemployment rates among young people may increase enrolment, as secondary school graduates will prefer to study and hence increase their employability. They may also find it attractive to receive some state financial support while studying. Similarly, a lower graduate unemployment rate will attract more secondary school graduates to higher education.

The next important demand condition for higher education providers is the sectoral structure of the economy, both in the national and in the regional environment of providers. Looking from the perspective and history of developed economies, one may note that in economies with a high share of services and trade industries, higher education enrolment is greater than in economies where manufacturing and agriculture industries generate the major share of GDP. In addition, the structure of the regional economy is also of great importance for a particular higher education institution, as the particular

branches of industry situated in the region will influence the demand for higher education graduates.

Finally, the general economic situation to a large extent determines the state expenditures on higher education, which in turn determine the opportunities for public state- financed higher education institutions and their private competitors. When state outlays are declining, universities and colleges are encouraged to generate alternative sources of revenue, such as paid courses for which part-time students pay tuition fees. Alternatively, they may engage in cooperation with business organizations or restructure their institutions and try and operate more effectively.

3.6.3 Demographic statistics / student power

The power of buyers is our next demand condition that shapes the responses of providers. When customer power is very strong, the relationship to the producing industry is close to a monopsony, i.e., a market with many suppliers and one or only a few buyers (Mansfield, 1991). Under such conditions, buyers set the price. In reality, few pure monopsonies exist. More common is a situation of some form of asymmetry between the providers and the clients. Higher education is an example of an industry where the buyers have less power than producers, due to asymmetry of information. However, there are some factors that positively affect the students' power vis-à-vis the providers. Students are more powerful if they are represented in students' organizations, student unions, or decision making bodies. These vehicles allow them to express their views and opinions on several issues concerning higher education, in particular those issues that directly affect instruction and student life.

The power of the student increases when the services offered by providers are standardized. This enables them to compare the offerings of the providers, to make more informed choices and it lowers the costs of switching from one provider to another. Students are also more powerful if they possess information about the institutions. If there are regulations that ensure the collection of information and its dissemination among students, then students can exercise more influence on the providers.

The power of students increases with the number of options from which the student can choose. The appearance of new higher education institutions erodes the monopoly that traditional institutions had on the provision of higher education. This can limit the ability of universities and colleges to push through tuition price increases at will, since new providers will often make use of low-cost delivery mechanisms.

Universities and colleges on their part can offset the student power by raising the costs of switching from one institution to another, for example by limiting the transfer of credits between universities to ensure that once students begin degree courses they cannot readily switch to another provider.

The impact of students on the university is an important factor impacting demand. Student organizations are a major influence on campus performance. They help determine the self-image of the student body and strongly influence the ideas that permeate the institution (Altbach, 1993, 2006). Student unions and organizations to a large extent influence the rules and regulations that govern university and college life. For instance, in Western Europe, student reaction to deteriorating conditions during the rapid expansion of the 1960s led to significant reforms of higher education at that time (Altbach, 1974, 2006). Students demanded greater representation in decision making and governance in universities, and in many cases agitated for changes to curricula – changes seen as more socially and politically relevant (Coaldrake, 2001).

On a university level, student organizations often control a significant budget and provide such services as food, entertainment, reduced-price tickets and so forth. Student governments also represent student interests to the university and often appoint student representatives to academic committees or governing bodies. In addition, in some cases the candidates for office must be accepted by the student organizations. On a national level, student unions, especially in Europe (Altbach, 2006), have traditionally played significant political roles in influencing higher education policies and defending student interests.

The increasing pressure from the student body is in part the outcome of a transition from elite to mass higher education systems. Pressures arising from a change in the student body figured predominantly in the analyses of Trow (Trow, 1973), as universities and colleges struggled to adapt practices for catering to larger, more heterogeneous groups of students. This trend challenges the capacity of long-standing university policies and procedures (Coaldrake, 2001).

Universities are also being driven to pay more attention to their students as more countries increase the contributions made by students towards the cost of their education and seek to direct funds in more student-centered ways. These provide students with an additional cause to take an active, demanding interest in the performance of their university and afford them a greater potential to influence institutional behaviour. According to some authors (e.g. Coaldrake, 2001) there is a strong argument that a direct financial relationship (e.g. voucher system combined with tuition fees) between a university and its students will encourage greater attention to student needs and requirements. Slaughter and Leslie (1999) argue that in private colleges and universities in the United States, where tuition income accounts for a significant part of institutional revenues, students are more

often treated as important clients, in contrast to their treatment in public universities.

Another important factor affecting the demand for higher education is the size of the secondary school system. The number of secondary education graduates relative to a standardized age group depends on demographic factors as well as educational policies. When the higher education-relevant age cohort increases in size, the universities and colleges can enrol students more easily.

3.6.4 Threat of substitutes

The threat of substitutes refers to products in other industries. A threat of substitutes exists when the demand for a product is affected by the price change of a substitute product. Substitute products affect a product's price elasticity – as more substitutes become available, the demand becomes more elastic since customers have more alternatives. A close substitute product constrains the ability of firms in an industry to raise prices.

In general, there are no direct substitutes for higher education, as only higher education institutions are eligible to award the state-recognized higher education degrees and diplomas. However, in practice, we can distinguish two types of substitute products: vocationally oriented courses offered by various non-higher education institutions, and jobs that may be taken up by secondary school graduates. Instead of going to a university, a potential student may choose to enrol in a vocational college that offers shorter courses directly related to particular jobs or industries. The second alternative for someone with a pre-university qualification is to enter the job market instead of applying for higher education.

Vocational courses, although they do not lead to higher education diplomas, provide their students with vocational diplomas, which certify the knowledge obtained by their holders in various specializations. These schools usually target the working, mature (in Poland: “third-age”), non-traditional students who wish to upgrade their vocational qualifications. Yet some secondary school graduates may apply for these courses, in particular when they are offered at lower tuition fees than in higher education institutions, and are provided by schools in smaller, non-academic centres close to the student's home. For some potential students, who feel themselves ill-prepared for higher education, despite holding the secondary school maturity certificate, these vocationally oriented courses present an attractive way to upgrade one's professional qualifications. On the other hand, it is important to note that some of the graduates from these courses will later on apply for higher education.

To decrease the potential threat of substitutes, universities and colleges can enter substitute markets and offer similar products, like teacher-oriented courses or shorter, more vocational courses for some well-defined client groups. They can also choose to accentuate their differences from competing vocationally-oriented institutions. Differentiating their product offerings, universities and colleges may emphasize that education involves more than formal learning. They may stress the socialization process that higher education offers to its students or they may accentuate the incorporation of particular work habits or the preparation of their students for lifelong learning. In doing so, some universities stress the traditional liberal arts notion of educating the whole person. This is an experience that cannot be replicated by non-university providers.

For school leavers, taking up a job is an alternative to taking up a higher education degree program. Some secondary school graduates may receive an attractive employment offer and resign from applying for higher education. When unemployment rates among young people without a higher education degree are higher than for higher education graduates, then secondary school graduates are more inclined to consider higher education.

Certainly, neither the vocationally-oriented courses nor employment are perfect substitutes for higher education. These alternatives do not fulfill the same needs or provide the same utility as higher education.

3.6.5 Supplier/academics power

The term 'suppliers' comprises all sources of inputs that are needed to provide goods or services, such as labour, raw materials, intermediate products and other supplies. Requiring inputs leads to buyer-supplier relationships. Suppliers, if powerful, can exert an influence on a producing industry later on in the value chain, to capture some of the industry's profits (Ekelund, Tollison, 1991). For higher education, the most significant suppliers are the academics. In particular academics holding a higher scientific degree are considered the heart of the university. Without a qualified, committed and adequately compensated professoriate, no higher education institution can be fully successful (Altbach, 1991). Their activity, such as teaching and research, defines the university. Some may argue that everything else, like administrative functions, laboratories, and libraries – exists to assist the academics in their work.

The role of academics – in particular professors – has expanded considerably during the last century. They often provide expertise to industry, play political roles in many countries, serve as members of parliament, or as ministers in the government, and as opposition leaders. Some of them are engaged actively in journalistic and other writing that has a political context. These new roles provided new opportunities for academics and have significantly enhanced the

prestige and power of the academic profession, moving professoriate to a position of great importance in society (Altbach, 1991).

In recent decades, more academics have become managers of research and they control significant budgets. Similarly, academics are quite often involved in the management of higher education institutions. However, the combination of a professional status and bureaucratic constraints sometimes leads to tensions between the university as an institutional home for autonomous professionals on the one hand and the university as a bureaucratic machine, accountable to external stakeholders on the other. As universities have grown they have become more complex and bureaucratic, which limits the power of professors over the structure of governance. As universities expand, traditional forms of governance are being replaced by managers who often come from commercial companies.

The power of academics depends to a large extent on the system of employment contracts within higher education systems. When universities and colleges are autonomous in determining their individual salary scales, the faculty's power may increase, as the academics have more options. Competitive bidding among universities for talented researchers and teachers may ratchet salaries upwards. It may limit any rents that universities can earn from their faculty. Similarly, the power of faculty may increase when they see more high-paying, alternative careers outside academia. On the other hand, the way to reduce the influence of faculty on higher education institutions is the use of part-time faculty who are a cheaper source of labour because they are only compensated for their teaching or research time. Therefore, if the state regulations allow faculty to be employed in several posts simultaneously, then the academics' power is reduced.

Ultimately, the faculty bargaining power remains high, especially that of highly ranked academics, because there are no substitutes for them. For instance, in Poland, in order to provide the study programs, institutions are obliged to employ a minimum number of academics. Nevertheless, the professors' bargaining power can vary across the system. Their influence on institutions is usually higher when they are represented through unions or associations, which can express their opinions on the policies affecting academics or affect them. The academics' power is also higher when there are significant costs of switching from one supplier to another, or when academics are tenured. The power of academics is especially high when the higher education industry experiences a high profitability and barriers to entering the higher education market are low. This means that there is a credible 'forward integration' by professors, meaning that they might be tempted to establish their own higher education institution (although the fixed costs for running a higher education institution are relatively high).

3.6.6 Degree of rivalry

The last external factor identified from industry analysis is the degree of rivalry. This is a supply factor that indicates the intensity of competition between existing providers on the market. A high competitive pressure results in pressure on prices, margins, and therefore on the profitability of every single company in the industry. The intensity of rivalry for the higher education market is influenced by a number of factors, which we shall now proceed to discuss (adapted from Mansfield, 1991; Begg, Fischer and Dornbusch 1991).

(1) A large number of higher education institutions of roughly equal size and providing similar programs increases rivalry, because more providers must compete for the same student segments and inputs.

(2) A slow growth of the higher education market in terms of student numbers causes institutions to fight for market share. In an expanding market, providers are able more easily to increase their revenues and student enrolments, while a shrinking market makes rivalry more intense.

(3) High fixed costs result in economies of scale effects that increase rivalry. On a growing market, providers may have lower fixed costs because they often rent the teaching space and sign short-term employment contracts with academics. Thereby they can flexibly decrease these costs if necessary. On a mature market, providers will frequently own their buildings and equipment while in relative terms they will have more permanent staff. All of this increases their fixed costs. When total costs are mostly fixed, institutions need to enrol more students to attain the lowest unit costs.

(4) The presence of low costs to students of switching from one university to another increases rivalry. When a student can easily change university or college, there is a greater struggle to capture and hold students within the institution.

(5) A low degree of product differentiation among institutions is associated with higher levels of rivalry. As will be described in the following chapters, differentiation in higher education is to a large extent based on location, while only some very selective higher education institutions are distinguished by quality. Therefore, the more similar providers are located in one region, the higher the rivalry between them.

(6) High exit barriers place a high cost on abandoning the product, because they cause a firm to remain in an industry, even when the venture is not profitable. A well-known exit barrier is asset specificity. In the higher education industry, plant and equipment are highly specialized, and usually cannot be easily sold to other buyers in another industry.

(7) Distance learning removes the capacity constraint under which a single institution has traditionally operated. The physical facilities of a single institution need no longer limit the size of the student body.

A number of policy measures can be employed to restrain rivalry within higher education. The first one is to lobby for strict entry requirements for new entrants. The second is mergers and acquisitions. Universities can also collaborate to share expensive facilities and specialized departments. The third is the credibility of incumbent institutions' certification and accreditation processes. Because higher education is an intangible service, there has to be some external legitimacy, alongside the accreditation, that every institution has to fulfill. Some universities may organize their own standards and clubs to which they wish to adhere.

Professional or academic bodies may lobby the government for high accreditation standards, some of which may be unattainable for new entrants. Clearly, strategies that require high standards for certification, and that reinforce the value of brand names of incumbent institutions can be adopted to deter new entry and thus decrease the degree of rivalry.

According to the economic literature, rivalry is reduced on markets labelled as monopolistic competitive, such as higher education (see next chapter), the greater the differentiation in the services of providers. When the rivalry between providers is high, a provider can reduce it by engaging in product differentiation, focusing on different product segments or trying to decrease the fixed costs. This observation on strategic responses actually is quite central to the research presented in this thesis. Chapter 6 discusses the strategies available to higher education institutions, given the various institutional arrangements, demand factors and supply factors they face.

3.7 Summary

This chapter has presented some preliminary insights into the basic building blocks of the analytical model that we wish to apply to the study of higher education developments in Poland. We have outlined elements of the institutional framework, including the various dimensions of marketization policies. The second part of this chapter presented the five forces identified in industry analysis as key factors explaining the conduct and performance of organizations. Both the institutional arrangements and the basic demand and supply factors shape the room that higher education institutions have to manoeuvre and determine their development as they react to student flows, funding flows, competing providers, et cetera. We shall concentrate on an explanation of the responses of universities and colleges to changing laws and regulatory frameworks, as well as the changes in the market structure.

In the next chapter we proceed with an important aspect of the institutional arrangements, namely the barriers to entry, and see how these affect the behaviour of higher education providers – in particular their price setting.

4 Monopolistic competition and price setting in higher education

4.1 Introduction

In this chapter we present an economic model of the university, a model that takes account of the special characteristics of the higher education market. This provides the basis for further analysis of the effects of the implementation of market mechanisms. One of those characteristics is the barrier to entry that many a new education provider will face when it considers entering the higher education market.

Section 4.2 argues that the market for higher education has special characteristics that conform to a situation of *monopolistic competition*. The section that follows (4.3) looks at the nature of competition and introduces the *micro-economic theory of non-profits*, which may be used to predict the responses of higher education providers to changes in both their institutional and their market environment. One of the potential changes in the institutional environment is the introduction by the state of market-type elements in the higher education system. This topic, introduced earlier in section 3.5, is now discussed further in section 4.4. First of all, the consequences of a removal of state subsidies are discussed (4.4.1), followed, in section 4.4.2, by another barrier to entry (freedom for private competitors to enter the market). Both elements are analyzed to predict the providers' reaction in terms of the prices they set (tuition fees) and the volume of student places they offer to their clients (i.e. the students).

4.2 Monopolistic competition

The characteristics of the higher education market do not meet the conditions for a perfectly competitive market. There are four conditions that define perfect competition. Perfectly competitive firms face a horizontal demand curve and, consequently, can be described as price takers. This implies that each provider on the market is so small that he is unable to affect the market price by changing his output. Second, the product of each provider must be identical to the product of any other provider, which means that the buyers in the market have no preference for a particular provider. Third, perfect competition requires that the providers have the freedom to enter and exit the market. There should be no entry barriers for new entrants and the incumbent providers should be able to terminate their business. Finally, the fourth condition refers to the availability of perfect information among all players on the market. This information is about

the prices, quantities and qualities of the products and services supplied and demanded (Mansfield, 1991; Ekelund, Tollison, 1991; Samuelson, Nordhaus 1992; Milgrom, Roberts 1992).

The theory of perfectly competitive markets is built on two fundamental assumptions. The first is related to the behaviour of the individual firm, which has no influence over the price and accepts the prices determined by market. The second assumption is about the nature of the environment in which the firm operates. This implies that existing firms cannot prohibit the entry of new competitors and there are no legal barriers to entry (Leslie, Johnson, 1974). The opposite limiting case of market structure on the supply side is a pure monopoly. The monopolist is the sole supplier on the market, which means it needs take no account of new entrants to the industry. The monopolist is a price setter. The economic literature concludes that perfect competition and monopoly are extreme cases and are developed as analytical tools (Leslie, Johnson, 1974; Begg, Fischer, Dornbusch, 1991, Mansfield, 1991). In reality, most markets lie somewhere in between these two extremes.

Let us now look at the higher education market. At the outset, we note that the higher education market does not meet the four conditions of perfect competition. So what is the nature of competition in higher education?

First, higher education is best characterized as many submarkets/segments which to some extent are coterminous with regional boundaries. Only the prestigious, high quality universities may be considered national players, attracting the best students from the whole country (see Hoxby, 1997, 2002). The medium-quality providers and providers that have only few selection hurdles for new entrants cater more to a regional clientele. The geographic factor is found to be the key predictor of whether the student will attend higher education and which university or college he or she will attend (Hoenack, 1971; Hoenack, Weiler, 1976; McClain, Vance, Wood, 1984; Kohn, Manski, Mundel, 1976; Douvan, Kay, 1962, Hoxby, 1997, 2002). The location of a university affects the transportation and living costs that many students need to take into account. According to national data in the U.S. Department of Education, in the fall of 1988, over 80 percent of first year students were enrolled in a college or university in the same state in which they previously resided. This percentage remained stable over the next two decades (Rothschild, White, 1995; Hoxby, 1997). This is why some higher education institutions locate themselves in a particular demand niche – both in content terms and physically – and try to satisfy the demand only for the students in that niche.

For simplification, we assume that the commodity sold in higher education is enrolment space, i.e. student places. Considering again the medium quality higher education institutions, their enrolment spaces can be labelled to a large

extent as homogeneous products or services. In this case the enrolment spaces are differentiated mostly by the geographical factors mentioned above, including such items as distance to the university, transportation and living costs. This assumes that product quality (i.e. education quality) plays a limited role in determining student choice. Quality differences in enrolment space are important only to some students, who do consider institutional prestige, faculty quality, program offerings, and entrance requirements.

Therefore, the nature of competition between higher education providers is different from the perfect competition among firms on traditional markets. Competition between universities and colleges appears to have two dimensions: a geographic-space and a product-space dimension (Hoxby, 1997). For instance, in the market for undergraduate students, Harvard and Stanford probably compete for roughly the same pool of students. Universities with lesser prestige are likely to compete among themselves on a regional basis, for regional students. The lure of a 'national brand' is less important for students in this market segment, and the costs associated with location are considered more important. Universities usually compete most intensely with universities in their own quality segment (Rothschild, White, 1990). The universities and colleges that base their differentiation to a large extent on location can influence their enrolment share to a limited extent by changing their price relative to that of their competitors. Their demand curves are not horizontal but have a slightly downward slope. If higher education institutions can charge tuition fees for some groups of students, they will set their own price, depending upon their location and the prices charged by similar institutions. On the other end, the most prestigious, selective higher education institutions compete on the basis of quality. Therefore, the competition between high-level universities is largely of the non-price variety. Nevertheless, they have to observe the prices charged by 'national interest' universities of similar quality.

Secondly, the higher education market faces asymmetry of information, due to the 'experience' character of higher education good (see section 3.3). The higher education market therefore requires government intervention in the shape of sound accreditation and quality control procedures, to protect the students from being short-changed by education providers.

Thirdly, to complete the understanding of the higher education market we look at the potential competition from new institutions on the market. Economists distinguish between natural entry barriers and those deliberately created by incumbent firms or by government. The former entry barriers emerge because of the economies of scale. The costs of providing education will differ across different programs. Programs like physics, biology, chemistry, and engineering require a diverse array of scientific equipment, which raises the cost of providing instruction and research. The social sciences and humanities, as well as a broad

variety of business and management studies, demand far less investment. However, these 'low cost' programs still need considerable support facilities, such as libraries and computer equipment. For these reasons, the fixed costs for providers of higher education are relatively high, regardless of the type of program. The literature advances numerous studies which show that, in order to start new program, some minimum student number is required. Leslie and Johnson (1974) suggest that 'Regarding specifically the entrance of new institutions into a given market, perhaps the simple most significant barrier is the size of the market itself, which is limited largely by the number of in-state college age students and by existing statewide institutional capacity'.

Therefore, there are financial barriers to entry into the higher education market. The lower the financial entry barriers, the higher the potential new entry into the market. Beyond the natural barriers to entry, the government or the incumbent institutions impose additional barriers or constraints to deter or even prevent new providers from entering the market. This may be done for very noble reasons, such as guaranteeing the quality of higher education and protecting the students. This is why in many countries only the public institutions are recognized higher education providers while in some other countries private institutions can only enter the market after meeting specific requirements. Erecting barriers to entry, however, is sometimes advocated by incumbent providers in order to protect their market share and prevent competition. Incumbents will sometimes resort to political pressure in support of their case.

The foregoing considerations suggest that the market type that best characterises higher education may be labelled as *monopolistic competition*. In a situation of monopolistic competition the market has many small and medium-sized providers, whose decisions have a relatively low impact on the market. The difference between the monopolistic form and the pure form of competition is that in the first each firm faces a downward sloping demand curve. Monopolistic competition refers to a situation in which an enterprise can to some extent influence its market share by changing its price relative to its competitors. The key characteristic for industries in a monopolistic competition environment is product differentiation. In the case of higher education, product differentiation for providers may be based on location, while for others it will be based on program diversity and program quality. Universities, acting like local monopolies, are partly pricing their services at monopoly levels, which affords them room to subsidise some of their services. In the next sections we show that the universities' prices are generating explicit or implicit rents. Only in some cases will universities set prices at a lower level, thus eliminating the rents and causing some of their competitors to leave the market.

There is a difference between the pure theoretical concept of monopolistic competition and the situation of the higher education market. Monopolistic

competition requires not only product differentiation but also limited opportunities for economies of scale and no barriers to entry and exit, whereas economies of scale and various legal barriers to entry play important roles in higher education. We deal with this special feature of the higher education market here. We analyse how a more competitive institutional framework for higher education impacts the differentiation and pricing policies of the various providers, taking account of their non-profit status. The non-profit status – which is a given for public providers, but which is also a characteristic of most private providers – is important, because it implies that providers will use any profits (or rents) they make for internal purposes only and cannot distribute their profit to shareholders.

In the remainder of this chapter we discuss the outcomes of such marketization policies, the dimensions of which were given in the previous chapter. First we will show that, when the barriers to entry into the higher education market are relatively low and the institutional arrangements promote competition between providers for resources, universities and colleges will expand enrolment and decrease tuition fees, particularly for high demand study programs. We explain this phenomenon using the microeconomic theory of non-profit enterprises (James, 1986; Massy 2004). Secondly, using the work of Zumeta and Thompson (2001), we look at the competitive advantage of private higher education institutions in light of the private-public tuition gap, defined as the difference between the average tuition fee charged by public providers and the fee charged by private ones.

4.3 The micro-economic theory of non-profit organisations

According to Wolf (1993), markets link the costs of producing or conducting an activity to the income or benefit that sustains it. This link can be provided in the form of the price charged by the producer. In a profit-motivated enterprise, financial performance provides clear feedback relating to the ability of the enterprise to compete efficiently and effectively for consumer preferences. In public (non-market) organisations the link is weak, because the organisations are financed by the state or receive their income from various non-price sources. They do not operate under the profit motive and their income is received mainly in the form of government subsidies. Furthermore, there is often an absence of the market incentives that drive institutions to evaluate what they do as well as how they do it.

The market imposes on organisations the need to carefully watch and where possible reduce lower their costs over time and to expand production, because of the actual or potential threat of competition and because of the additional profits this will bring to the organisation. There is lack of such incentives in the non-

market field. This combination of characteristics may bring along an increased risk of misallocation of resources. Public higher education systems may therefore be inefficient when competition on the market is weak.

Let us look now at what will change if the institutional framework were to allow new providers to enter the market and increase competition or, in general, increase the reliance on market forces as shown in section 3.5. We do so using an approach derived from Estelle James and taken further by William Massy. These American authors developed the microeconomic theory of non-profit enterprises, which they applied to higher education institutions (James, 1986; Massy, 1996, 2003, 2004). While a normal for-profit firm will strive to maximize profit, a non-profit firm tries to maximize utility. Utility is the amount of value that the non-profit contributes to society, as laid out in its mission. Utility is subjective in character, while profit would be something that could be determined objectively. Certainly, a non-profit would need to maintain a balance between revenues and expenditures, on average, or it would cease to exist. Non-profits, like universities and colleges, serve altruistic purposes rather than profit-maximizing ones. They have a social responsibility mission and their objective is to 'maximize a subjectively determined value function by adjusting outputs and output prices, subject to the market, production, and financial constraints'. Let us now for the moment assume that the higher education institution's mission is to supply education (i.e. student places) by providing a set of different educational programs that each have a particular capacity. For-profit organisations, in order to maximize their profits, would expand their output as long as the extra revenue exceeds the extra cost. They would increase the supply of student places up to situation, when the cost of providing one additional student place (the *unit cost*) is exactly equal to the revenue this brings to the organisation (the *price*). This is the familiar economic rule of 'marginal revenue equals marginal cost' (MR=MC). In not-for-profits, the decision rule is extended to also contain 'marginal value'. Marginal value (MV) is the 'incremental contribution to mission attainment, expressed in dollar equivalent unit'. The non-profit decision rule is modified to:

$$MV+MR=MC$$

This rule must hold for each of the institution's many outputs. The equation balances two kinds of value on the left with the cost of producing that value on the right. MV represents intrinsic value, or value for the output's own sake. MR represents the sales revenue generated, which can be used for any institutional purpose. A program or activity will be established or expanded as long as $MV+MR>MC$. It is important to note that MV is stated in monetary terms to put it in line with MR and MC. It is the extra utility obtained from a change in output divided by the marginal utility of money (Massy, 1996, p. 69).

A non-profit firm is prohibited by law from paying out any positive margins (i.e. the surplus between revenue and cost) to their owners or stakeholders. This is known as the 'non-distribution constraint'. For this reason they spend any positive margins as cross-subsidies to maintain other activities that cannot survive on their own, but that produce a 'value' for the institution. Activities with a positive margin provide cross-subsidies for other less-profitable activities. They are ploughed back into the organisation rather than distributed to shareholders. Cross subsidising, or discretionary spending, for instance, means that a university is transferring profits generated from a popular economics course to an ailing literature program. Without cross-subsidies the institution would have no way to further its own values as opposed to following the market. The literature program is of value to the institution, but for the program marginal revenue falls short of marginal cost: $MR < MC$. Apart from positive contribution margins, cross-subsidies can also be funded from fixed revenue, such as income generated from government appropriations, from endowments, or donations from private sponsors.

Let us now assume a situation in a higher education system where reliance on market forces is low and the universities' revenues largely depend on state subsidies. In addition there are barriers to the entry of new (private) providers. Suppose the institution has a program that is essential in terms of its mission and is trying to expand the program, even though its marginal costs exceed marginal revenue. This means that the program would require more resources than are recouped in revenue: $MC > MR$. The marginal value is maximized when the marginal value of an output equals minus the output's contribution margin:

$$MV = -(MR - MC)$$

This shows that mission-critical programs' contribution margin is negative and its marginal value is positive. The university is cross subsidising the program from the profits earned on programs with positive contribution margins. Now suppose the university's fixed state revenue is large enough for it to subsidise all its programs and activities and have all marginal values positive or equal to zero. No program needs cross-subsidies and no program need cross subsidise any other. The university has no incentives to expand the programs that can have their $MR > MC$ (i.e. a positive contribution margin) or trim the costs in programs with a negative contribution margin ($MR < MC$). The fixed revenue is high enough to subsidise the mission-critical programs, without drawing on the institution's cross-subsidy pool.

As noted above, the program will be expanded only if $MV + MR > MC$, that is if $MV > MC - MR$. In this case the university will increase the number of students in the program up to the moment that $MV = 0$ when $MC = MR$. This means that some programs, like literature, physics and others that are not in high demand, operate

with MV positive and $MC > MR$, and other programs, such as business, accountancy, or law, are expanded by the university only up to the point where MV is zero, and $MR = MC$.

Higher education institutions can either be price takers or price makers. Institutions without market power accept the prices on the market and those with market power can set their own prices. Consider a national higher education market that consists mostly of medium and low selective public universities and colleges, which receive fixed revenue from the state. These kinds of institutions are to a large extent local monopolies. However, the students, if very dissatisfied, can move to another city to study at another university. In this case the price competition does not play a significant role; universities rather compete first on the basis of place and secondly on the basis of quality of their product. 'Sticker price is a blunt competitive instrument and price wars produce long-lasting negative effects' (Massy, 2004, p.21). We may assume that universities behave like price setters and can raise tuition fees as long as they stay under the pricing umbrella of other, similar quality universities. Beyond some hypothetical price they are more accurately described as price takers. Usually only the most prestigious, highly selective, high quality higher education institutions can be labelled price makers. The rest will behave according to the rule described above.

In many European countries, public universities and colleges cannot set tuition fees. However, for the purpose of this study, which explains the development of higher education in Poland, we assume that higher education institutions charge tuition fees and are free to set the level of tuition fees. This assumption reflects the situation in the private arms of public institutions in Poland, where part-time and evening studies are offered and tuition fees are charged. As mentioned in chapter 1, part-time students account for almost sixty percent of all students in Poland, representing the greater part of the Polish higher education market.

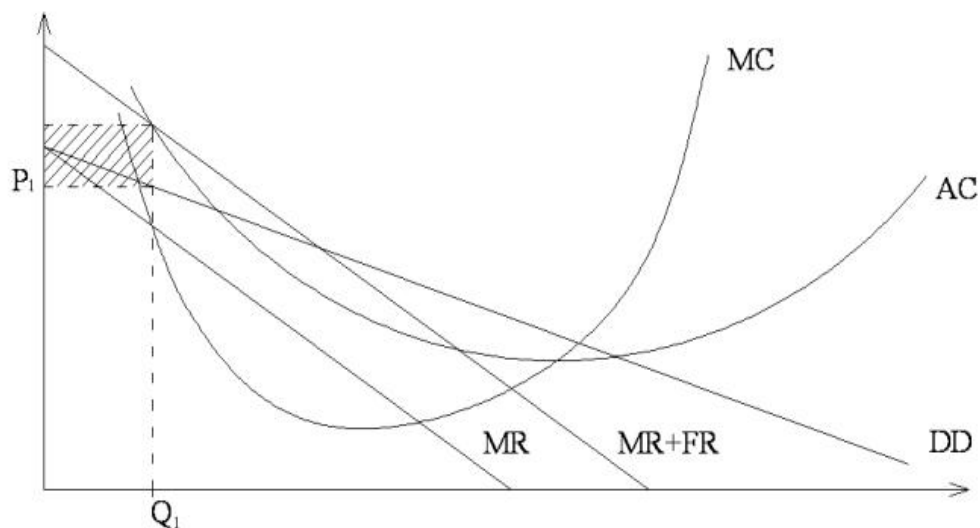
Let us now take two different programs in a medium quality and 'medium market power' university. One is a mission-critical program, like literature, that has $MC > MR$ because of insufficient demand. The other is business studies, where demand is high, which has $MC = MR$. The demand curve for business studies is nearly horizontal, due to the high demand constrained by the prices that are set on the market. At the opposite extreme the literature program faces a vertical demand curve. This starts from some reasonable cost, which students are willing to pay for literature studies. From what we have learned so far, the university will expand the business studies to the level where $MV = 0$, and will offer literature studies, where $MV > 0$, because of the weak demand. Figure 4.1 (business studies) and 4.2 (literature) show the university's supply decisions.

In figure 4.1, the Y axis shows the prices, revenues and costs. The X axis shows the number of students enrolled. Given its demand curve DD and marginal

revenue curve MR, the university will enrol Q_1 number of students where $MC=MR$. The program will not be expanded further; it is enlarged only when $MV+MR>MC$, to the point where $MV=0$, and $MV=0$ at (P_1, Q_1) . The university behaves this way because there is no need for cross-subsidies inside the institution, so the university does not have to make a profit on business studies. In fact the university is making a loss on business studies (marked rectangle in figure 4.1), as for Q_1 the AC is higher than DD. However, the university is subsidising the program through discretionary spending from fixed revenue, which shifts its MR curve for business studies to $MR+FR$.

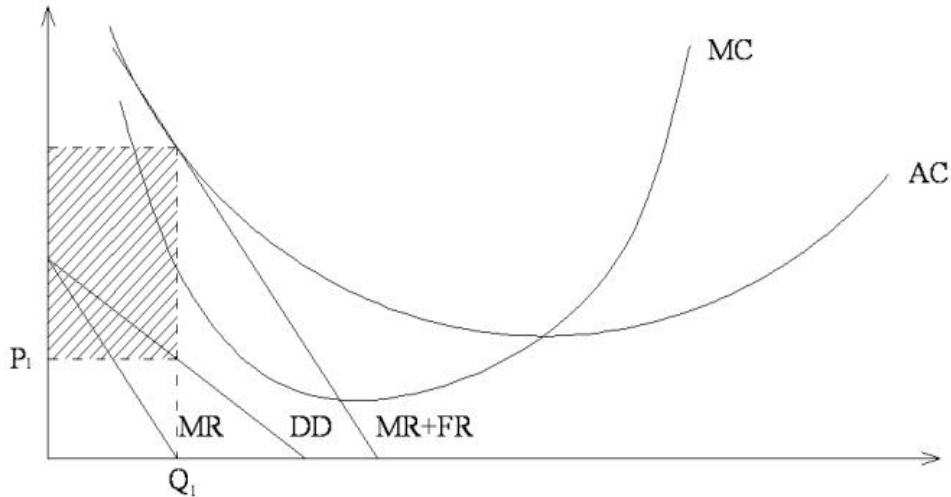
In figure 4.2, the literature program, given the insufficient demand for literature DD, the university expands the program to enrol Q_1 at a tuition fee P_1 where $MC>MR$, thus MV is positive. The university is subsidising the program through discretionary spending from fixed revenue, which as described above, shifts MR curve for literature studies to $MR+FR$.

Figure 4.1: Equilibrium for business studies in a monopolistic competition situation



Source: own analysis after Begg *et al.* (1991)

Figure 4.2: Equilibrium for the literature program in a monopolistic competition situation



Source: own analysis after Begg *et al.* (1991)

4.4 A case of institutional reform: removing state subsidies

In this section we continue the example presented in the previous section, but we introduce a case of institutional reform. Instead of a higher education market with state subsidies, we now assume that the higher education institution's fixed revenue is erased. The university receives its resources in the form of tuition fees charged to students. This institutional change increases the reliance on market mechanisms in terms of sources of revenue (see section 3.5 table 3.3). The discretionary spending on mission-critical programs can only be funded from the positive contribution margins of other programs. This implies that in order to expand the literature program, the university needs to generate a profit from other programs. The institution can either decrease the costs of profitable programs, increase prices, or enrol more students. In a monopolistic competition situation, each enterprise can influence its market share – in the case of universities: student numbers – to some extent by changing its price relative to competitors (Begg, Fischer, Dornbusch, 1991). Monopolistic competitive industries engage in product differentiation. In the case of higher education, for the medium quality universities, this differentiation is based to a large extent on location. However, if one university raises its tuition fees too much, other universities and colleges will lure away some of its students. Suppose that universities are not willing to lower the costs in the business studies department. They can then either raise prices or expand the enrolment in business studies. The

decision-makers (that is: the university's board and/or its deans) are aware that if they choose to raise prices instead of enrolment and the competitors choose a high-output strategy, without raising their prices, they will lose a significant share of their market. The economics literature suggests that in this case the institutions can seek an explicit or implicit agreement with their competitors in order to avoid competition and restrict the risk of decreasing revenues. This collusion or co-operation between firms is easiest if the formal agreements are legally permitted. In practice, such cartels are outlawed in Europe, the United States and many other countries. Nevertheless, courts have revealed many such instances of 'gentlemen's agreements' between companies.

According to Rothschild and White (1995), the university deans will pay attention to the tuition levels of universities and colleges in similar locations and similar prestige classes and "are concerned that their own tuition levels not diverge appreciably from those of their rivals." They provide an example from the United States, where the U.S. Department of Justice's Antitrust Division in the late 1980s investigated alleged meetings by university administrators from at least 23 prestigious East Coast colleges and universities. These administrators met annually to agree on scholarship packages that would be offered to prospective students and on tuition levels charged. Their participants apparently feared that without these meetings the universities might be dragged into a price war. Another 33 universities and colleges were under similar investigation at the same time. Within those groups, the universities and colleges perceived one another as direct competitors and were concerned to restrain price competition (Rothschild, White, 1995). Additionally, in May 1991 the Justice Department of the United States formally charged eight Ivy League schools and Massachusetts Institute of Technology with price fixing. This provides some indirect support for the claim of price competition between universities.

Recalling Begg et. al. (1991) collusion is harder if there exist many firms in the industry, if the product is not standardized, and if demand and cost conditions are changing rapidly. Not all of these conditions are met in our example; we have public institutions, which enjoy local monopoly, their cost curves are similar, because the number of academics for each program and their wages are to a large extent set by government, and the product is highly standardized. To show why the institutions will choose to cooperate we use game theory (Mansfield, 1991; Samuelson, Nordhaus, 1992). In this game, each player must choose a strategy for the level of output and prices. In our example, in order to subsidise the mission-critical programs with low demand, each public university has to make profits on study programs that are in high demand. Figure 4.3 shows a game between two universities that have to choose a strategy after their fixed revenues were erased.

The first number in each box indicates profits to university A, the second to university B. If A chooses high or low output, B earns more profits going high, and conversely. If they do not know the other player's decision, both go high and make a profit of 1, but if they co-operate they will both choose low and make a greater profit of 2.

Figure 4.3: The prisoners' dilemma game²

		University B's output			
		High		Low	
University A's output	High	1	1	3	0
	Low	0	3	2	2

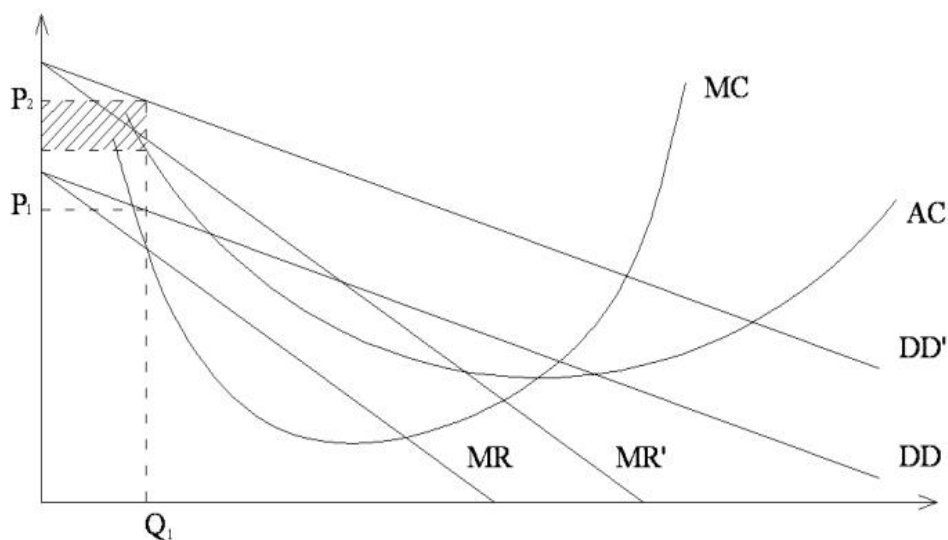
Source: own analysis after Begg et al. (1991)

Suppose that the universities do not engage in a collusive monopoly. In both, the managers know that if they choose low output and high prices, the competitor will choose inversely and reap all the profits, because many students will move to the competitor and choose to pay lower tuition fees. So they both decide to increase enrolment and leave the price at the same level. Consequently, both will make a profit of 1. However, suppose that universities are local monopolies and that other universities cannot enter the market. In this case, when both institutions had a low output before, the outcome is likely to be a collusive monopoly. The universities promise each other that they will keep their enrolment low and both will raise their price. In this case, the students are forced to accept the new prices, because they do not have the option of choosing other universities with low tuition fees. Each institution earns a profit of 2. For simplicity there are only two higher education institutions in our example, but the agreement can easily be expanded to more institutions. However, the more providers there are on the market and the lower the barriers to entry, the less realistic is collusion. To illustrate this, see figure 4.4. The Y axis shows the prices, revenues and costs. The X axis shows the number of students enrolled. Institutions agree to not increase the enrolment level, but to increase prices. Thus the new equilibrium will move from (P_1, Q_1) to (P_2, Q_1) . Compared to figure 4.1, the student demand curve shifts from DD to DD' because business studies is very

² The game is called the Prisoners' Dilemma because it was used for the first time to analyze the situation of two prisoners in two different cells. They can plead guilty or not guilty to the only crime that had been committed. The prisoners would plead not guilty only if they knew that other would plead guilty.

popular and students are willing to pay a high price for the program. The students could choose the other university with lower prices, but they face the same price increases at every institution. The universities make excessive profits (marked rectangle in the figure 4.4) and can cross subsidise their mission-critical programs. However, now their MV for business program is negative, because revenues from tuition fees exceed costs for business program. There is no possibility for a new provider to enter the market, because the private providers are not allowed to operate.

Figure 4.4: The equilibrium for monopolistic collusion in business studies



Source: own analysis after Begg *et al.* (1991)

In figures 4.1, 4.2 and 4.4 we see that the marginal cost curves first decline and then start to increase. This means that there are initial economies of scale. Even in programs that are perceived as 'low cost', like business or other traditional humanities' disciplines, the university has to incur significant costs to establish such a program. The price of qualified academic faculty is expensive and there is often also a need to provide students with extensive libraries and computing facilities. For these reasons, the fixed costs of expanding the program are relatively high and therefore the marginal costs of one more student enrolling will be declining. Marginal costs decline more slowly where the economies of scale become less important for the university and then, starting from a particular output level, the marginal costs will increase. The main reason for diseconomies of scale is that the management of the company – in our case: the university and its faculty – becomes more difficult as enrolments increase. Moreover, the program needs extra classrooms, computer facilities, more extensive libraries, etc.

However, the increasing marginal costs are not only a result of space and facility constraints, but are also caused by the higher quality services the institutions have to offer to attract new students. To demonstrate this relation let us look at the work of Zumeta and Thompson (1981).

Zumeta and Thompson devoted much effort to both empirical analysis and theoretical speculations about institutional cost behaviour. They do not produce consistent conclusions about the nature of marginal cost in higher education institutions (Zumeta, Thompson, 1981). Some empirical studies found increasing marginal costs, others found that marginal costs raise as enrolments increase. Zumeta and Thompson (1981) proved that both results are correct and can be derived from equally plausible assumptions, because the shape of the marginal cost curve for a particular program depends not only on the supply characteristics of institutions but also on the student demand for the particular program. They showed that when there is a high student demand or demand is increasing, institutions can provide the same set of educational services for an increased number of students at a decreasing marginal cost. On the other hand, when higher education institutions face a decrease in student demand, they can increase enrolments only by providing better quality or by expanding student financial aid. This entails additional costs and therefore the university faces increasing marginal cost per student.

In our model, higher education institutions face a high student demand for business studies and they can increase their enrolment at a decreasing cost per student. However, they can take cost advantage of newly enrolled students only up to some level of enrolment, because of two sets of constraints. These are the insufficient capacity of the institution to provide services for more students and the increasing marginal costs under given demand conditions.

It should be noted that we are aware of the multi-dimensional nature of the higher education production set. However, for the purpose of this study we consider only one dimension of output, instruction. We assume that the main output of universities and colleges is student enrolment, which is the case for many Polish higher education institutions. In analysing the effect of size on unit costs we assume that the output of higher education institutions consists entirely of student enrolments. There are studies that have examined economies of scale and scope in higher education, taking into account the multi-product nature of production and costs in higher education (DeGroot, McMahan, Volkwein, 1991; Dunder, Lewis 1995). Some have concluded that product-specific economies of scale exist in particular for undergraduate and graduate instruction, and that an increase of these outputs independently of other outputs will result in an increase of efficiency. Nevertheless, there are some differences between single and multi-product analyses, as there are economies of scale associated with the composition

of outputs. There may be cost advantages associated with the simultaneous production of multiple products (see: Dundar, Lewis 1995).

The MR curves lie below the DD curves, because from the extra student enrolled we must subtract the loss in revenue from existing students. The demand curves slope slightly downward because there is a high demand for business studies (our example). The university is able to enrol more students only by slightly decreasing prices. On the other hand, if the price rises slightly, the demand falls insignificantly. The demand curve behaves like this because if the university charges much higher prices then students will move to another university. This implies that the university is more of a price taker than a price setter.

4.5 A case of institutional reform: removing barriers to entry

This section analyses a second case of market-based institutional reform. We investigate the behaviour of universities on a market without barriers to the entry of new providers. The new providers are private higher education institutions. Introducing such market-type mechanisms is supposed to exert a downward pressure on prices. However, Massy (2004) points at structural factors and the reluctance of universities to engage in price wars. He describes the situation in the United States, where elite private institutions provide a strong pricing umbrella for the rest of the higher education institutions. Elite private institutions receive great endowments, which enable them to offer generous scholarships to the best students, who would not be able to pay the high tuition fees. Tuition price setting by highly selective universities is compared to a shell game (Alexander, 1998). The university raises its official tuition price, the higher tuition qualifies many students for bigger federal and state grants, which are passed on to the school, the university grants a scholarship to cover the rest of the tuition price rise, so many students don't actually pay more. This is made possible because the federal grants system that provides financial aid to college students is based on a formula that increases grants when tuition is higher. This is not the only reason why tuition fees are on the rise in selective universities and colleges. High tuition carries prestige, especially at top schools, and huge scholarships are a powerful tool to attract the best students. In the United States, most selective universities and colleges have always been aggressive about raising published prices to attract the best students and maximize what they receive from the federal and state grants. Other, less elite private and public institutions are doing the same to the extent they can. The market allows them to increase the tuition fees as long as they are lower than the fees charged by elite institutions, meaning 'as long as they stay under the pricing umbrella' (Massy, 2004). Therefore, the high-pricing strategies of elite institutions influence and determine the situation on the whole market, and prices are not pushed downward by market mechanisms.

In our non-US analysis the pricing umbrella is provided not by the endowments and grants but by the fixed revenues provided by the state to public higher education institutions. These grants affect the prices charged on the market. However, we take the case where state funds do not increase when the institution raises its tuition fees and, in addition, we also assume that there is no substantial endowment income for higher education institutions or donations from the private sector. This situation reflects much of the world outside the US.

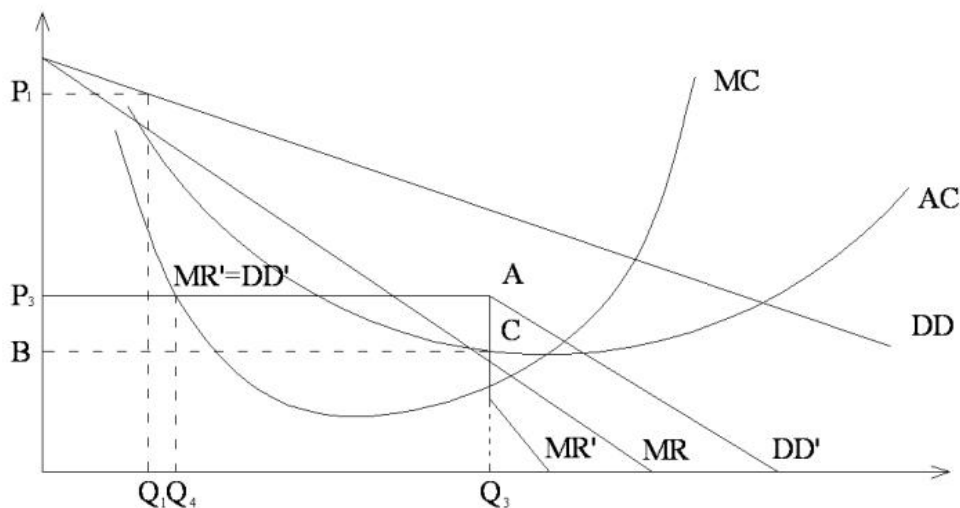
Suppose that private higher education institutions can enter the higher education market. The public universities receive a fixed revenue from government appropriations and behave in the way described in figures 4.1 and 4.2. Private institutions detect a high demand for some programs and look at the prices and costs of delivering these programs. They note that public institutions do not expand the programs beyond the ideal size, judged against the program's marginal value and profitable status. They decide to enter the market, attracted by the profits. This is illustrated in figure 4.5. Suppose that compared to their public counterparts, private universities face similar MC and AC for these programs. Suppose too that students place the same value on the programs offered by the private institutions. This means that private institutions are not very different from their public counterparts in terms of study offer, selectiveness, prestige or reputation. The shape of the MC and AC curves is as before.

Therefore, when new institutions enter the market, the shape of the aggregate demand curve for the program will change, from DD to DD'. We now have a kinked demand curve. This implies a change in the shape of the MR curve. As illustrated in the prisoners' dilemma game referred to above, institutions on the market know that their price cut will be matched by other institutions on the market. On the other hand, an increase in prices will elicit little or no response from other players. Since the competitors do not follow the price increase, the price rise will lead to a substantial loss of market share to other institutions, and a price decrease will not lead to an enrolment increase. In figure 4.5 the price being charged is P_3 and output is Q_3 , however only for private providers. As we can see, the market demand curve DD' facing the providers has a 'kink' in it. The slope of the upper portion of DD', reflects the assumption that if the provider raises its price, no rival will follow the price increase. The lower portion of DD' is based on the assumption that rivals will match the price decline. Thus the provider loses sales if it raises prices above P_3 and does not gain sales if it lowers price below P_3 . Because of the 'kink' in the demand curve, the marginal revenue curve is not continuous. It consists of two segments. Given the higher education providers marginal cost curve as MC, we can see that the Q_3 is the most profitable number of students enrolled. Moreover, Q_3 remains also the most profitable enrolment number and P_3 the most profitable price even if the marginal cost curve shifts up considerably. It remains the most profitable enrolment number if the MC shifts to

the point A. Hence, under these circumstances, we might expect price to be quite rigid.

Thus, the new equilibrium in a competitive higher education market with fixed state subsidies for public institutions will be at A. The private competitors will enrol Q_3 students at tuition P_3 . The public institution will charge the same price, but enrol fewer students (Q_4), because it expands the program only when $MV > 0$. The program is subsidised from fixed revenue. The private providers are making a profit of AP_3BC .

Figure 4.5: The kinked demand curve.



Source: own analysis after Begg *et al.* (1991)

Higher education institutions set the price at P_3 . The private universities decide to expand the business studies and set their output level where $MC=MR'$, and price exceeds AC . At equilibrium the price P_3 is lower than P_1 and forces public institutions to adjust their tuition fees, because otherwise the student would choose the private institutions. The public provider can lower its tuition fees and adjust enrolment to the new $MC=MR'$, thanks to its decision rule which contains MV . The loss from the lower price is compensated from the fixed revenue. The public institutions do not have an incentive to increase their enrolment to a level where the marginal value is negative (Massy, 2004).

It must be noted, that this model does not tell us how the providers adapt to the situation where MC is above the gap of MR' (in the figure 4.5). We may assume, that if cost rises for whole higher education industry and MC intersects the line $DD' = MR'$ private providers will try to increase the price in order to not to go

bankrupt. Such move is probable, in case when the cost rises for industry as a whole. In this case, the demand curve will shift upward, as students could choose the other university with lower prices, but they face the same price increases at every institution. However, in case of the cost increase for individual provider, which shifts its MC above the MR', there is more indication that an increase in its price will not be matched by other higher education providers, and the provider can lose students and go bankrupt. In the higher education market, with state subsidies channelled only to limited number of institutions the situation will be more complicated when MC exceeds MR for industry as a whole. This situation will be analyzed in section 4.6.2.

Naturally, there are institutions on the market that can be considered as price setters. However, this is possible only for the institutions that pursue a differentiation strategy and offer unique, or high quality courses. According to Zumeta (2001), "The more the institution differentiates its products, the more insulated demand for its product is from the behaviour of other institutions, the steeper the slope of its demand curves, and the greater its market power". However, most private institutions, especially the low or non-selective ones, are not very different from their public and private counterparts. They will follow the low cost strategy and try to attract the students by offering low cost study courses, usually in high demand study fields. The shape of the student demand curve for such non-distinctive institutions can thus be characterized as a kinked demand curve.

In a pure competitive market the long-run equilibrium holds when each firm produces on its AC and makes only normal profits, so there are no incentives for new entry into the market. In the above case it would be where AC equals DD'. However, we have to bear in mind that there are financial, legal and political barriers to both entry and exit and economies of scale in higher education. Moreover, the size of the higher education market itself limits the number of local higher education institutions. In our case, no new entrant is likely to appear on the higher education market, because it would shift the demand curve downwards and cause all competitors to book losses. This proposition assumes that universities' prices are generating explicit rents and that there is a lower set of prices that would eliminate the rents and generate only normal profits.

On such markets, where public institutions receive sufficient state subsidies in order to cross-subsidise mission value programs, the private sector's main task will be to cater for the unmet student demand (see chapter 2). Public institutions will not be interested in expanding their enrolment and thus will leave a part of the market to private institutions. Private providers, by generating explicit rents, will be able to develop study courses that generate a loss for the institution, due to low demand. However, private providers in order to expand their enrolment will have to adopt a low or non-selective admission policy, and thus will attract

mainly students that are less academically qualified and are from less affluent families. Public institutions, by setting limits for the number of students that will be admitted, may adopt a more selective admission policy and gain students that are better academically qualified. These are likely to be students from more well-to-do families.

Let us assume once again that fixed revenue from the state to public universities is erased. This means that reliance on market forces is increased in two ways. In terms of the marketization dimensions that were presented in table 3.3, our example now includes two marketization criteria: more private sources of revenue and ownership that is less public in character. In order to cross-subsidise their mission-critical programs, public providers will have to make profits on other programs. Therefore, the public institutions will decide to expand the enrolment on programs like business studies. What will happen to our equilibrium? The public university increases enrolment from Q_1 to Q_4 (see figure 4.5), which will not affect the price. As a result, the total enrolment in high demand programs will be expanded and the average costs in public universities will decrease for this particular program, allowing the institution to improve its contribution margin (but having a negative marginal value).

There is a danger that putting the university on a severe 'revenue diet' by decreasing state subsidies (or even eliminating them) will undermine its ability to serve the public good and maintain its low-demand study programs (James, 1996; Massy, 1997, 2004). Basic research may suffer, too. Institutions deprived of non-tuition sources of revenue will trim their cross-subsidies when the tuition surpluses from the high demand courses become insufficient. First, any 'non-essential' activity that the institution developed during the time it still received state subsidies will be terminated. Then the institution will evaluate all its programs, identifying the low-priority ones. It will shift cross-subsidies towards higher priority programs. However, in extreme cases, universities will not be able to discharge their public value duty and will be forced to close the low-demand mission-oriented programs. Thus, erasing non-tuition sources of revenue will undermine the institutions' ability to serve the public good. This will be explained more fully below, using the non-profit decision rule.

Our next proposition is that private higher education institutions' marginal cost and average cost curves lie beneath the public's MC and AC curves. This implies, among other things, that privates place more emphasis on the costs of providing a program. The more efficiently they can teach, the more money they can shift to activities preferred by their managers, like scholarships for faculty, new buildings, or computer facilities. However, even if this proposition is valid, it will probably not change the enrolment and prices on the market. The public's marginal costs provide a pricing umbrella for the rest of higher education. The

privates will enrol the same number of students for the same price, having lower costs. As a consequence they can reap bigger contribution margins.

Now let us continue the debate on furthering the public good in private universities. What will happen? As argued above, higher education institutions will discharge their delegated responsibilities when and only when their value function – its mission – reflects the public good agenda. To do this they should have sufficient financial resources in the form of non-tuition sources of revenue. First, both public and private non-profit institutions differ from for-profit entities in the sense that the non-profits' objective function involves 'marginal value'. According to the 'microeconomic theory of non-profit organisations' all surpluses in non-profits are reinvested within the institution. Governments perceive this constraint as a kind of collateral that ensures that any public subsidies channelled either directly or indirectly from the government to these institutions will be used as intended. This means: used for furthering the public good (James, 1996). However, Massy (2004) argues that the distinction between non-profit and for-profit organizations is most important where a degree of public subsidy is involved. In the case where public subsidies are low or organisations do not receive any state subsidies, the distinction vanishes, and is unimportant when the organisation's financial sources come solely from its sales to customers. In our example, private universities and colleges deprived of state subsidies are not likely to serve the public interest. Of course, some of them may develop low demand study programs (or conduct basic research), but this choice will be made not because it furthers the public good but to increase the reputation and prestige of the university or college.

It is time to set down a brief, intermediate summary. From the micro-economic theory of non-profits we have learned two things. First, if there is a public monopoly, the price will be relatively high and enrolment relatively low, even when the universities' fixed revenues from the state are erased. Second, if there are no barriers to entry, except the economies of scale, the privates will enter the market and expand the programs in high-demand areas. In the case where the publics receive fixed state revenues, the price will fall, the enrolment will grow, but publics will not increase supply as much as the privates, because of their unwillingness to expand the program beyond an ideal size when the program's marginal value is still positive (Massy, 2004). Third, when there are relatively low barriers to entry into the higher education market and the institutional arrangements promote competition between providers for resources, then – obviously – universities and colleges will expand enrolment and decrease tuition fees for the high-demand programs. Fourth, we have argued that non-profits in financial difficulties will behave like for-profits and use the decision rule $MC=MR$ instead of $MV+MR=MC$. The competition forces institutions to evaluate the costs of their operation and drives them to adjust their production process in response to the changes in supply and demand.

This model also explains the behaviour of private institutions. The privates operate as non-profit institutions. However, deprived of non-tuition sources of revenue, they have to expand the high-demand programs and use the decision rule $MC=MR$. The model suggests that the competition that public universities and colleges experience from the private providers can raise the internal efficiency of the higher education market as a whole. Market forces spur the internal productivity improvement (i.e. innovation) and improve responsiveness to supply and demand in public institutions; moreover, they do not compromise, to some extent, higher education's function in furthering the public good. In times of financial stringency the market forces contain incentives for productivity improvement. Public institutions adjust the prices to the level determined by competition, and increase their enrolment in high-demand programs while lowering their costs. This will improve their contribution margin, thus making room for maintaining the programs that are less favoured by the market but that are important in furthering the institutions' mission. An open market with freedom of entry may increase the responsiveness and efficiency of a publicly funded and publicly regulated system of higher education. In some countries, governments work under the assumption that freedom of entry and the ensuing emergence of new providers will lead to competition and a quest for efficiency and relevance (Jones, 1992). This competitive reform activity is presented as an answer to the complacency of many state controlled systems of higher education, where policy decisions take the functions of market mechanisms. Thus, competition is believed to encourage the degree of diversity. In order to attract students, education providers will offer a variety of training and programs.

This theoretical exposé leads to the expectation that higher education institutions, confronted with a change in their environment in terms of increased competition for students, will increase the size of their programs and exploit any economies of scales. They will improve their efficiency by cutting back on costs. In competitive surroundings they will also raise differentiation in program offerings, allowing them to cater for heterogeneous demands from various student groups. Jones (1992) suggests that allowing private institutions into the system also has psychological effects; 'Fear of competition, hope of emulation or aggrandizement, and so on, as a result of privatization may all provide a salutary shock to the thinking of academics and administrators within a complacent and largely public system...and serve to stimulate where private practices, mechanisms, and controls had become stagnant'.

4.6 Other barriers to entry: state funding mechanisms

4.6.1 *The role of state funding mechanisms*

The previous section made it clear that the freedom of entry for new providers is an important condition for competition, but it is not the only one. The growth and functions of private education and the outcomes of competition also depend to a large extent on public policy concerning the eligibility of new providers for government funding (Jongbloed, Salerno, 2002; Jongbloed, 2003). The evidence in support of this conclusion is derived from the experience of countries where private providers exist. Geiger (1991), as seen in chapter 2, developed a taxonomy and an analytical description of private higher education: 'Where public higher education is restricted in size and somewhat selective in intake, private sectors become the agency for meeting the general social demand for higher education. The result is "mass private sectors" that usually contain the majority of country's enrollments. Where public and private institutions have equivalent status and functions, the two sectors may be said to be "parallel". And where government chooses to have the public sector dominate the principal task of higher education, private institutions are left with only "peripheral" roles to fulfill'.

Our review of the literature in the second chapter suggests that, if government believes that an open market is the best way of providing higher education that meets the claims of efficiency, then these claims will manifest in public policy. Such a government will promote equal rules for both private and public higher education providers, and allow for competition between public and private providers. If, on the other hand, governments restrict public provision to a fraction of the amount demanded, mostly for the best students, then the private sector's essential task will be to provide more higher education for less academically qualified students, mostly from poor socio-economic backgrounds. In such a case, the competition between public and private universities will be limited and the benefits from competition are likely to be smaller in terms of efficiency (Geiger, 1991).

Therefore, an important condition that to a large extent determines the performance and the development of private higher education institutions in competition with public providers is the size and shape of the non-tuition revenues available for private institutions (Jongbloed, 2003). These sources of revenue can be private endowments or donations. In some cases they are state subsidies. Endowments and donations for higher education institutions play an important role and 'give universities and colleges enough financial strength to balance mission with market'. Provided it is of sufficient size, the non-tuition income allows private institutions to offer low-demand study programs, the delivery costs of which exceed revenues, or to offer high-cost study programs, or even to provide scholarships for bright students from low-income families. Thus,

non-tuition revenues allow them to pay attention to the public good. This social responsibility goal does not enter the decision rules of for-profit institutions.

We may argue that, apart from the question which criteria new higher education providers have to meet in order to become a recognized (that is: accredited) higher education institution, an even more important one is whether they qualify for government subsidies. If so, the next question is whether they qualify on the same terms as the 'regular' public providers. And thirdly, whether the students from private providers may qualify for government support in terms of student support or tax exemptions. Therefore, the next barrier to entry that may exist relates to the state programs for providing financial aid to students in private institutions or programs for the institutions themselves.

The first area of state funding is student-based aid programs that define whether students from private higher education institutions are eligible for direct or indirect state support. Direct student support may take the form of a scholarship for the best or poorest students. Many of these aid programs function as a kind of voucher that eligible students can carry to either public or private institutions for (partly) paying tuition fees. In six states in the US, the governments provide "tuition equalization" aid grants to private college students, regardless of their need status (Zumeta, 1997). This kind of approach clearly expands the pool of students for whom private institutions can compete. In terms of indirect support, students attending private higher education providers can be eligible for tax incentives. Parents or working students may claim a tax allowance to write off the tuition paid to the schools from their tax liabilities.

The second type of state support is direct payments to independent private higher education institutions. States, for instance, may contract with a private provider to enrol students in particular fields or in particular modes of study. In the US, contracts exist that support under-represented students and students with disabilities. The grants are automatically provided and are based on the numbers of this type of student in the institution (Jongbloed, Salerno, 2002).

Often private institutions do not receive education funds on the same terms as public providers do. It is claimed that law has not established them, and therefore the state is not obliged to provide funding. Besides that, private institutions charge tuition fees to their students. However, in countries like the Netherlands, Belgium, New Zealand and Germany, private recognized universities and colleges are in fact eligible to receive funding on similar terms as public institutions. In some cases this may not extend to all private institutions or lead to a situation where the money is the same across public and private students.

We now analyze the impact of direct state subsidies provided either to public institutions only or to both public and private institutions. Starting with a

situation where state subsidies are allocated only to public institutions, we turn once again to the microeconomic theory of non-profit enterprises. We will do so in order to analyse how the eligibility of new private recognized providers for state funds on the same terms as public providers affects competition and efficiency levels on the higher education market.

4.6.2 Case 1: No state subsidies for privates; reducing subsidies to public institutions

Suppose state subsidies are available only for public institutions. In terms of the microeconomic theory of non-profit enterprises, suppose that the state subsidies are high enough to allow public institutions to realise positive marginal values for their high-demand study programs. The absence of state subsidies for private providers means that these providers will offer mostly low-cost / high-demand programs. Privates cannot afford to serve the public interest by providing the mission-oriented programs that public providers offer; they will not use the decision rule $MV+MR=MC$. They will also find it hard to conduct basic research or provide scholarships to needy students. Public institutions are more likely to have a differentiated supply of programs, including high-cost / low-demand study programs, and they will more often engage in research.

If in such a situation the state funds channelled to public higher education providers are limited, private institutions will enter the market due to the low barriers to entry and the unmet demand for particular study programs. Due to the decision rule $MV+MR=MC$, public universities expand their capacity in high-demand programs to the level $MV=0$. Public higher education institutions receive fixed revenue from the state so they do not have to cross-subsidise the low-demand study programs. This situation is illustrated in figures 4.1 and 4.2. Allowing new providers to enter the market and offer high-demand courses will expand enrolment and decrease tuition fees, as illustrated in figure 4.5.

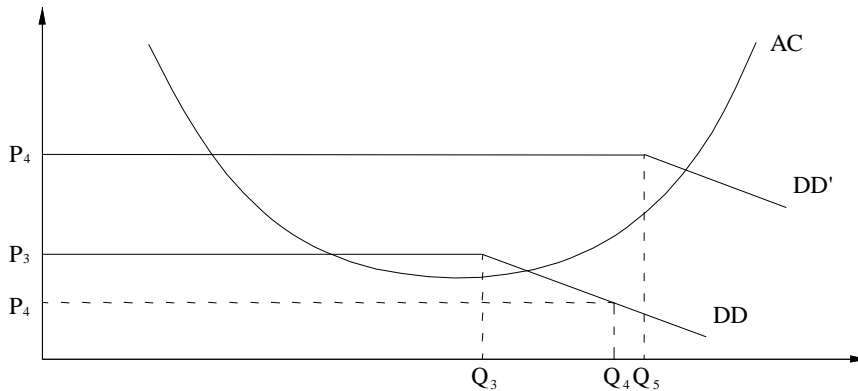
If the state revenues for public higher education institutions are too low to enable them to continue offering low-demand, mission-value study programs, the public institutions have to generate profits elsewhere. They will have to expand enrolment in popular programs to increase their contribution margins. This allows them to cross-subsidize or provide discretionary spending to the mission-value programs. In these circumstances, public providers cannot afford to have a high-demand program (e.g. business studies) that has both a positive marginal value and a positive contribution margin. The kinked demand curve slopes down (figure 4.5). This implies that enrolling an extra student reduces tuition fees. The economic theory of monopolistic competition reminds us about the relationship between price, marginal revenue and total revenue, when the demand curve slopes down. The more inelastic the demand curve, the more an additional student will bid down tuition fees and reduce total revenue from tuition fees. Beyond a certain tuition fee level, the marginal revenue becomes negative and

total revenues start to fall. Consequently, revenues will not cover the costs of providing the program, so higher education institutions will incur losses and possibly leave the market. Thus, the state appropriations to public institutions affect the competition between private and public providers. They act as a cushion against real competition.

Should state appropriations actually become very low, public institutions will start to behave like for-profits and use the decision rule $MC=MR$ instead of $MV+MR=MC$. The public providers will lower their tuition fees, regardless of the decreasing marginal value and the fall in revenues this will bring. Private higher education institutions, deprived of state support, will be forced to copy the behaviour of the publics. Beyond some tuition levels, private institutions will no longer break even and will incur losses. If this persists, they will have to leave the market. However, public providers with state support can survive the short-run losses. After the privates leave the market they can start increasing their tuition fees in order to cross-subsidize the programs which they value but which have a low market value. In other words, in a situation of financial stress, public colleges and universities will behave in ways that at first might seem contrary to their underlying value structure (Massy, 1999). If the public universities are barely breaking even, they will set aside expanding the literature program in favour of raising revenues to remain afloat. These actions do not imply that the university values literature less, but that it has been forced to value money more.

Our analysis of the consequences of the non-existence of state appropriations for private institutions during a situation of financial stress in public institutions leads to the following conclusion. Subsidized public universities and colleges, after identifying the high demand programs, will begin enrolling more students until marginal costs start falling and contribution margins becomes negative. This will force private institutions to leave the market. According to the monopolistic competition theory, the market share of each firm will depend on the number of firms in the industry and on the prices charged. For a given industry demand curve, a decrease in the number of firms on the market will shift the demand curve of each firm to the right as its market share rises. This is shown in Figure 4.6, which makes it clear that public universities in search of resources will bid down the tuition fees to the level P_4 . They will enrol Q_4 students. Privates leave the market, because the revenues do not cover the average costs. The publics' demand curve shifts to the right and their market share rises, allowing them to increase the level of tuition fees to P_5 , enrolling more students (Q_5) and generating funds for cross-subsidies to mission-oriented programs.

Figure 4.6: The public higher education institution's demand curve



Sources: own analysis after Begg, et. al. (1991)

In a situation of very limited state resources for public higher education institutions, public providers will start to serve student market niches that were previously targeted by private providers. A large proportion of students in private institutions will come from lower socio-economic backgrounds and from rural areas. In other words, the private providers do serve a public need, which may come under threat if public providers start entering their market. This effect of reducing budgets for the public higher education providers is often overlooked. Competition between public and private providers not just reduces prices; it also affects the programs offered and the options for students. In a national survey of state policies affecting private colleges and universities in the United States, private sector representatives responding to the survey ranked this area second in importance, after state student aid policies (Zumeta, 1989). Some private institution leaders may claim that providing state funds to public institutions only leads to a situation of unfair competition, since public institutions can be more price competitive than private ones.

Some research on these issues has been conducted in the United States (Astin and Inouye, 1988; Zumeta and Thompson, 2001). The primary variables examined were: (1) the private-public tuition gap (measured as the difference between the average tuition charged by public and private institutions); (2) state spending on student aid; (3) money spent on private institutions; and (4) density of public universities and colleges. Astin and Inouye found: (1) a significant positive relationship between change in public tuition and private institutions' enrolment change; (2) a significant positive relationship between change in state student aid spending and enrolment change, although the relationship was nonexistent for the very selective institutions; (3) a positive relationship between change in per-student aid spending and the proportion of private institutions' students from lower-income families; (4)

a significant positive relationship between the private-public tuition differential and private enrolments; (5) a negative relationship between state spending on higher education and private enrolment share; and (6) no relationship between direct state funds to private institutions and their enrolments.

Zumeta and Thompson find similar results. In general, their analyses confirmed that increases in state spending on student aid were positively associated with gains in private enrolment, especially for the lower-income student group. However, their finding that the private-public tuition price differential is positively associated with private enrolment contradicts the notion that higher prices in the public sector would lead private institutions to expand enrolment. To further analyse this finding, Zumeta and Thompson segmented the private higher education sector, using a selectivity indicator. They identified high, medium, low and non-selective private institutions. It turned out that the tuition fee differential is insignificant for the highly selective group, which means that in-state public institutions are not close substitutes for highly selective private universities and colleges. In contrast, there is a significant negative relationship between the private-public tuition differential and the private enrolments for moderate and less selective private institutions. These findings tend to confirm the presumption that many, if not most, public institutions target the same market niche as the moderate and less selective private institutions. Additionally, there is no such relationship for non-selective private institutions, which are usually small colleges based on religious principles. The latter have no competition to fear from the public sector.

We argue that many of these findings are transferable to the Polish higher education market. First of all, the great majority of private higher education institutions in Poland can be best characterized as medium, low or non-selective institutions. There are only a few highly selective colleges, located in and around large academic cities, that attract students from the entire country. Most of their students come from high-income families and for them public institutions are probably not satisfactory substitutes. They charge on average very high tuition fees and their enrolment share is stable. Secondly, the private, non-selective institutions as well as the medium selective ones compete with the private arms of public institutions. The private arms of public institutions offer part-time study programs to which students holding the *matura* qualification can apply. Such students will not need to take further entrance examinations, but they will be required to pay tuition fees. The *matura* is the secondary school final examinations certificate which gives the holder the right to apply for higher education. Poland has seen a huge expansion in this kind of “open door” programs which exist alongside the full-time, free-of-charge programs but are restricted in capacity and only accessible to students who meet strict entrance requirements. Therefore, the competition between private and public institutions in Poland takes place mainly on the market for part-time programs.

4.6.3 Case 2: Introducing state subsidies to private institutions

Let us now look at the situation where both public and private providers are eligible for state funding on similar terms and where this funding is allocated to institutions on the basis of the number of students enrolled. This competitive funding mechanism will trigger competition in the higher education market. Universities that wish to operate in the high quality market segment will try to enrol the best students and offer high-quality programs, many of which will be high-cost ones. These students will be attracted by such factors as an institution's prestige and its selectivity. For these students, the location and costs of the program are outweighed by the quality criterion. If, thanks to the high fees, the institutions in this market segment manage to realise positive contribution margins in these programs they will free up resources to cross-subsidise other low-demand programs that are important in the light of the institutions' mission.

Competitive funding also triggers competition within the market segment populated by low to medium selective institutions. These are institutions that focus on students in their region. Their competitive advantage rests on low costs and location. Market forces, introduced in the shape of competitive funding mechanisms, will drive the public institutions to closely monitor the costs of their operations and, where possible, to reduce costs. Competition weeds out any inefficiency that was created during non-competitive times. Shedding unprofitable lines of business is a natural phenomenon in for-profit businesses, but for the non-profit institutions it is a sensible strategy too, because producing high-demand services at lower costs will improve the institution's contribution margins and add to the resources available for cross-subsidies (Massy, 2004).

If the allocation of state subsidies takes place through competitive funding mechanisms, this will have a positive impact on the institutions' responsiveness to changes in supply and demand. Shifts in demand force adjustments in the universities' program offerings in order to attract students. Similarly, on the supply side, changes in inputs force adjustments to production processes. Thus, market forces, in the shape of competitive funding mechanisms, spur universities and colleges to operate more efficiently. We point out two different types of responses in the remainder of this text: *strategic responses* related to program offerings: (1) Higher education providers develop a high quality program supply, they offer unique programs; or (2) they will try to attract students by offering low-cost programs. For the higher education market as a whole, the competitive funding model will drive most institutions to offer more study places. However, it must be noted that a very intense competition, combined with cuts in government appropriations, will undermine even the most efficient universities' ability to serve the public good. In such a case, many public and private universities will not have sufficient financial strength to 'balance mission with the market' (Massy, 2004). When non-tuition revenues in the form of state subsidies,

private endowments, or donations are inadequate, universities and colleges have no capacity for discretionary spending to sustain mission-value programs and are forced to respond only to supply and demand.

4.7 Summary

The microeconomic theory of non-profit enterprises provides a model to explain the behaviour of higher education institutions. Higher education providers that have an objective function that includes elements of *market* (i.e. meeting student demand in popular subjects) and *mission* (provide programs in areas where the institution feels a social responsibility) and at the same time need to balance the books, will carefully monitor each program's market and mission value. The fact that they are non-profit institutions implies that they will make use of a decision rule stating that they will expand or decrease their program offerings in response to fluctuations in student demand, the competition from other providers and the revenues they are able to generate from non-tuition sources. This behaviour has important implications for the student places offered, the fees charged, the diversity in the system, the student segments catered for, and the overall level of efficiency in the system.

The monitoring of each program's contribution to an institution's objective forces the providers of higher education to look at a program's contribution margin (the difference between per-unit revenue and per-unit cost). For some this margin will be positive; for others it will be negative. In those public higher education institutions that have a strong sense of social responsibility, the programs with a positive contribution margin provide cross-subsidies for other, less profitable programs that are important to the institution's objective of serving the public good. Cross-subsidies are a form of discretionary spending that allows the university to further "its sense of social responsibility – as opposed to simply following the market" (Massy, 1999). Other sources of discretionary spending may be found in state funding, endowments, or donations. Most private higher education institutions will use a decision rule that is analogous to a rule in the business world (marginal revenue equals marginal cost) and they will offer programs with positive contribution margins. Nevertheless, the private providers will be non-profit enterprises, which means they cannot distribute their profits to their owners or shareholders. This implies that in cases where private colleges receive some non-tuition revenues either from the state or from endowments, or where they generate substantial positive contribution margins on some programs, they can fund some less profitable activities that contribute to furthering the public good. In other words, even private providers of higher education sometimes have a mission that incorporates social (say, non-monetary) values.

The theory tells us that in a situation where the state cuts the fixed revenues provided to public universities, the institutions' behaviour replicates that of a for-profit firm, because it has no revenues left to cross-subsidize the public good-oriented programs. It will act on the basis of the rule that marginal revenues equal marginal costs. Non-profit public universities effectively become for-profits. If some conditions persist (state protection, say), they may even drive the privates out of the market. The transformation in the publics' behaviour is not just the outcome of cutbacks in state allocations, it may also be the outcome of institutional reforms, meaning changes in the legal framework, or changes in the funding conditions. This chapter has presented some examples of institutional reform, in terms of removing barriers to entry, changing the funding system, and supplying funds to (students in) private institutions. The main message of this chapter is: institutional reform affects the providers' behaviour and their responses in terms of program supply, tuition fees and student segments served. Institutional reform often comes in the shape of increased competition between public and private providers. In other words, it may be placed under the heading of marketization. The next chapter will take a closer look at the room for manoeuvre that providers have. The organisation's capacity to respond – its strategic response – to changes in its environment depends on its autonomy in various areas.

5 Other market ingredients: Autonomy, Funding Mechanisms, and Information

5.1 Introduction

In this chapter we continue to build up our theoretical framework for explaining the responses of higher education providers to the changes in the institutional framework and the changes in the supply and demand conditions they face in their market. The previous chapter looked in particular at legal and financial barriers to entry for new providers. Removing those barriers is a manifestation of institutional reform that will have implications for the degree of competition between public and private providers of higher education. In chapter 3 (table 3.3) we argued that this type of institutional reform is an example of marketization policies. Such policies are often implemented by governments to encourage the emergence of new providers, which will not only increase the capacity of the higher education system, but also decrease inefficiency and increase product differentiation. In other words, the marketization policies inject a dose of dynamism into the higher education system. The public and the (new) private providers will have to reposition themselves on the market, prioritise their programs and clients, and set new prices for their services.

Repositioning presupposes freedom to manoeuvre. The providers of higher education can only adjust their operations and product supply if they have sufficient room to adjust their inputs, production processes, and outputs. In other words, they require a substantial degree of autonomy. This chapter is thus concerned with various dimensions of institutional autonomy. After a general introduction (section 5.2), we go on to discuss academic autonomy (section 5.3), appointive autonomy (5.4), and financial autonomy (5.5). It is important to elaborate the autonomy concept in order to operationalise a major building block of our analytical model. Marketization policy will often go hand in hand with an increase in the degree of autonomy of the players on the higher education market.

Other building blocks of our analytical model that also touch on marketization and institutional reforms relate to the government's funding mechanisms. Where the previous chapter looked at the effects of funding mechanisms on the behaviour of higher education providers, section 5.6 investigates the effects on the students. Different funding mechanisms have different effects on student participation in higher education as well as the composition of the student population in terms of socio-economic background. The final sections of this chapter focus on two other important ingredients of well-functioning markets in

higher education, namely information (section 5.7) and the student's freedom of choice (5.8).

5.2 Institutional autonomy

An important characteristic of markets is the freedom of providers to determine for themselves how they organise their production process, make use of their resources and whether they have freedom to decide on the services they offer to their clients. For public organisations and organisation that receive a large amount of public funding, state regulations will often place limits on these aspects of institutional autonomy. Increasing the degree of autonomy for providers is often part of marketization policies, since this is believed to enhance the providers' responsiveness and their articulation to student demand (Jongbloed, 2003). According to Tight (1998), 'Institutional autonomy refers to the belief that institutions of higher education should be left alone to determine their own goals and priorities, and to put these into practice, if they are serve society as a whole' (Tight, 1998, p. xx). A higher degree of autonomy for providers is believed to be beneficial to their motivation – it has a positive effect on efficiency, productivity improvement (i.e. innovation), and the organisation's orientation to clients. Autonomy implies empowerment. Less autonomy would mean more power to the state – more centralization, which, according to Massy (1999), may disempower those who represent the institution's core competences and outcomes.

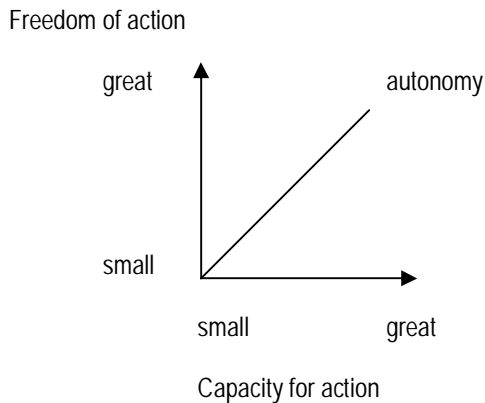
Autonomy and deregulation will often go hand in hand. More autonomous organizations will have fewer ties to the state, fewer regulations to deal with and less interference in matters related to the production process. At the same time, however, the organisation is exposed to the behaviour of other organisations; it is less protected. Recalling Jongbloed (2003), 'Competition and deregulation are linked in the sense that competition presupposes some degree of deregulation; competition can only be realized when entities have some freedom to move'. Authority may be devolved from the central level to the university in a number of areas. The state, however, will often devolve only part of its authority, because it (or rather: Parliament) will continue to be able to influence outcomes. Moreover, it would also like to ensure that autonomy is used sensibly. Autonomy will therefore need to be combined with accountability. Universities and colleges will have to justify their activities and account for their use of state resources and their performance (Sizer, 1998). If universities are to be autonomous in managing their internal affairs and resources, they will also have to demonstrate efficiency and effectiveness. First and foremost, this requires trust on the part of government that university decisions, when subject to fewer controls and restrictions, will be better for the university (Johnstone, Bain, 2001). If autonomy is over-emphasized, the external stakeholders of the education institution may not have the

information to which they are entitled and performance, which might be unacceptable to them, remains unchanged.

Robert Berdahl gave a frequently used definition of institutional autonomy. He drew a distinction between substantive and procedural autonomy (Berdahl, 1990). Substantive autonomy refers to the authority of the institution to determine its own goals and programs, while procedural autonomy refers to the regulations and means by which these goals and programs will be pursued. There are many issues and procedures that may be considered for procedural deregulation. Contract procedures, budgeting processes, internal auditing, monitoring, and performance measurement are some of the areas in which regulation has traditionally been abundant. For instance, governments may try to regulate educational activities and expenditures in great detail in order to keep costs under control and make use of a line item budgeting approach. However, 'excessively detailed financial control brings about a false efficiency flowing from local initiative and common sense is constrained and discouraged' (Bowen, 1980). That is why, especially in today's competitive environment, procedural autonomy is promoted in respect of financial issues.

The underlying question for the issue of institutional autonomy is the extent to which organizations exercise freedom to act and whether they have the capacity to act and achieve the expected and presumed results (Lundquist, 1987). The analysis of institutional autonomy in higher education usually focuses on freedom of action, whereas autonomy also includes the ability to initiate or terminate actions at the actor's own discretion (Pfeffer, Salancik, 1978), without dependence on any external parties. The capacity for action is to a large extent determined by the level of resources that can be allocated at the organization's discretion, the importance of the resources to the organization, and the centralization of the sources of revenue. Even if the organization possesses extensive institutional autonomy in several of its operational dimensions, the mere fact that it has insufficient revenues will decrease its capacity to act autonomously. This is depicted in figure 5.1, which is based on Lundquist (1987).

Figure 5.1: Dimensions of autonomy



Source: after Lindquist (1987)

Law formally defines institutional autonomy, but the legal aspects are only partial descriptions of reality. Using the model above, autonomy may be described as the overall ability of the institution to act according to its own choices in pursuit of its mission. It is the net result of the sum of its legal rights and duties and its financial and other resources. Nyborg (2003) points out that to discover the extent to which a university enjoys autonomy in relation to the state, one should look at state-university relationships. Curry and Fischer (1986) distinguished between four models: (1) the state agency model; (2) the state-controlled model; (3) the state-aided model; and (4) the corporate model. These four patterns can be placed on a continuum, from almost complete state control over financial and personal decisions at the one extreme to almost complete independence at the other.

The state agency model treats a university as a branch of the state government, like government departments in socialist countries. All revenues are deposited in the state treasury and are subject to appropriation control. Student tuition fees, if any, are determined by the state, and government allocations often are tied to specific functions and objects. Most financial investments and staff recruiting require prior approval by the state. Furthermore, unexpended appropriations are returned to the state fund at the end of the year. Following Volkwein (1987), we may conclude that the state is primarily overseeing the production process, rather than its effectiveness.

The state-controlled model is not as extreme as the state agency variant. The institutions' appropriations and expenditures are not under such detailed, tight state control. State appropriations to education providers are based mainly on enrolments, by means of a formula that takes the number of students into

account. Any revenues generated from other sources can be retained and managed by the higher education institution.

In the state-aided model, funds granted to the university are freely managed by the university, within broadly defined boundaries. The university's budget is less tied to detailed expenditures. Although generalized formulae are used to ensure financial stability, provisions are available to ensure that the university works on specific goals and activities. In this model of state-university relations, higher education institutions are free to set tuition fees and such other student fees as they may charge for their services. All funds generated by the institution are retained by the institution and are not subjected to state control. Accountability for state funds appropriated is rendered by means of periodic post-expenditure audits. Revenues from fees are normally carried forward at the end of the fiscal year. Moreover, a limited carry-over of state funds is also allowed.

Finally, the corporate model implies total institutional control over all revenues and personnel matters. A board or (buffer) agency, operating on behalf of the state, contracts with institutions for particular services, including capacity, in terms of student places in particular kinds of institutions. The state has no responsibility for finances, but it does specify the services it wants to acquire. For students, access to higher education is ensured through student financial aid. Accountability is ensured by means of provisions that focus on effectiveness rather than on processes.

In the Curry and Fisher conceptualization, most universities and colleges are in practice placed somewhere between the two extremes. The corporate model is a pure type, rarely encountered in reality. The state-controlled and the state-aided models are the most common variants, examples of which may be found in North America and Europe. A number of dimensions of academic life may be identified, with different degrees of autonomy for each dimension. The domains include:

1. freedom from non-academic interference in the governance of the institution;
2. freedom to allocate funds as the institution sees fit;
3. freedom in the appointment of staff and in determining their employment contracts;
4. freedom to decide on the admission process;
5. freedom to design the curriculum and to set standards and methods of assessment (Tight, 1998).

Another important issue is to which body the autonomy is being granted. The government may devolve authority to the rector, a university's governing board, or to the faculty. Any devolution of state authority to such entities increases institutional autonomy because these buffer entities act on behalf of universities and colleges. However, the choice of entity makes a difference.

Frazer (1997) also presents a list of issues where institutional autonomy may vary. He specifies the following dimensions of autonomy:

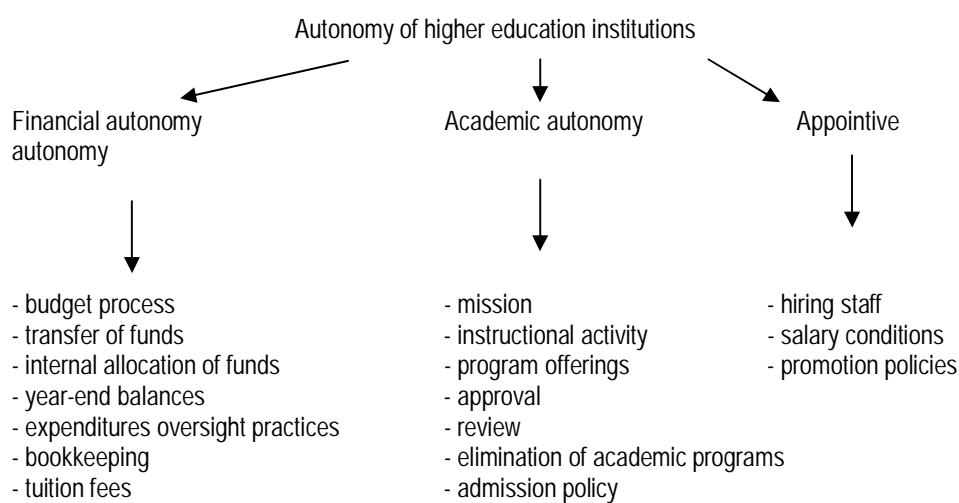
1. legal status of the institution (is the institution recognized in law as a separate entity, free to own property, and can it enter into contracts with others without reference to a higher authority?);
2. academic authority (how does the institution obtain its authority to operate and is this subject to review and renewal?);
3. mission (does the institution determine its own goals?);
4. freedom to appoint the institution's governing bodies and their independence from any higher authority;
5. financial authority, in terms of the freedom to make decisions about expenditure;
6. appointive autonomy;
7. academic affairs (does the institution determine student admissions, its own curricula, and research activities?).

The most common type of public higher education provider is a statutory authority. The institutions are independent entities established by Act of Parliament, without proprietors and operating in the manner laid down by their funding acts. However, the distinction between government department and statutory authority does not boil down to the way the higher education institutions were established, but to the contents of the funding acts, which grant a particular level of autonomy. Before the collapse of the Soviet Union, academic and other higher education staff in Poland and other Soviet satellite nations were civil servants and the higher education institutions were strictly administered and treated as government departments. Governments decided on new programs, appointed new staff and decided on the number of students to be enrolled. While this type of management of higher education institutions hardly exists in developed and developing countries nowadays, this does not mean that all higher education providers are free to decide about, for instance, their internal staff structure and program supply.

A framework for an analysis of the autonomy of higher education institutions may be found in the typology developed by Levy (1980) and The Carnegie Foundation (1985). This typology embraces the aspects of institutional autonomy identified above. Three important areas of university autonomy are distinguished: (1) academic, (2) financial (or budgetary), and (3) appointive (or personnel) autonomy. Academic autonomy relates to a university's ability to set out its own mission, to offer academic programs compatible with its mission, to supply new programs, to control instructional and research activities and to set its own standards of admission and degree requirements. Financial autonomy exists if a university controls the preparation and allocation of its budget, and if it is relatively free to manage revenues and expenditures within some external

restrictions (apart from the regular accountability requirements). Finally, appointive autonomy refers to the higher education institutions' freedom to govern such activities as the hiring and promotion of academic staff and the conditions of employment, in terms of salaries, working hours and so on. This typology is presented in figure 5.2.

Figure 5.2: Dimensions of university autonomy (after Levy, 1980)



Having the framework for the analysis of autonomy in place, we now proceed to discuss its three main elements.

5.3 Academic autonomy

One of the main areas of marketization policy is the degree of academic autonomy, which refers to the university's ability to determine its own mission. This mission may be conceptualized in terms of research programs undertaken, research dissemination activities, degree program offerings, instructional diversity, and the students' profile in so far as this is the result of the university's admission (and selection) process. According to Jongbloed (2003), the freedom to specify the contents of academic teaching and research programs is an important element of a market-oriented higher education system. Jongbloed (ibid.) states that decisions on the contents of teaching and research in higher education are mostly left to professionals, i.e., to academics and higher education institutions, although in practice some external standards and requirements will be imposed on program contents. The question here is to what extent the state intervenes in the programs' contents.

Students will expect a certain degree of diversity in terms of education programs offered by higher education providers. This programmatic diversity is concerned with the comprehensiveness and objectives of educational programs and the specialist education tracks that afford greater possibilities for students to acquire the knowledge they are particularly interested in. In other words, just like consumers in other markets, they would like to be able to choose from a wide range of products, ranging from standardised to tailor-made ones. Procedural diversity extends to differentiation in the methods of course delivery. Given more freedom, higher education providers will try to distinguish themselves from other providers by implementing different methods of instruction, ranging from the use of new information technologies to tutor-based teaching and learning forms. Procedural autonomy gives higher education institutions room to determine the way they transmit knowledge to students. One of the aims of marketization policy is to promote differentiation of study programs and lift regulations that prescribe program contents.

Higher education is an 'experience good', which is usually acquired only once in a lifetime. The educational career in higher education traditionally lasts three to five years, but the content and the quality of education can be properly evaluated by the students only once they have graduated – or even well after that event. At that point, a graduate's knowledge and skills can be verified by the labour market. Therefore, individuals investing in their own human capital through the purchase of higher education do not know what they are buying – and won't and can't know what they have bought until it is far too late to do anything about it. Education is typically a one-shot investment expenditure (Winston, 1999). The students have only limited possibilities to evaluate the actual quality of the programs offered by their university. By the same token, nor are employers that recruit graduates perfectly informed about the knowledge and skills that students take away from their university. These facts point to important information asymmetries – a topic we take up again below (section 5.7). At this point we merely state that information asymmetries call for measures on the part of the government to protect students and the quality of the education they receive. Clearly, protection requires some form of regulation, which in turn impinges on the academic autonomy of education providers.

In higher education systems that are increasingly market-based and where the number of students and providers has risen rapidly, it is clear that program content and program quality need to be monitored by means of assessments and accreditation schemes. Even in systems where many undergraduate students receive their education at zero tuition fees, students and society still invest considerable resources. Because higher education is a good the quality of which is difficult to observe, many students will be led by signals that reflect an institution's *prestige*. Prestige is often linked to the performance of the institution in terms of its academic research. To build up prestige, academics are believed to

prefer research over teaching (James, Neuberger, 1981). All this provides sufficient reasons for the protection of students and quality. Government may be the most suitable actor to provide such protection. Thus the government sees to it that academic programs respect certain content standards. Governments – or rather accreditation authorities – will set criteria for the recognition of degrees. Meeting these criteria is also a precondition for the programs to receive government funding. Setting quality standards is done to ensure that programs observe societal, national and international standards. The guidelines for program content act as a form of consumer protection. They serve as a tool that guarantees the transparency of the system and enables comparisons to be made across programs. In a more market-driven system the role of information is crucial for students who wish to choose the university or college that is best for them.

Academic autonomy is also related to the matter of elimination of academic programs. Quite often the review and elimination of academic programs is subject to the same procedures and regulations that are in place for the approval of new programs. One may argue that explicit standards for program review have to be applied during the entire life span of a program, not just when the university or college applies for a new program.

The next dimension of academic autonomy is the freedom of higher education providers to make use of the resources available to them. By resources we do not mean the financial resources (see next section), but rather the students who apply to the university for a place on one of its study programs. The applicants may be regarded as a form of raw material, since students enter the university with a given level of knowledge, skills and experience and they will leave the university – ideally – as a graduate possessing more skills, knowledge and experience. In this regard, the production technology in higher education is unique. Students, the customers of higher education institutions, are an essential input into the teaching process. Students are partly educated through their classmates (their *peers*); the quality of their peers co-determines the outcome of learning (Jongbloed, 2003, p. 119). Universities recruit one of their most important inputs from the same persons as they sell their services to. This is why higher education is referred to as a customer input technology (Rotschild and White, 1995). Since the quality of education depends to a large extent on the composition of the student body, higher education institutions will have powerful incentives to care about the characteristics of those to whom they wish to sell. They will try to control or influence who their customers will be (Rothschild, White, 1995). In such a case it is very important to know about the regulations concerning the institutions' freedom to select their students.

Enrolment restrictions can work properly if the demand for higher education exceeds supply, because in order to exercise control and so that institutions are

able to choose, there will have to be excess demand. Excess demand occurs when providers offer their services well below the cost of production, or if they are able to offer student support. It also occurs in a system of public provision of education, where the state sets enrolment limits well below demand. In cases like these, universities and colleges attract more students than the places they have available. Admission procedures will vary greatly between countries. In countries like the Netherlands and Germany, the educational system is characterized by open entry. All qualified secondary schools graduates who pass the appropriate final exam are free to enrol in academic programs in the institution of their own choice. Only the programs that have a limited capacity, like medicine, architecture or performing arts, have entrance restrictions. They will only admit the best students. In open entry systems, the institutions have limited control over the students they enrol and cannot influence the profile of their student body. They can only influence their profile by means of what they do once the student has enrolled.

In many other countries, e.g. the United States, Anglo-Saxon countries, and in Central and Eastern Europe, higher education institutions have more freedom to set their own admission procedures and entrance requirements. The admission procedures often take the form of entrance exams, the level of difficulty of which to some extent reflects the quality of the provider. Providers determine their preferred students' profile in line with their mission. In general, a higher education institution can influence its student profile through its offerings to students, in terms of programs, teaching and research facilities, student services, international cooperation options and other facilities. Marketization policy may give higher education institutions more freedom to set their own admission standards. This may encourage providers to become more innovative in order to attract the students they desire.

To summarize, academic autonomy is defined by the following areas of authority: freedom to define the institution's mission; authority to approve, review and eliminate academic programs; authority to control the instructional and research activities of the institution; and authority to determine standards for admission and degree requirements.

5.4 Appointive autonomy

In terms of appointive or personnel autonomy, two general categories may be identified: (1) ceilings on the number of academic staff (i.e. faculty) and other positions, and (2) characteristics of employment contracts. Limits may exist on the number of employees, either separately for faculty and administrative positions or for the total number of positions. In some countries the state imposes a cap on faculty and non-faculty positions. The most common situation is where higher

education institutions are free to determine the number of staff employed. However, institutions will usually have to fit this within the financial resources available to them. Appointive authority also refers to the way in which the collegial or individual governing bodies are elected within the institution.

Characteristics of employment contracts refer to qualification requirements, salary scales, tenure, working hours, performance measurement, and terms of promotion. In many countries these employment conditions are determined by government, often in consultation with the higher education sector or labour unions, and laid down in higher education legislation, which bind all higher education institutions. In this case, higher education providers have little influence on the performance of their academics. Once the academic worker is employed, his or her terms of employment are determined and protected by constitutional law and employment conditions can be neither changed nor influenced by the institution. The state, like in any other industry, determines the general conditions and standards that must be obeyed by employers, such as minimum wages, minimum number of vacation days, maximum weekly working hours, or the recommended retirement age. All academics and other staff members holding the same position are treated and rewarded similarly, regardless of their actual performance. The system of tenure, i.e., lifelong employment of academics, also limits the autonomy of providers in deciding on their labour inputs. To some extent it also limits the incentives for better performance that academic teachers and researchers feel.

Regulations affect the degree of competition in higher education and, therefore, incentives for efficiency and innovation. The quality of higher education providers depends, to a great extent, on the quality of academics. So if the providers' freedom to determine the main input for their 'production' process is largely absent, there is less of a free market in higher education. Part of marketization policy is to transfer the autonomy on employment terms from the state to higher education institutions. A decentralized personnel policy has already existed for many years in the United States, where universities compete for the best faculty, tempting them with high salaries, research facilities and fringe benefits. In the recent past, the Dutch and British governments also devolved decision-making on employment conditions to their higher education institutions.

Personnel regulation also includes the conditions for promotion. In higher education, promotion refers primarily to scientific degrees. Doctoral education is a very crucial area for the ambition and development of research-based higher education institutions. First, because part of the institution's mission is research activity, which is conducted by PhD students, PhD holders and other researchers. Approval criteria mean that, if new providers and new programs are to be recognized, they will often have to have a minimum number of academics with

the appropriate scientific degrees. Program approval as well as research ambitions are seriously curtailed if the institution is unable to employ the required academic staff. This holds for existing as well as new providers. The organization of doctoral education therefore has an impact on the growth options and performance of higher education systems. The academic staff in small, private or public higher education institutions will then also face limited possibilities for raising their academic qualifications. This situation is made worse if departments in large public universities unofficially restrict admission to their doctoral programs to employees from their own university.

5.5 Financial autonomy

Autonomy is also manifested in the degree of regulation with respect to decision-making on financial resources. Institutional autonomy is said to depend more on the degree of financial freedom than on the public or private origin of the revenues themselves (Johnstone, Bain, 2001). However, Tight (1998) is of a different opinion: “the extent to which institutions of higher education have autonomy over the allocation of their funds is critically dependent upon the sources of those funds, and on the attitudes which the funders take to their use.” Given the reliance of public higher education providers on public budgets, and given the fiscal difficulties faced by many European and other governments, one will continue to see many expenditure controls at the institutional level. State governments will be reluctant to let go of these controls.

Definitions of the concept of financial autonomy in the context of higher education are plentiful in the higher education literature (see Berdahl, 1990; Ashby, 1966; Hufner, 1992; Frazer, 1997). The authority to use and raise funds and access to diversified funding sources are seen as crucial to financially autonomous institutions. Independent decision-making power over the use of state funds contributes to the financial autonomy of a higher education institution.

Our approach to financial autonomy of higher education institutions rests on the dimensions described by Jongbloed (2003), who distinguishes the following general aspects of financial autonomy: (1) freedom to deploy financial resources, (2) freedom to build up a portfolio of assets, (3) freedom to engage in various income-generating activities, and (4) freedom to determine the level of tuition fees.

The first issue concerns the budgeting methods. We can identify two methods for the state financing of higher education (Massy, 1999). In the first, the *specific responsibilities* (SpR) system, the state tells the institution exactly what to spend money on and follows up to ensure there are no deviations. Line item budgeting

is the most common budgeting method that falls under the SpR system. An SpR system represents a priori control over the institution's activities. SpR is probably effective in small, transparent higher education systems, but when complexity increases the costs of gathering information, regulation and control will grow disproportionately, along with the employees' feelings of disempowerment. Line item budgeting systems allow little delegation and reserves most authority for central bodies. It is likely to fail in the case of higher education, because both the system and individual providers' activity are too complicated to control in detailed (Massy, 1999). The funding agencies do not possess the necessary information to make good decisions. Moreover, if the institutions are to operate efficiently, they should be able to operate flexibly and be free to shift resources if necessary. SpR systems may be put in place to protect society from inefficient and illegitimate expenditures, but by their very nature they produce incentives to the contrary.

A second budgeting system uses price as a regulator. In this system the central authority negotiates plans with each institution and allocates funds in the form of unrestricted block grants. Costs are controlled through the size of the lump sum. Governments employ block grant budgeting in order to give institutions more flexibility with respect to the internal allocation of funds at their own discretion. This means that funds are not tied in advance to any particular use. This trend may be witnessed in many countries where lump sum budgeting has been implemented. The appropriations are neither as detailed nor the expenditures as tightly controlled as under itemized budget allocation. Financial devolution removes the barriers and shortcomings related to the SpR systems. The decisions are not arbitrary and insensitive to local conditions. Decisions are arrived at more quickly and they are efficiently translated into action.

For universities, the right to build up a portfolio of assets refers to the fact that, when the university raises funds, including revenues from tuition fees or contract research, these funds may be retained by the university and are not subject to strict state controls. At the end of the fiscal year, the funds can be carried forward to the next year without affecting the amount of state appropriation. The carry-over principle also refers to unspent state funds. Financial autonomy also includes the absence of prior approval by the state for the institutions' purchase decisions. Following Jongbloed (2003), it is worth noting that financial autonomy implies that higher education institutions are allowed to enter the capital market. They can either invest their surpluses on the capital market or take out loans in order to invest in infrastructure or other activities.

In a rapidly changing environment, the universities' freedom to engage in various income-generating activities may provide an additional source of revenue. Universities may generate additional resources, for instance, when enterprises demand on-the-job training for their employees, or if businesses contract out their

internal training and R&D activity. These are examples of contract activities. Such activity may be extended further if universities exploit their intellectual property rights by means of licensing or patenting of inventions. Intense interaction between university and industry always raises some concerns about the public good character of science. According to some, academic research should stress the free dissemination of new knowledge; secrecy about its outcomes should be prevented (Eicher and Chevaillier, 2002). Concern is also expressed over the direct competition between universities and private business. Jongbloed (2003) points out that publicly funded institutions are often accused of unfair competition; using government grants to engage in cross-subsidization and thus under-pricing their services. Despite this criticism, many higher education institutions nowadays try to turn their intellectual property rights into an additional source of finance. In many countries, governments urge institutions to intensify their relations with the private sector. The states allow universities to create various university-related enterprises and spin-offs whenever they are related to the university's teaching or research activities. This may take the form of consultancy firms, science parks, incubators, and other joint ventures for developing university-produced inventions.

A diversification of revenue sources strengthens the autonomy of higher education institutions, because it makes them less dependent on a single funder (i.e. the government). However, it also requires a stronger management to cope with resource management and the additional problems and risks that arise when entering the competitive business arena. The diversified funding base is regarded as essential for introducing innovations into the system (Clark, 1998). More income provides institutions the capacity for action.

In a business world, customers pay for the services they receive. They pay a price that reflects the cost of providing the services. If higher education is a business then students should pay for the education they get. The question of who should pay for higher education, is a contentious issue in higher education. The higher education literature is dotted with all kinds of articles, part of them in favour of private financing of education and part of them strongly against any payments of fees by students. The social returns to higher education are a justification for public funding, while the private benefits would call for private contributions (see chapter 3, table 3.1). Mixed financing would be the result. For the providers, the freedom to set prices for services – reflecting the students' private returns – is an essential element of financial autonomy in a market-based higher education system (Jongbloed, 2003). Price is one of the main elements of competition between enterprises. If they can charge a price, higher education institutions are expected to benefit from increased revenue and diversification of their revenue sources. Jones (1992, p. 591) suggests that "It is sometimes hoped that the creation or reinforcement of a market in education [implementation of tuition fees] will

also make students a more demanding and thoughtful clientele and institutions more efficient and responsive providers”.

Summarizing, the financial autonomy of higher education providers is dependent on the following conditions: the nature of budget process (lump sum versus itemized budget allocation), state control over expenditures after allocation, state pre-audit requirements, year-end balances, unexpended appropriations, control over non-state revenues, access to the capital market, freedom to engage in various income-generating activities and, finally, setting tuition fees.

5.6 Equity issues and state financial support for students

In chapter 3, at the end of section 3.3 and the beginning of section 3.4, we pointed out the distributional effects of government interventions in the higher education system. Sometimes, governments – despite their good intentions – fail to contribute to a situation where the composition of the student body reflects that of the population; the middle and higher socio-economic strata are often over-represented in the publicly supported higher education institutions. There is a problem of *equity* in public higher education that calls for government intervention. However, in some cases government intervention intended to remedy the distributional inequities, itself produces distributional inequities. For instance, in a graduate tax system the well-educated rich citizens may be more able to avoid paying taxes, or transit to self-employment, which presents less of a tax burden. Similarly, the redistributive programs in higher education may also produce distributional inequities. However, Wolf (1993) suggests that inequities produced by such redistributive programs are smaller than the original market inequities that these programs are intended to remedy. So clearly there is a problem of how to tackle inequity. This section therefore attempts to document the inequities in higher education produced by different systems of state financial support.

If students paid all costs of higher education, the financial burden would prevent poor but otherwise qualified students from going to university. In order to redress this market failure (see section 3.3), government intervenes and provides subsidies to lower the financial threshold. It offers free public education, in addition to various student support schemes. While at first glance free education might seem to contribute to the principle of equal access, empirical evidence does not support this view. Across the world, free higher education does not seem to go hand in hand with a balanced social representation of students in higher education. Higher education researchers argue that a system of free tuition is inefficient and inequitable (Hansen, Weisbrod, 1969b; Hoenack, 1971; Windham, 1976; Jackson, 1982; Jongbloed, 2004). A higher education system with zero or low tuition fees reflects the general belief that the returns to society from a highly

educated citizenry justify significant public expenditure on education (Hearn, Longanecker, 1985). However, a more targeted approach of subsidizing higher education is based on the belief that higher education brings benefits first and foremost to the individual, so public expenditures for higher education should maximize the public returns from education while keeping the public costs to a minimum.

Given the debate on free versus subsidized higher education and the effects either has on efficiency and equity in the system, we discuss the outcomes of two different ways of providing subsidies to higher education. First of all, the effects of a system of direct payments to institutions are investigated. Second, a student-based funding mechanism is discussed.

Equity effects of traditional funding models

Traditionally, public financial support for higher education is provided in the form of direct subsidies from the state to selected higher education institutions. Only a select group of higher education providers receives subsidies to supply degree programs for which students can then register by paying a tuition fee. Often this fee will be relatively small compared to the actual cost of providing education. In many countries, fees do not even exist and education is offered “free”. In the case of zero (or token) fees, the governments in question cannot provide sufficient financial support for the providers to create enrolment space for all candidates. Nearly all public higher education institutions have limits placed on the number of student places that are offered for free. Entry quotas and selection systems will be used to ration the space. Such mechanisms are developed mainly to protect the quality of education, but they are also created because of fiscal constraints. However, the sometimes rigorous admission and selection systems have important implications for the opportunity of students from the lower socio-economic strata in society to access higher education. In particular, students from low-income families and other disadvantaged groups in society are often less well-educated than their peers from the middle and upper classes. Students from privileged backgrounds have often attended better quality secondary (and primary) schools, making them better prepared to take the university’s entrance exams. Students from privileged backgrounds are raised in an environment where the idea of going to college is less ‘foreign’ than it is for students from lower socio-economic groups; they have higher aspiration levels and they see the value of a university degree. Moreover, many students from lower-income families are debt-averse, meaning that they do not consider taking up a loan to pay for their costs while studying (Vossensteyn, 2005).

The evidence confirms the distributional inequity in state financed, free-of-charge higher education. An OECD study found that in Europe ‘there is a disproportionately small participation by lower socio-economic groups in all countries’ (OECD, 1998). A more recent study showed that the present higher

education systems seem to have little impact on the participation of young people from less-advantaged backgrounds (OECD, 2001). In the United Kingdom, the National Committee of Inquiry into Higher Education (1997) concluded that, although participation from lower socio-economic groups had increased over the years, the gap is still very significant. Anderson and Vervoorn (1983), in a study on the Australian system, conclude that the higher education institutions hold a disproportionate number of students from the middle and upper end of the social spectrum. Another Australian study on the students' background (Long, 1999) explored higher education participation in terms of parents' occupation, the student family's educational attainment and family wealth. Each of these elements had a significant positive correlation with higher education participation. The study showed that differences in parents' occupation and educational attainment to a large extent reflect the differences in career aspirations and attitude to education, which are then transmitted to children and reflect the willingness of parents to support the education of their children.

Skuja (1995) showed that students from higher socio-economic backgrounds were over-represented in the more prestigious study programs like medicine, dentistry and law. Students from middle class families were slightly underrepresented, and students from disadvantaged backgrounds were significantly underrepresented in these fields. Similar results were reported in an Australian study of the effects of the Higher Education Contribution Scheme (Andrews, 1999) on participation in higher education. The study revealed that in Australia, the students from low socio-economic backgrounds account only for 11 to 13% of all students in fields like medicine and law. They were represented to a greater extent especially in education and nursing studies. A 1984 Commonwealth of Education survey showed that over three quarters of veterinary science and law students had fathers who work in managerial or professional occupations (Marginson, 1997). Another study (Blossfield, Shavit, 1993), which covered 13 countries including some Western European ones, shows that from the 1960s to the 1990s, 'the effect of social origin on the transition to tertiary education has remained virtually unchanged (Biffi, Isaac, 2002).

These studies provide ample evidence that government subsidies can do little to correct the failure of the system in terms of the overrepresentation of students from the middle and high classes. In particular, the existing systems of free higher education are regressive, because they tend to subsidize the students from higher economic classes at the expense of all tax payers, including those with low income (Biffi, Isaac, 2002). The system of free or low tuition fees for all academically eligible students regardless of their socio-economic background is thus inefficient, because it subsidizes the students who can afford to pay more. Most of them would participate in higher education anyway. Moreover, they will be profiting in terms of a higher income and status once they enter the labour market as graduates.

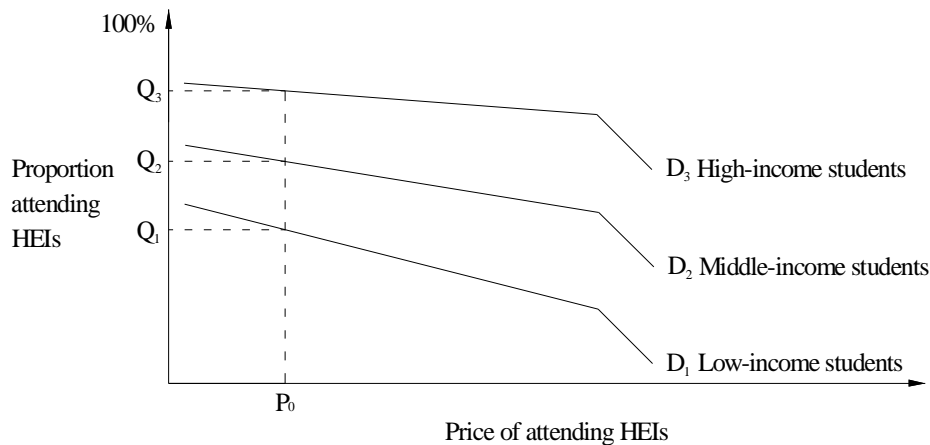
The under-representation of students from lower socio-economic groups is an argument for the state to take corrective measures to bring about a socially more acceptable outcome. This government intervention is in danger of introducing even more non-market failures. Simply providing more subsidies or expanding the capacity in the zero-tuition programs may even worsen the problem. Sticking with financial measures, the question is, what changes in the system of funding public higher education might be considered for removing the inequity? Any reform in this area would have to start with the observation that higher education leads to private returns (see chapter 3), so charging a fee is efficient. Secondly, to remove inequities, a more targeted system of providing subsidies to low-income students will have to be implemented. This targeting of higher education subsidies is often referred to as a 'market rationalization model' (Hearn & Longanecker, 1985). It lies at the heart of a number of analyses and investigations into the enrolment effects of different pricing policies in higher education (Leslie & Brinkman, 1987; 1988; McPherson & Schapiro, 1991, 1998; Hearn & Longanecker, 1985; Andrews, 1997; 1999; Heller, 1997; Hansen & Weisbrod, 1969b). These investigations look especially at the role of state student support in keeping university or college affordable for students of all economic and social backgrounds. Drawing on these authors we highlight the principal dimensions of pricing policies in higher education and make some remarks on how public subsidies can best be employed to enhance equity and efficiency in higher education.

Tuition fees are likely to have an impact on an individual's willingness to participate in higher education. As with most goods, an increase in the price of higher education has a downward pressure on demand. However, the empirical higher education literature provides evidence that a rise in the price of higher education will have a different impact for students from different socio-economic backgrounds (Vossensteyn, 2005). Students from low-income families were found to have the highest price responsiveness. The response from middle and high-income students to a price rise is more likely to be inelastic. Some studies showed that a one per cent rise in price generates a less than one per cent fall in education participation (Leslie & Brinkman, 1987; McPherson & Schapiro, 1991). Hoenack (1971), studying the demand curves for students from different family income backgrounds, presents different demand elasticities for different groups. The elasticity varies from 0.68 for the lowest quartile of parental incomes, to 0.48 for the highest income quartile. Hoenack demonstrates, however, that the demand curves are steeper for all students, the higher the cost of attending higher education. A study by the California Postsecondary Education Commission (1980) found that students from low socio-economic classes are approximately twice as price responsive as middle income students, and high-income students are about two-thirds as responsive as middle-income students. These two sets of research findings show, first of all, that participation by lower socio-economic groups in higher education is lower than participation by groups from middle

and high-income backgrounds, and, second, that price changes have a significantly larger impact on low-income students. This is illustrated in figure 5.3, which shows higher education attendance patterns for different income groups in a system with low tuition fees.

We note that this model assumes that students from all backgrounds have equivalent aspirations and abilities to participate in higher education. Students from disadvantaged backgrounds require relatively less additional financial inducement to increase their participation. However, facing the same price, their share in overall enrolment is lower than that of more advantaged groups. In figure 5.3, the same low price (P_0) is charged to all able students, regardless of their background. High and middle-income students account for the majority of enrolled students: $Q_3 > Q_2 > Q_1$.

Figure 5.3: Demand curves for three income groups



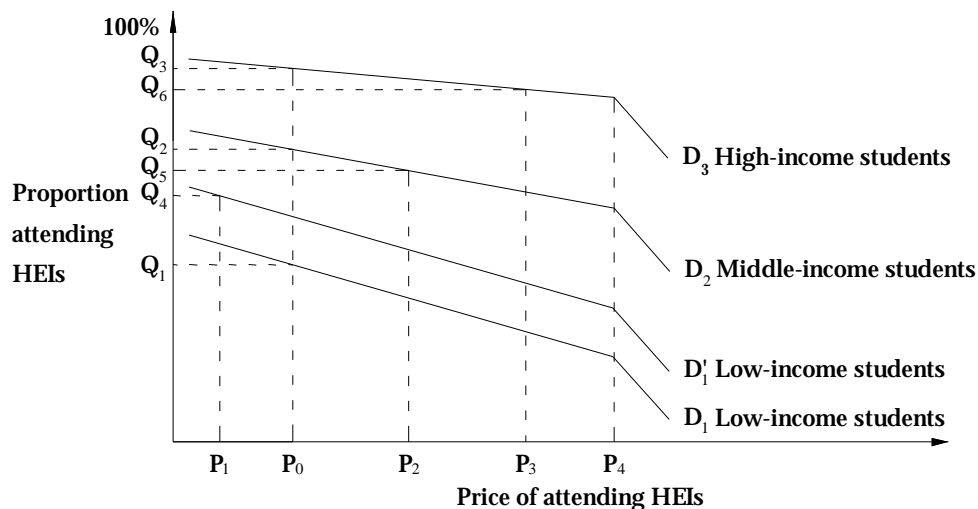
Source: own analysis after Hoenack (1971)

Equity effects of student-based funding mechanisms

In order to remove the distributional inequity and inefficiency, a change in the funding mechanism may be considered to replace the traditional model that provides direct subsidies to providers. In a more targeted allocation model, state subsidies would be tied more to individual financial needs. Different income groups would then face different costs of education. This means that, instead of the traditional blanket state subsidy for all academically able students, the state charges (or introduces) tuition fees in public universities for all students. The fees are accompanied by a system of student financial aid that takes account of the student's financial situation ('means testing'). This targeted model will shift subsidies from high-income students to low-income students.

First, let us assume that public policy aims to increase enrolments from disadvantaged groups in high quality public higher education institutions in a system where a fixed total amount of subsidy is available and admission standards are held constant. The state introduces a regime of differentiated costs: students from high-income and middle-income families face increases in tuition fees. Students from low-income backgrounds receive a discount. The changes in the cost regime will have a differentiated impact on student participation. The impact will be small for students from the higher socio-economic groups and moderate for those from medium socio-economic backgrounds. The changing cost regime implies a reallocation of the subsidies across the different groups, carried out to increase total participation and achieve a more equal participation rate. Figure 5.4 illustrates the outcomes of this targeting of subsidies.

Figure 5.4: Participation effects of more targeted subsidies



Source: own analysis after Hoenack (1971)

The middle class students face a rise in the price of attendance from P_0 to P_2 . This group receives less in terms of tuition subsidies. Therefore, the participation rate falls from Q_2 to Q_5 . The students from higher income backgrounds receive no student aid to offset the higher fees. Their participation falls from Q_3 to Q_6 . The lower-income student demand curve (D_1) shifts upwards because of the availability of student support. This effect, combined with lower tuition fees, causes more students from this group to participate in higher education (a rise from Q_1 to Q_4). The effect of the new cost regime is that total participation increases compared to the situation laid out in figure 5.3, because the enrolment expansion in the low-income students group offsets the decrease in the other groups. However, beyond some hypothetical price (P_4), further price increases

will cause participation to decline among the well-to-do students without any compensation from increments in the other groups' participation.

Hoenack (1971, p. 302) estimated that 'a subsidy reallocation aimed toward a more equal representation from the income groups would increase total enrolment somewhat if the reallocation was small. However, beyond some point, a reallocation would bring about a smaller total enrolment, because successive movements towards equality become increasingly more costly in terms of reductions in the level of total enrolment'. This means that only moderate increases in tuition will increase both the total enrolment and the participation rate of students from low-income families. We note that in our example the admission criteria for universities will not be changed as a part of a policy to influence the composition of the student body. This implies that only academically qualified students are accepted by higher education institutions. On this matter Hoenack (1971) argues that, in the long run, if the costs of attending universities are lower, the secondary school student from a low-income background is much more likely to prepare himself to meet the entrance requirements. The empirical results reviewed here support the view that tuition fee increases may serve to enhance rather than diminish the equity and efficiency in higher education, provided they are offset by differentiated (say, targeted) student support packages. A movement toward targeted subsidizations for higher education will have a positive effect on the enrolment and on a balanced social representation in higher education in the long run.

A model in which the state subsidizes eligible students on the basis of financial need, regardless of whether the students attend a public or a private higher education institution, might also be considered a feasible policy to achieve a socially balanced representation in higher education. In line with the discussion in section 2.5, where we presented three postures for the state's policies in relation to the private higher education sector, such a model would fall in the category of market-competitive models (Zumeta, 1996). In the market-competitive approach, the state enhances competition in the higher education sector by designing a tuition policy that equalizes net prices for low-income students between private and public institutions. Needy students in both types of institutions receive state subsidies. Zumeta's findings about states in the US that have a policy where a blanket approach in subsidies is replaced by a more targeted approach provide some support for the view that the latter will increase cost-efficiency for the state budget and provide relief in the tax burden for citizens. Zumeta's analysis also confirmed that the average participation rate in higher education is highest in the market-competitive "high tuition – high aid" states.

Other studies of student aid concentrated on the equity effects. For instance, Leslie and Brinkman (1998) concluded that student aid does increase access.

Woodhall (1970; 1982) examined the loans scheme in a number of developed countries and found that they have worked reasonably well and have increased access for students from lower income groups.

Summary

To summarize, a change in funding models, subsidies and tuition policy may bring about positive effects in terms of efficiency and equity. As part of the overall change in the institutional arrangements that took place in countries like Poland, it is important also to look at the way in which support for higher education is provided. The targeting of public support, tuition equalization policies and making support available to private institutions has implications for the composition of the student population and the overall participation in higher education. These insights should be combined with the fact that location matters when it comes to students deciding on whether or not to enrol in a higher education institution (Hoenack, 1971; Kohn, Manski, Mundel, 1976). Making low-income students in private institutions eligible for state aid will influence the composition of the student body, because private institutions are often located in smaller cities. This makes higher education more affordable for low-income students from rural and small city areas. Beyond this, one may propose that the costs of providing higher education programs are lower in small regional private colleges. Therefore, given the limited state budgets, it is possible to subsidize more low-income students.

5.7 Information issues

A well-functioning market presupposes that the producers and consumers in the market possess 'perfect information' about the products and services for sale – their prices and other characteristics. In higher education, the information relates, among other things, to entrance requirements, program offerings, program contents, program quality, tuition fees, student facilities, and the labour market effects of a higher education degree. Since higher education is an *experience good*, the market for higher education is likely to suffer from information deficiencies. There are information asymmetries between students, universities, governments, the university's clients (or stakeholders), and banks (as providers of student loans). The presence of adequate information will improve student choice; it is also crucial for accountability reasons. The latter is tied to the issue of institutional autonomy, because more freedom for the institution to set out its own course in practice will go hand in hand with greater demands for accountability (Trow, 1973). However, it is accountability related to the performance of higher education institutions – their productivity, effectiveness and quality. In times of great concern for 'value for money', higher education institutions, like other non-profit organizations, are being asked to justify their use of resources and their performance to various external funding bodies (Sizer, 1998). Publicly available

information on the quality of higher education institutions provides incentives for them to improve their quality and make an important contribution to the process of accountability, both externally to funding bodies, government and society, and internally within the institution (Sizer, 1998).

The collection and dissemination of comparative information on higher education services is done to achieve a number of goals. The first is to protect the students from being short-changed by higher education institutions. The second is to 'introduce some concrete information on the extent to which the benefits expected from education expenditure are actually secured, to facilitate comparisons in terms of effectiveness and efficiency as between various parts of the system, and as between different points in time' (DES 1985). Yet another goal is to help institutional leaders to identify the strengths and weaknesses of their own institution. In summary, performance measurement is used for two general purposes (Kaiser, 2002): improvement and accountability. Adequate provision of information can signal problems and inconsistencies in the higher education system and this may lead to action to improve performance. The accountability function stresses that providing swift, reliable information on performance serves as a kind of legitimacy for the (public) resources invested in higher education.

There are many ways to promote greater transparency in higher education. One is to require each higher education institution to conduct its own internal quality assessments, possibly using external visiting committees, and to have the results made public. Second, accreditation exercises, which are increasingly held across the world of higher education, require academic programs to undergo evaluations. Such an exercise is required in order that the institutions can have their degrees officially recognized and their students eligible for various forms of state support (Jongbloed, Salerno, 2003). If students know that a program is accredited they can be sure that it meets specific quality standards. Quality assurance mechanisms of this type often make use of a variety of performance indicators.

In more market-driven systems, where students have to pay for their education, information about degree programs is more important for students when choosing a university or college. Universities and colleges, competing for students, may be tempted to provide the kind of information that puts the institution in the best possible light. As a result, some students may misinterpret the information given to them and consequently make the wrong decision. Therefore, governments may step in and monitor the provision of information to students to ensure the information is relevant. Greater reliance on market forces means a greater role for choices made by individual students. According to Dill & Soo (2004), student choice should then be informed by adequate data about entry standards, program completion rates, the proportion of graduates entering employment, the share continuing in professional training programs or higher

degree programs, the average starting salaries of graduates, the students' satisfaction with respect to their academic program, et cetera.

When the provision of direct information about product quality is inadequate or absent, consumers tend to seek – and producers try to provide – ‘indirect or symbolic indicators of product quality’ (McPherson & Winston, 1997). Higher education institutions will often send out signals that do not provide direct evidence about institution performance but instead are meant to ‘impress clients’. Colleges and universities may be tempted to engage in marketing activities to influence student choice. They will stress aspects of their institution that are directly observable by students but that do not have a direct relation with the educational experience. Examples are on-campus facilities, buildings, libraries, et cetera. ‘Theatres, athletic facilities, computer centers, museums, and the like would rank high on the list of such facilities, and the prestigious colleges and universities have been energetic in developing such facilities in recent years’ (McPherson, Winston, 1997, p. 84). The positive aspect of these ‘marketing’ activities is that universities and colleges become more student-orientated. However, the negative side is that such demonstration efforts contribute to the increasing cost of higher education. They paint a picture that links quality to visible, often expensive symbols of prestige.

In short, a more market-oriented higher education system, where higher education institutions compete for students, requires a clear role for the government in enforcing quality standards, accreditation and maintaining information systems that support student choice. The information that is crucial for student choice would have to be comparative in nature, revealing the differences between institutions and programs. Such differences are more likely in an open higher education system, where public universities compete with private institutions – both seeking their market niches and stressing their comparative advantage.

5.8 Freedom to choose

In the previous section we already touched on the centrality of student choice in a market-driven higher education system. This section continues this discussion, pointing to freedom of choice as an essential condition for a real market (Jongbloed, 2003). This ingredient of a market stresses the condition that a student can choose the institution in which he wishes to enrol, provided he holds the necessary access qualifications and is not restricted by financial thresholds.

First, freedom to choose relates to legal restrictions that may limit the students' access to higher education. There may be regional limitations, such as the presence of reserved enrolment places for local students, or other facilities for

selected student groups. Regulations may also limit the number of student applications to multiple higher education institutions. In 'planned' higher education systems, a national agency often exists that allocates students across institutions. In market-oriented systems, it is left to the students to apply for a study place at the institution of their own choice.

Freedom to choose may be restricted due to economic limitations. This is relevant at the macro level. Governments may set a fixed capacity for the system in terms of student places, or the government may prevent new providers from coming into existence (e.g. state funds channelled only to public institutions), or the government may place limits on the type and capacity of programs in a particular discipline or degree level (bachelor, master, PhD). Student choice is also influenced by the eligibility of scholarships and students loans. If students from lower socio-economic backgrounds in private recognized and accredited higher education providers are not eligible to receive student support, their choice is also restricted. Economic limitations also work on the individual, student level. Students may face liquidity constraints – they cannot pay tuition fees and the cost of student housing and have to resort to loans. Here, the fear of debt may prove to be a significant limit to access and choice. Students may then voluntarily restrict their choice to nearby institutions, sometimes of a less than wished for quality.

Another dimension of freedom to choose is the extent to which students can choose and specify their curriculum. Jongbloed and Salerno (2003) distinguishes the macro and micro levels of students' freedom to choose. At the macro level, the freedom is tied to the higher education institutions' freedom to provide a choice of academic programs, to the admission system and to the geographic location of higher education institutions. An open entry system, coupled with a wide range of degree programs and geographically dispersed higher education institutions, ensures that most candidates can enrol in their preferred program. On the micro level, the freedom relates to the students' freedom to develop personalized study programs. According to Jongbloed (2003), higher education institutions cannot satisfy every demand, because of the high costs and disciplinary coverage this would bring about. Furthermore, coherence would pose a potential problem. Therefore, institutions will offer 'standardized' study programs. In practice, students will have only limited room to freely specify and develop their program. Moreover, professional standards and national systems of quality assessments will limit the degree of flexibility offered to students. In contrast to this, for study fields such as economics, management, public administration and humanities, the required course elements may constitute only 60-70 % of the curriculum, leaving institutions some freedom to provide a set of additional and elective classes to students.

5.9 Summary

In the preceding sections we have discussed some elements of marketisation, in the shape of ingredients and effects of 'free markets'. These were autonomy, equity considerations, information and freedom to choose. Institutional autonomy, in its many dimensions, is believed to make the higher education system more efficient, more responsive and larger in terms of capacity and range of choices. However, markets may bring undesired effects such as an inadequate representation of students from the various socio-economic strata in society. We argued that a reform of funding systems may alleviate this inequity problem. Targeting student support and tuition equalization programs may 'do the trick'.

Information and freedom to choose are the two final ingredients of markets. For the provision of information – in particular when it comes to the quality dimensions of education – government would need to play a role in terms of providing accreditation mechanisms and information systems. Governments also affect the range of choices available to students by placing limits on the various dimensions and facilities in the system. In particular, we have pointed to the 'open' character (or closedness) of the higher education system. That is: allowing privates to compete with public providers and allocating direct or indirect support to students in either type of institution. Such institutional arrangements were already stressed in the previous chapter. This chapter has completed the discussion by presenting additional institutional arrangements such as autonomy, funding mechanisms, accountability and quality control. The presence of such arrangements and their reforms will shape the strategies of public and private providers. This is the subject treated in the next chapter.

6 Higher Education Institutions' Strategic Responses

6.1 Introduction

In this chapter we complete the construction of our theoretical framework. Whereas the previous chapters (3-5) paid attention to the explanatory variables, this chapter gives a detailed exposition of the dependent variable. The prime focus of our study is the development of public and – in particular – private higher education providers in Poland. This development is studied on two levels: the system (or macro) level and the meso level, the level of the individual higher education provider. Obviously, the first is the consequence (or: aggregate) of the latter, but studying individual behaviour provides a better understanding of trends appearing at the macro level. The individual responses of higher education providers to changes in the institutional arrangements and other (external) conditions have many dimensions. This chapter looks at the meso level and focuses on a number of important characteristics of the providers' responses.

Based on this study's analytical model, as presented in chapter 3 (section 3.2), we expect that the responses of private and public providers of higher education will be shaped by the policy framework and the market environment in which they operate. In Poland, both have seen dramatic changes over the past 15 years. The policy framework – or rather: institutional arrangements – has undergone many reforms that may be characterised as a marketization of the higher education system. The market environment in which the providers operate has also seen rapid change, on both the demand side (i.e. the economic and demographic conditions) and the supply side (i.e. the presence of competing products and providers).

The term we use to describe the organizational responses of higher education providers to their changing environment is 'strategic responses'. This is meant to stress that we focus on the positioning of the higher education providers on their market. In brief, positioning means choosing product, price, place and clients. In terms of higher education this means: program offerings, program content, mode of delivery, fees charged, location of university/college and the composition of the student body.

Within the room for manoeuvre given to providers by the state in terms of autonomy (or – in negative terms – the barriers raised), higher education institutions will use any knowledge about their external environment to develop options that will improve their competitive position. The result could be a new

strategic direction, such as stressing their cost advantage over competitors, differentiating their product from competitive products, or engaging in strategic partnerships with other providers. This is where we make use of the concept of competitive advantage (Porter, 1980, 1998).

This chapter presents the main competitive strategies available to higher education institutions on a monopolistic, competitive higher education market shaped by varying external demand and supply conditions as well as institutional arrangements. In section 6.2 we introduce Porter's generic strategies – or business concepts – for creating value in a for-profit environment. Section 6.3 lays out in greater detail the four main types of strategy that may be distinguished and translates these to the case of higher education. The Porter strategies have been developed further by other authors such as Dawes and Sharp (1996). Their work provides an opportunity to link up strategies and market characteristics, which is done in section 6.4. The final section of this chapter, section 6.5, draws the various pieces together and ultimately identifies five strategies that are relevant for higher education providers operating in various market constellations. We try to find support for the five strategies in the empirical part of this study.

6.2 Porter's Generic Strategies

In chapter 4 we have already studied some of the universities' strategies in response to changing institutional arrangements – changes such as the removal of barriers to entry, or introducing public support for private providers. We looked at the institutions' price setting decisions and their capacity decisions for the various types of degree programs they offer. We now look more closely at the strategies they develop in response to the demand and supply conditions with which they are confronted.

We assume that each public and private higher education institution is interested in gaining a competitive advantage in the market. Competitive advantage is the centrepiece of the work of Michael Porter (Porter, 1980, 1998). A loss of competitiveness may lead to loss of prestige, reputation, market share and, in the case of private organisations, even bankruptcy. In contrast, having a competitive advantage over other (competing) organisations brings with it sufficient student enrolments, in turn generating state funding and tuition fee income, which is necessary for further development. According to Porter, each organization should have its own individual strategy, reflecting its needs and plans, given the institutional arrangements and external conditions. The leading question of this section is how will the private and public providers position themselves in the marketplace, in terms of prices, capacity (i.e. student number), programs, degrees, et cetera, in response to the changes in their environment?

According to Porter (1980), organizations adapting to new institutional arrangements and new demands will choose the way they respond and reorganize themselves according to a business concept, which is the organisation's leading idea about how it should create value (or added value). A business concept involves a strategy framed in terms of product thinking and ways of increasing efficiency by leveraging the firm's strengths. 'Business' can also refer to a not-for-profit organization, such as a higher education institution, a government agency, et cetera, because (added) value encompasses not just money but also customer-oriented value or value for society as whole. The idea of value here relates to the concept of value elaborated in chapter 4, where (in section 4.3) we introduced the concept of intrinsic value. The business concept is equally relevant for a non-profit enterprise when such an organization is confronted with a change in its environment. Examples of environmental change are: increasing competition, increasing (or different) accountability requirements, technology shifts, or changes in the sectoral structure of the economy. In such a case, the organisation may need to rethink its business concept – it needs to reposition itself.

We use the terms business concept and strategy interchangeably. Porter distinguishes two “families” of business concepts or strategies:

- (1) the product differentiation strategy;
- (2) the efficiency or cost leadership strategy.

The first type refers to the idea that the organisation is unique – it serves a particular market, it offers products and services that are different from the products offered by other suppliers. In the second family of strategies the advantage of the organisation lies in the fact that, compared to competitors, it manages to produce its products in a less costly way. For both families of strategies, having the right production technology (and the staff/knowledge to handle it) is essential, next to knowledge of the market.

Strategies may target either a broad market or specific market segments. In some cases, targeting the broad market may lead to increased added value and a better competitive position on the market. Usually, the sector in which the organization operates – the branch of industry, the available technologies and the potential clients – provides or imposes the available options. The sectoral structure of the economy may sometimes provide high profits for all organizations on the market, whereas in other cases the organizations are able only to just break even using one of the business concepts. This points to the fact that the important determinant of a firm's profitability is the attractiveness – or the state of maturity – of the industry in which it operates and its position within that industry. Even if an industry may have below average profitability, an organization that is optimally positioned can generate sizeable returns.

Following Porter we may therefore identify two main groups of strategies:

- (1) narrow/market segment strategies
- (2) broad market strategies.

Within these two groups, organizations can choose a product differentiation strategy or a cost leadership strategy. This leads to the four generic strategies shown in table 6.1.

Table 6.1: Porter's Generic Strategies

Target scope	Advantage	
	Low cost	Product uniqueness
Narrow (Market segment)	Focus strategy – low cost	Focus strategy – differentiation / high quality
Broad (Industry wide)	Cost leadership strategy	Differentiation / high quality strategy

After Porter (1980)

The next section further discusses the four strategies shown in table 6.1.

6.3 The strategies further explored

Continuing the discussion of the strategies available to organisations that operate on a market, we now present further details about the four main strategies identified by Porter. Each is translated to the case of higher education.

6.3.1 Narrow – market segment strategies

The narrow or market segment strategy is based on the idea of increasing production volume by focusing on particular consumer groups, on a particular geographic area or on a particular product. This strategy is based on the idea that the organization can operate more efficiently than its counterparts who try to satisfy the needs of a wider array of clients. The premise is that the needs of the group can be better serviced by focusing entirely on this market niche. As a result, firms identify the particular consumers' needs and wishes in order to provide them the products they demand. This strategy allows organizations to increase their productivity either by lowering their costs – thanks to the narrow product offering – or by developing unique and/or high quality products. The latter option enables the organisation to pass on the higher production cost to the consumers, since no close substitute products exist. In both cases the strategy is a focus strategy –the focus is either on cost or clients.

In the case of higher education, a focus strategy implies that universities and colleges concentrate on a narrow student or program segment, and within that segment they attempt to develop the best offer and capture the students' interests, their loyalty. This discourages other providers from competing directly. In this example, students have less choice; they have fewer alternatives to choose from. The products on the market are not standardized and are different among the different providers. Competition between providers is therefore relatively mild. This is the case of monopolistic competition (see chapter 4).

The choice of focus strategy may be imposed partly by the presence of specific institutional arrangements and external factors, such as:

(1) **government restrictions.** Here, authorities grant monopolies for some market segments or they restrict competition between particular groups of higher education institutions. Examples are music colleges, navy training institutions, police academies and medical colleges. Such regulation may concern restrictions to entry in some areas of higher education. Other restrictions involve making state funds available only to selected (public or regional) universities and colleges. There are many other kinds of regulations that may protect the position of particular (often incumbent) higher education institutions.

(2) **proprietary restrictions.** This means not sharing the organisation's knowledge that provides competitive advantage. Some universities may have access to new technologies, international research centres, or to unique, highly specialized academics. They can therefore offer different products and services than their counterparts. The competitors are deprived of this kind of knowledge or assets. For instance, regional settings such as proximity to a particular industry (or multinational corporation) can afford a higher education institution a competitive advantage over other providers.

(3) **Economies of scale.** This means that there are advantages to producing a large output - in terms of the student number per course. More output leads to lower unit cost. If this is the case, the institutions in question prefer to offer only a limited number of courses, usually in overlapping fields (provided there is sufficient demand), and enrol as many students as they can. They will not offer multiple study programs. Theoretical insights as well as casual empiricism suggest that the marginal costs of educating additional students in similar study fields are substantially lower than the marginal costs of educating students across a wide range of fields.

Higher education institutions that follow the market segment strategy either offer high-quality or unique products and try to be perceived as high prestige schools, with brand name reputation influencing student choice, or they provide "convenience", low cost study programs, mostly for regional students. In the

latter case the programs are not unique, but are attractive in terms of price and place.

Focus – differentiation – high quality strategy

Universities that follow the differentiation strategy within a narrow market segment will mostly compete in a nation-wide market. However, they target a specific market segment of students who are attracted by the national brand name, which signals high quality or unique attributes. The students in this segment will pay less attention to the costs of study or the costs associated with the location of the university. These universities, being selective and targeting a specific market, usually charge high tuition fees, although some of them might offer scholarships for bright and/or needy students. Such scholarships are paid out of their endowments or from other non-tuition sources of revenue. They may adopt strict admission procedures and engage in selection practices in order to enrol the best qualified students and thus protect their quality and brand reputation. They will take part in professional and academic accreditation and seek legitimacy by adopting high standards for certifications that reinforce the value of their brand names.

The differentiation strategy implies that institutions will demonstrate their distinct features, to be perceived as different and better in other aspects than their counterparts. Institutions can offer distinct, unique study lines, new methods of teaching, employ well-known, highly ranked scientists, operate modern buildings and facilities, or engage in cooperation with foreign partners and private industries or businesses.

Universities and colleges that succeed in a focus differentiation strategy are likely to have the following internal strengths:

- (1) access to highly qualified academics, some of them in unique study fields;
- (2) access to leading scientific research, international cooperation, and to new technologies;
- (3) highly skilled and creative product development and management team;
- (4) reputation for quality and innovation plus institutional prestige, usually due to a relatively long history and tradition;
- (5) location usually in metropolitan areas with developed labour market; and
- (6) access to non-tuition sources of revenue.

Focus strategy – low cost

Universities that operate on the basis of a low cost strategy with a narrow market will be quite different from the previous group of prestigious institutions focused on the top end of the market. The cost leadership strategy calls for being a low cost producer in an industry for a given level of quality. Higher education institutions sell their products or services either at average industry prices to earn

a profit higher than that of rivals, or below the average industry prices to gain market share. In the event of a price war, the institutions can maintain some profitability while the competitors suffer losses. Even without a price war, as the industry matures and prices decline, the institutions that can offer cheaper products will remain profitable for a longer period of time.

In this group, colleges and universities offer study programs for specific student segments, such as working students (often mature students) or students from lower socio-economic classes. Castro and Navarro (2003) describe these institutions as education providers that usually carry out their teaching activities in low-cost disciplines, mainly in social sciences and professional tracks. They operate in close response to labour market developments and the corresponding high demand for particular courses. They develop neither graduate programs nor engage in research; their faculty is usually part-time; they offer evening and part-time courses adapted to lower and middle-class students who remain in their regular employment. Accordingly, they tend to have low tuition fees.

Private higher education of this type is mostly dependent on tuition fees and offers its courses at relatively low prices. The availability of private and public contributions and endowments is likely to be very limited. The low-cost universities compete within their quality segment for regional students, who pay more attention to cost and proximity of the providers than to quality and reputation. Clearly, the most prestigious universities' student bodies are far more homogenous than the tuition-dependent, regional ones, in terms of family background, income, age, working experience and prior educational tracks. Since many students work to pay for their studies or to upgrade their qualifications, cost leadership universities respond to their needs by offering various part-time study programs. Working and mature (third-age) students are represented particularly in universities and colleges located in their living or working areas.

The low-cost specialist operators often concentrate on regions with only few higher education providers, where competition is relatively low. The market niche ought to be relatively large, however, in order to allow the institution to be efficient. The low-cost focus strategy is especially relevant for newly established higher education providers, with limited financial resources. If such an institution, without large non-tuition funds, were to compete with old, mature, rich counterparts, then it would probably fail. But if such an institution decides to operate in some market niche that is neglected or underserved by competitors, it can successfully function and develop.

The increased demands for accountability on universities have expanded the focus on effectiveness. Effectiveness for low-cost universities means focusing especially on accessibility (or 'openness'). As argued in chapter 5 (section 5.6), any expansion of higher education is most likely to be found in opening up the

institution to students from lower socio-economic groups. This means moving away from the traditional middle/high-income students to students of all income levels. It also implies expanding access to students in all geographic locations. More recently, the emphasis on lifelong learning has further achieved expansion of access through increased numbers of adult, usually working students.

Some of the risks of sticking to a focus strategy include imitation and changes in the target segments. Furthermore, it may be fairly easy for a broad-market cost leader to modify its product in order to compete directly with the narrow market, low-cost provider. As argued in chapter 4, the providers that are the most vulnerable to the competition are the cost-leadership, medium- and low-selective universities and colleges. These providers, if deprived of non-tuition sources of revenue, can be challenged by competitors within their quality segment that have additional, non-tuition, fixed revenue, such as state subsidies or endowments. Universities that pursue the higher quality strategy at higher prices than their competitors, are far more competitive. They set prices at high monopoly levels and can generate substantial rents, despite the higher costs of providing their products, in terms of high quality faculty or technology. On the other hand, this type of university will also have to watch the prices charged by similar quality, highly selective universities and may sometimes not be able to exploit the rents associated with their brand names.

6.3.2 Broad, market-wide strategies

A broad, market-wide business concept suggests a broad market strategy, where the products offered are matched to (i.e. cater to) broad market segments. Organizations choosing the broad market strategy can adopt the differentiation strategy or the cost leadership strategy, emphasizing price first and availability second. However, most often (Porter, 1980) they will combine both strategies, offering low-cost products to some consumer groups that emphasise the price first, and high-quality products to those consumers that are lured by the brand and quality of the products. For this reason, we focus on this kind of broad market concept which combines both cost leadership and high quality strategies.

Universities that pursue a broad market strategy usually offer a wide range of study programs, including programs leading to bachelor, master and – possibly – doctoral degrees. They may offer varied modes of delivery, including full-time, part-time and evening-time programs. Their offer is targeted at all students groups, both students from middle/high socio-economic strata and students from the lower strata, fresh secondary school graduates as well as working mature students. They also try to attract students from rural areas by opening branches in smaller non-academic cities. For instance, universities that follow this kind of strategy may adopt a different admission and pricing policy for their full-time courses, applying strict entry requirements and high prices, while for part-time

programs they set lower admission requirements and a low tuition fee. Higher education institutions that decide to adopt such a broad market strategy need to have diversified sources of financial resources in the form of state subsidies or large endowments, or donations. If they do not possess this resource flexibility, they will be less likely to adopt a broad market strategy. On the other hand, the institutions with sizeable non-tuition sources of revenue will more often choose a broad market strategy, offering both low costs courses – mostly to low income students – and high quality ones.

According to Jongbloed (2004), in the case of a broad market strategy, the universities' offerings are based on a selected number of 'standard products' offered to prospective students in specific segments. Since higher education institutions are increasingly confronted with heterogeneous, unpredictable demands, it is difficult for them to offer standard products only to selected student segments. Jongbloed (2004, p. 422) finds that 'Value creation shifts to differentiation, putting the customer in the driver's seat and adjusting business processes accordingly. An increase of the number of programs for the increased number of market segments would seem to be a worthwhile strategy, allowing providers to meet unpredictable, individual, time-dependent student demand. However, such a differentiation strategy tends to decrease efficiency and negatively affects the productivity of the organization.' These relations are in accordance with our earlier findings concerning the costs in higher education institutions. In their study on marginal costs in higher education, Zumeta and Thompson (1981) showed that when there is a high student demand or if demand is increasing, institutions can provide the same set of educational services for the increased number of students at a decreasing marginal cost. On the other hand, when higher education institutions face a decrease in student demand or growing competition, they can increase enrolments only by providing better quality or expanded program offerings, which entails additional costs. In this case, the university or college may face increasing marginal cost per student.

According to the business science literature, the broad market strategy is not always best (Porter, 1980). If a firm attempts to achieve advantage on all fronts, it may achieve no advantage at all. For instance, if the firm differentiates itself by supplying very high quality products, it risks undermining that quality if it seeks to become a cost leader in other product segments. Even if the quality did not suffer, the organization would risk projecting a confusing image.

6.4 The Dawes and Sharp strategies

In recent years, several authors have undertaken empirical analyses of competitive strategies in an effort to expand our knowledge of the links between industry structure, business concepts and economic performance. Some authors

have focused on a single industry (Cool & Schendel, 1987); others have taken a broader view, preferring to utilize the wide range of strategy elements to identify the broad strategies of firms in diverse operating environments. In this section we look at a study by Hooley, Lynch, and Jobber (1992) and the re-analysis of this study conducted by Dawes and Sharp (1996a, 1996b).

Dawes and Sharp examined a number of organizations in terms of their strategies in a given environment. Furthermore, they identified the most common characteristics of the organizations' performance and related the performance to the supply and demand market characteristics. The market characteristics they identified are: type of market (new and growing market, or mature and stable market), the degree of rivalry, and consumer power in terms of variability in (or speed of change of) customer needs.

There is an interesting topic in the study by Dawes and Sharp (1996a) that corresponds neatly to our analysis of links between the supply and demand conditions and organizations' reactions. It concerns the firms' positioning in reaction to the market characteristics. The way they treat this topic provides us with a very useful way of showing the relationships between the concepts of market characteristics and organizations' responses. Dawes and Sharp formulate a number of strategies they see as being adopted most frequently by firms and organizations on markets that exhibit either of the following characteristics:

1. Emerging and growing market, with high fluidity of competitive structure, low competition from other firms within the industry, low buyer power and relatively rapid changes in customer needs;
2. Mature, saturated and stable market, with lower fluidity of competitors but higher rivalry, higher buyer power and lower speed of changes in customer needs.

Strategies for emerging and growing markets

Dawes and Sharp distinguish three strategies for the case of an emerging and growing market:

1. low cost, average quality, and aggressive sales growth strategy;
2. more broad market oriented strategy,
3. high quality - high price strategy.

The first strategy is the ***low cost, average quality, and aggressive sales growth strategy***. It exhibits the attributes of Porter's narrow market-low cost strategy. Organizations adopting this strategy pursue aggressive sales growth, often through market expansion, aiming mostly at selected customer segments. They produce relatively low or medium quality products compared to their competitors and are not likely to charge higher prices; they may even charge

lower prices. The strategy implies that providers select a number of high-demand 'standard products' of average quality that will be offered to prospective students in specific segments of the student market for moderate or lower prices compared to competitors. The strategy is best characterized as 'aggressive growth and market expansion strategy with low or average prices'. According to the theory of monopolistic competition (see chapter 4), the type of product differentiation for universities and colleges adopting this kind of strategy is based mostly on location, price and convenience. The providers will try first of all to attract regional students. Universities pursuing this strategy usually offer undergraduate, vocationally oriented courses in low-cost study programs.

Universities and colleges choosing the second strategy are pursuing a higher market share and steady growth. They are not following an aggressive route to achieve this. Instead, they focus on existing segments of the student population and are less likely to expand their study offer for new types of students. Higher education institutions that choose this business concept target not only regional students, but try to compete on a more nation-wide market. Therefore, their strategy is a more broadly market-oriented one. The quality of their offer is usually higher than that of competitors that follow the aggressive growth strategy, but it is offered at the same price. Higher education providers adopting this strategy usually base their differentiation on a variety of products.

The third strategy is relevant for new and growing markets as well as mature and stable markets. It is associated with selective targeting of high quality products sold at a high price. This is why it is called a high quality-high price strategy. This strategy mirrors Porter's focus-differentiation / high quality strategy presented above (section 6.3). The universities adopting this strategy base their competitive advantage on the uniqueness of their offer and on its high quality. The approach to new product development is to lead the market and take on any competition, rather than to avoid or ignore it. The strategy involves offering above-average quality and prestigious study programs, selective entry procedures and higher fees than competitors. The high quality-high price providers prefer steady, regular growth rather than aggressive growth. They will focus on winning market share rather than expanding the market. Therefore they focus on student segments that already exist on the market. These institutions will try to brand their names and exploit a premium, offering courses at high prices. It is worth noting that both the fluidity of competitive structure and speed of change in customer needs are the lowest for this group of institutions, whereas they are highest for the previous two strategies.

Strategies on old and mature markets

We now turn to strategies that are relevant for operating on mature, relatively stable markets with increased rivalry between competitors (Dawes & Sharp, 1996a). Three strategies are available in this type of market. The first is the high

quality-high price strategy described above as the third strategy. This strategy may also be adopted by organizations on stable markets. The other strategies that are feasible on old and mature markets are:

1. same quality, same price strategy (or 'average quality and price' strategy);
2. defensive, internal orientation strategy.

Strategy (4) involves setting steady sales growth goals, usually by focusing on the whole market. In other words, this strategy follows a broad market idea, similar to strategy (2). Higher education providers adopting this business strategy advertise themselves as providing the same (good) quality products at the same competitive prices as their counterparts. They offer a wide range of study programs, targeting a broad range of students groups. This strategy is usually chosen by those universities and colleges that selected strategy (1) in earlier days, when the market was still new and growing. First, on the growing market the institutions offer a selected number of 'standard products' of medium quality, usually in high-demand study fields, for the same prices or lower ones than their competitors. Later on, when the market becomes saturated and demand stabilises they expand their offer of study programs and try to reach new, promising student segments. However, they are still considered medium quality institutions pricing at average or low levels. Their focus is more quantity- than quality-oriented, that is, their way to survive is to capture students from other segments offering more average quality study courses. Thus they still base their differentiation on location, but due to the changing characteristics of their environment, increased competition, increased student awareness and power, and the slowdown in student demand, they have to widen their study offer to capture new student groups.

Another group of institutions that may pursue this strategy on a stable, saturated market consists of universities that earlier, on a growing market, chose the broad market approach (strategy (2), listed above). First, they offer programs of average or high quality to selected student segments. However, when competition becomes intense and student demand slows down, they decide to capture students from other segments and offer more diversified study programs. These programs are new in terms of study fields, quality, type, mode of delivery and price. In other words, instead of focusing on student groups that already exist on the market, they expand their offer to new types of students.

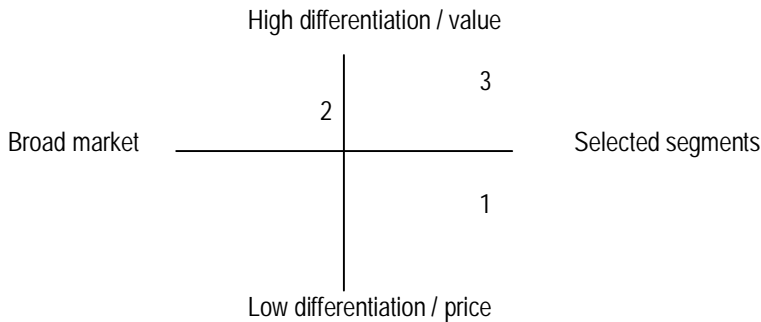
This strategy resembles Porter's broad market strategy. Universities and colleges on a stable market, facing increased competition, will have to diversify their offer in order to attract new students; students who were previously served by other providers.

The fifth strategy, which is especially relevant for mature, stable markets, is the defender strategy. In this case, higher education institutions rationalise their use of staff, resources and infrastructure to reduce costs and to improve their productivity. They choose a targeting policy, focusing on selected student markets. For universities and colleges this approach implies an orientation towards costs and changes in internal management structures. As a result, the universities will offer their services usually at a price lower than the average price in the sector, striving to earn a higher profit than their rivals, and gain market share. Universities and colleges employ part-time faculty and offer mostly vocationally oriented study programs. Clearly, this market strategy resembles Porter's cost leadership strategy. As a consequence, most universities and colleges that adopt this strategy are considered low-quality providers, operating with low fees and relatively narrow program offerings. In contrast to the previous strategy, the defensive strategy makes universities focus on selected student segments and orient their differentiation on low-cost programs and location. The universities will not widen their program offerings and they will try to retain all their activities in order not to lose the student niches they already serve.

6.5 Summary

This chapter has identified a number of strategies for higher education institutions that strive to maintain a comparative advantage over competitors. They do so in response to changing conditions in their market environment – changes in both demand and supply conditions. Pulling together the various strategies of higher education institutions, we may draw two diagrams that show the way in which the organizations respond to the changes in their environment. The diagrams combine Porter's generic strategies (the two families of differentiation and efficiency strategies, see sections 6.2 and 6.3) and the strategies identified by Dawes and Sharp in their study of organisational responses in various market situations (mature versus growing markets, see section 6.4).

Figure 6.1: Organizations' strategies on an emerging, growing market

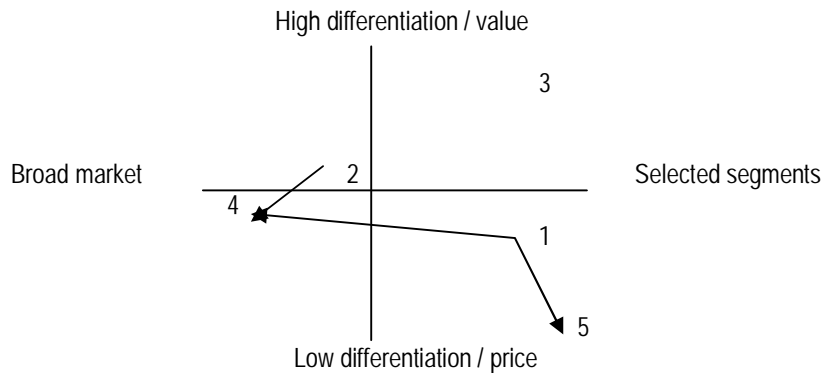


Source: own analysis

Figure 6.1 relates to an emerging higher education market where demand is growing. Providers that pursue strategy 1 base their differentiation on low or average costs and focus on expanding the market by approaching new student segments, which are usually under-served by other providers. The second strategy is positioned higher up the vertical axis representing differentiation. There is greater differentiation in terms of program prices and the quality of the program offer. Providers adopting this strategy offer programs of slightly higher quality. They charge average prices and focus mostly on winning market share in already existing student segments, rather than expanding the market. The third strategy is associated with selective targeting of high quality products at a high price. Universities pursuing this strategy base their differentiation on the high quality of their offer.

Figure 6.2 presents the evolution of the strategies now that the market has become mature and stable. Providers that adopted the first and second strategies on a growing market now face increasing competition and stable student demand. They will try to expand their offer to reach new student segments, previously served by other institutions, and go for a broad market. Other institutions, departing from the first strategy, will adopt the fifth strategy, which makes them defend their market share by bringing down their cost and offering only a few study programs. Universities and colleges that adopted the third, high quality-high price strategy are not likely to change it. They will continue to pursue selective targeting at high prices.

Figure 6.2: Organizations' strategies on a mature, saturated market



Source: own analysis

To summarize, this chapter has analysed in greater detail the dependent variable in our study – the responses of higher education institutions to changing conditions in their environment. We have used the term *strategic responses* for the dependent, stressing that the institutions will rethink their program offer, price, location and clientele in response to the key forces that affect their market share. They will be concerned with sustaining and possibly improving their competitive advantage. The explanatory variables that feature strongest in this chapter are the demand and supply conditions on the higher education market. These are related in particular to demographic and economic conditions as well as the degree of rivalry – all of them elements derived from business science and industry analysis (see chapter 3). The next chapter adds to this the institutional arrangements that also shape the organisations' strategies. Combining the various elements will then give us a rich set of analytical tools and concepts to understand more fully the strategic responses of private and public higher education institutions to changes in their market and institutional environment.

7 Hypotheses

7.1 Introduction

Now we have completed the construction of our theoretical framework it is time to take the first step towards an empirical analysis of the Polish higher education system. The theoretical framework, based on neo-institutional theory (chapter 3), industry analysis (chapter 3), the micro-economic theory of non-profits (chapter 4), some general economic principles (chapter 5), and business science (chapter 6), will serve as a toolkit for our exploratory analysis, the goal of which is to come to a better understanding of the effects of marketisation policies and other institutional reforms on the developments of public and (the many) private higher education institutions in Poland. These developments are analysed at the level of the system as a whole as well as at the level of separate (groups of) public and private providers of higher education during the period 1989-2004.

A number of hypotheses are formulated to guide our exploratory analysis. These statements, inspired by theory, have the following form: '*if this set of conditions obtains, the following developments are likely to happen*'. Conditions may be understood on the one hand as elements in the institutional framework and, on the other, as particular demand and supply conditions. The institutional arrangements refer to the laws, regulations, funding mechanisms, degree of autonomy, entry barriers, forms of government control, et cetera. The demand and supply conditions refer to the conditions in the market – in short, whether we can speak of a growing market or a mature one. The phenomenon to be explained (i.e. the dependent variable) is the development of the Polish higher education sector, in particular the *strategic responses* (see chapter 6) of individual public and private higher education providers.

The hypotheses are presented in the next section, along with a brief explanation of their link to the theoretical model.

7.2 Hypotheses

According to our theoretical model – the *interdependency model* presented in chapter 3 – the strategic responses of higher education providers to changes in their environment are determined by the structure of the industry and the institutional framework in which they are operating. In competitive markets, organizations are free to determine the direction they follow and the strategy they pursue. In the case of higher education, however, the situation is not as clear as it is for commercial companies, which respond primarily to the supply and demand

conditions in their market. The dominant factor that influences the strategic responses of universities and colleges is the government's higher education policy, as the state provides financial support to higher education and sets the rules that govern the market for education. Exploring (or explaining) the strategies of higher education providers therefore needs to take place in a setting that takes account of both the external, market forces and the institutional setting.

The institutional arrangements are primarily set by the state – the national government. The supply and demand forces depend on a wide range of underlying forces, such as demography, economic developments, technology, geography, political developments and ... government policies. Therefore, the role of state policy (the state subsidies in particular) is essential. Matters are further complicated due to the special nature of higher education, which is an experience good, produced by means of a customer-input technology (see chapter X). It is rife with information problems and other market failures, which makes it difficult to apply business-oriented models. In contrast to markets for traditional goods, the degree of competition in the market for higher education is to a large extent determined by government policies on issues like funding, quality and access. This poses potential barriers to entry for new providers, especially those of a private origin. The vast majority of students enrolled in degree-granting programs are in public institutions, which receive a variety of public subsidies. This creates significant barriers to unsubsidized private higher education institutions and brings an advantage to the subsidized providers. The price (the tuition fees) they charge is significantly below their production costs, and they are able to enrol students on free study programs.

In addition, in chapter 4 we also showed that decreasing public support channelled to public institutions severely affects the competition between private and public providers. The micro-economic theory of non-profit enterprises as applied to higher education providers leads to the prediction that low state appropriations will force the public providers to behave like for-profits. They will scale down their activity in those programs that primarily have a value for society as a whole, concentrating on economically viable programs. The public providers will lower their tuition fees in order to attract more students, and offer their services well below their production cost. This will distort the competition between private and public providers.

This does not imply that the business strategies we observe in the for-profit sector are useless in the case of higher education. In fact, as argued in our discussion of monopolistic competition (chapter 3) and in light of the strategies outlined in the previous chapter, the providers of higher education, faced with changes that lead to a higher degree of 'privateness' in their market, will also start worrying about their market share, leading them to re-think their program offer and price. A greater degree of 'privateness', or greater market reliance, may take the form of

diminishing state support, removal of entry barriers, extension of support to privates and, generally, more autonomy and less protection by the state. The higher education providers will thus experience greater exposure to the influence of various external forces and will need to modify their strategy – their way of creating value. The managers in universities and colleges then have to think strategically, in order to face economic realities and satisfy social expectations. They need to stress their competitive advantage. They have to decide whether to focus on selected student segments, to be a regional or a national provider, to offer a unique study program, to offer the most popular programs, or to offer a wide variety. This is where the choice of business strategy comes in: the differentiation versus efficiency strategy, a focus versus a wide market strategy. Do they want to be a low-cost producer or do they feel they can charge a high price for their services?

The universities' surroundings therefore consist of several dimensions, which broadly resemble the external factors affecting business companies. In particular in Poland, where the market forces became the most fundamental driver after the collapse of socialism in 1989 (Kwiek, 2003), those dimensions changed rapidly. As higher education systems become increasingly market-oriented, we analyze the strategic responses of universities and colleges using the business strategy thinking derived from the work of Michael Porter.

Our 'interdependency model', which links market conditions, institutional arrangements, and strategic responses of higher education providers, is used to guide us in our exploratory analysis of the effects of marketization in Polish higher education market. The model leads to nine hypotheses that are to be used to analyse the strategic responses by public and private higher education providers. The hypotheses are shown in table 7.1. The first set of hypotheses addresses the period immediately after the fall of the communist regime, the period 1989-1997, when the higher education market expanded rapidly. The second set of hypotheses is used to guide our analysis of the period 1997-2004, when the higher education system may be characterised as a saturated, more mature market.

In *hypothesis 1* we argue that, when the government allows private providers to enter the higher education market and eliminates barriers to entry, the fundamental free market rule will come to life: if a demand for higher education exists, the supply will rise to fill the void. New providers will enter the higher education market to meet demand.

Table 7.1: Hypotheses

Period 1: 1990-1997	Period 2 : 1997-2004
<i>On an expanding higher education market, with increasing student demand, a low degree of rivalry between providers, low barriers to entry, and an absence of state financial support for private higher education institutions ...</i>	<i>On a mature higher education market, with stable student demand, a high degree of rivalry between providers, and an absence of state financial support for private higher education ...</i>
1. the number of private providers will expand significantly.	6. most private higher education institutions will choose a steady sales growth strategy, focusing on the entire market rather than on selected student segments. They will offer diversified academic-oriented study programs and target students that were previously served by public institutions.
2. the main function of private higher education will be to provide more higher education and to absorb unmet student demand.	7. facing decreasing state financial support, most of the public institutions will choose a steady sales growth strategy, focusing mostly on the entire market rather than on selected student segments. They will increase enrolments on full-time study programs and lower entry requirements. Thus, they will target the students previously served by private institutions and will further develop their 'private arms'.
3. most of the new private providers will choose an aggressive growth strategy through market expansion. They will aim at selected segments, such as mature and part-time students, offering a limited range of study fields, focusing on high-demand low-cost vocational study programs at medium or low tuition fee levels.	8. private and public higher education institutions that earlier offered high quality study programs at high prices, will not change their strategies.
4. facing decreasing state financial support, most of the incumbent public providers will not change their zero-tuition, full-time programs in terms of capacity, variety and entry requirements. However, when faced with severe financial constraints, public institutions will expand the enrolment in fee-based, part-time programs.	9. new private and public providers will choose either a focused, low-cost strategy by offering low-cost study courses that are vocationally oriented and charge low prices. Other new providers will adopt a focus-differentiation strategy by offering unique study courses for selected student segments.
5. only a limited number of private institutions will choose a high quality-high price strategy. They will provide a broad study offer, master degree level courses, and have a more balanced structure of enrolment between part-time and full-time students.	

Hypothesis 2 addresses the *function* of private higher education (see chapter 2). Given the state's policy posture towards the private sector (private providers are not entitled to financial support from the state), private higher education providers are subject to the laws of demand and supply, just like any other business. They will have to offer attractive study programs in order to generate sufficient revenues from tuition fees and achieve their critical size. Since they are unable to compete directly with their public, subsidized counterparts, they will be mostly demand-absorbing institutions. Their main function is to provide more higher education.

Hypothesis 3 addresses the actual program offer of private providers; their *strategy* in terms of: variety of programs, modes of delivery, pricing policy, the institutions' location, the composition of the institution's student body, and its admission policy. The choice of location will be determined by the level of unmet demand in the region. The new privates will attract students who are unable to enrol in public institutions, either because of strict entry requirements, or because of a scarcity of student places. They will therefore be established mostly in metropolitan areas with a high student demand. In contrast to the public institutions, they will focus mostly on underserved clients, such as mature students and those coming from poorer socio-economic backgrounds. Their students prefer to study on part-time study courses in order to be able to combine work and education.

Hypothesis 3 also points to the expectation that, in order to attract students, private providers will offer low-cost programs for which there is a high demand. These are mostly courses in business and management fields, and courses of a vocational character. The privates, given the environment in which they are operating, will recruit part-time academics to teach large classes. The privates place their priorities on teaching mostly undergraduate students. They offer their academic staff very little opportunity to conduct research. The subsidies for public providers create barriers for the private providers to attract students to their full-time courses. Therefore, most of the new private providers will adopt a 'low cost strategy' with a focus on regional students and they will base their product differentiation mostly on low costs and location.

Hypothesis 4 addresses the strategic responses of public providers. These providers face only little competition from private providers, thanks to their advantage in being able to offer free study places to full-time students. As long as this is the case, they will not significantly diversify their program offer within full-time courses and will not increase their capacity in this sphere of activity. They will continue to apply strict entry requirements. In short, they will stick to the student market they are already serving. This market consists of students drawn mostly from middle and higher income classes, mostly living in urban

areas, and having parents who are likely to have received some form of higher education or advanced secondary education. The public universities and colleges will continue to concentrate on these student market segments, and will not significantly expand their offer to attract alternative student groups, such as students from lower socio-economic strata.

The response of the public providers will therefore be in line with the steady growth strategy identified by Dawes and Sharp (see section 6.4), that is, they position themselves on the broader market and strive for steady rather than aggressive growth. They focus on traditional student segments in the market and are unlikely to expand their offer to attract new categories of students. On the other hand, in accordance with the microeconomic theory of non-profit organizations (see chapter 4), if the state subsidies for public institutions are cut back drastically, they will be forced to adjust their strategy. In that case they will seek additional sources of revenue in order to continue providing study programs that are costly and/or less popular, but nevertheless produce a 'value' for the institution in the sense of contributing to the institution's public mission. The public providers will use the surplus they make on other programs to cross-subsidize these "mission value" programs. Given the high student demand, the most convenient way to accumulate supplementary income is to increase enrolments on cost-covering programs that bring in revenue. Fee-based, part-time courses in high-demand study fields, such as business and economics, will be expanded in order to generate the discretionary resources necessary for the cross-subsidization of mission-oriented programs. All in all, according to the neo-institutional theory, the public providers will adjust their structures and activities in response to the changes in the institutional arrangements.

Hypothesis 5 predicts that only a few private higher education institutions will choose a high-quality strategy, offering high quality study programs, mostly at master level, charging high tuition fees, and adopting some form of entrance examination. They will try to achieve a balanced structure of enrolments between part-time and full-time students. These institutions will not focus on regional students but serve a nation-wide market where they compete with selected public providers. The new private universities and colleges that adopt a high quality-high price strategy will endeavour to be perceived as providing a better higher education than most of their private competitors, one that is at least as good as the best public universities. Their focus is on areas of high-quality higher education where students face severe restrictions on enrolment in the best public higher education institutions. The private high-quality providers will be located mainly in metropolitan areas and academic centres. This is where a large number of high ranking professors can be found and where there is access to new technologies, foreign companies and a well-developed labour market. Being private, the new high-quality / high-price providers are reliant on tuition fees, but to a lesser extent than the less selective private providers, thanks to some

donations and endowments. They will thus mainly develop programs in high-demand areas. Only a few private providers will base their differentiation strategy on the uniqueness of their program offerings. When it comes to the issue of furthering the public good, the private universities will do so when – and only when – their objective function includes public good production and they have adequate discretionary funds, for instance in the form of public subsidies or endowment income.

The second set of hypotheses is developed to address the situation of a stable and mature market, with a greater degree of rivalry between providers and where student demand is slowing down. We clarify hypotheses 6 through 9 below.

Hypotheses 6 and 7 focus on the strategic responses of private, respectively public providers in a situation that may be characterised as a mature, stable, saturated market, where there is a great concentration of providers (i.e. a high degree of rivalry). This means that both the public and private providers will try to attract new groups of students in order to survive. Public institutions will challenge the private ones by entering their market niches, by increasing enrolments in full-time courses, and lowering entry requirements. The public institutions will increase their study offer as well as enhance their marketing activities. If the institutional arrangements allow them to do so, new **public** providers will emerge in small cities that have less of a tradition of higher education. Thereby they try to attract students who were previously targeted by private institutions.

By the same token, the private institutions will challenge the public institutions if the market becomes saturated. They will offer a more academic type of program, rather than vocationally oriented courses. They will thus increase and diversify their program offerings and enhance their marketing activities. So the privates will try to attract students that were hitherto served by public universities and colleges. Most private providers will charge similar fees to the public providers – in some cases they may possibly be lower. In other words, we will observe a convergence between the public and the private sectors.

Hypothesis 8 states that a small number of highly selective private and public institutions will not change their ‘premium positioning’ strategy and will continue to defend their competitive advantage on the basis of the high quality of their services. These selective institutions like to be perceived as prestigious; they will not risk undermining that perception by simultaneously trying to become a cost leader in other student segments. Even if their quality did not suffer, the organization would risk projecting a confusing image, thus putting its prestige and reputation at risk.

One may also expect that the oldest private institutions, compared to their younger private counterparts, would be more likely to offer a range of programs

that is more diversified in terms of study courses, mode of delivery and level of degrees. The relatively older private providers are more likely to choose a high-quality / high-price strategy thanks to the availability of highly qualified academics, their location (in metropolitan areas with academic centres), and their proximity to developed labour markets.

In *hypothesis 9* we argue that private and public institutions that appear on a relatively mature and saturated market will choose between two strategies: (1) they offer low-cost study programs that have a vocational orientation, charging low tuition fees and locating themselves in small non-academic cities in order to attract new groups of students; (2) in order to differentiate themselves from other providers, they will offer unique programs, not previously supplied by older institutions. They will behave in this way because of the nature of student demand. On saturated markets, with many institutions offering similar products, new higher education institutions, deprived of prestige and reputation, cannot deliver the same study offer as either their older private or public counterparts for the same prices, since – given that the price is the same – most students will choose more prestige institutions. On highly competitive markets the demand curve for an individual provider is almost horizontal. According to economic theory, a horizontal demand curve implies almost infinite price elasticity of demand. If a newly established private higher education institution raised its price even slightly, it would lose all its students. Such an institution, having no reputation, prestige, or large endowment funds, cannot change its price and charge higher tuition fees by lowering its admissions and act like a high quality institution. Students given a choice between an older, more prestigious private institution and a new private provider that offers similar study courses for the same price (or perhaps slightly lower), will prefer the older institution. Therefore, we expect that on saturated markets with a high degree of rivalry between providers and a stable or declining student demand, it is hard for newly established institutions to compete directly with older, more prestigious institutions solely on the basis of low costs. They will have to seek different forms of differentiation and look for new potential student groups. Hence, the more an institution differentiates its products, the more insulated the demand for its products is from the decisions of other institutions, the steeper its student demand curve, and the greater the market power within the particular student segment.

The research hypotheses presented above are to be used as a way to structure our empirical analysis of the Polish higher education system in the period 1989-2004. They embrace the insights of institutional theory by emphasising the adaptation process of organisations to new institutional arrangements and they embrace the insights from industry analysis and strategic thinking by taking account of adaptations to the external environment. The next chapter explains the methodology we use to find empirical support for the hypotheses.

Part III Operationalization and methodology

8 Research design

8.1 Introduction

An important objective of this thesis is to describe and evaluate the outcomes of higher education policy in Poland. This chapter explains the research design chosen. It offers a survey of the research methods, the way we have operationalised the key concepts and variables that feature in our analytical model, the data sources, and the samples used for answering our research questions. The reader should bear in mind here that our study is largely exploratory in nature. The emphasis is on applying theory to improve our understanding of an empirical phenomenon – the developments in Polish higher education. To do this we start with insights derived from institutional theory, business science and the economic theory of non-profit organisations to draw up a framework for analysis. Our research design is used to address a number of practical questions about the behaviour of private and public higher education institutions. In doing so it hopes to provide greater insight into the rationale and effects of the higher education policies implemented after the collapse of the socialist system in 1989.

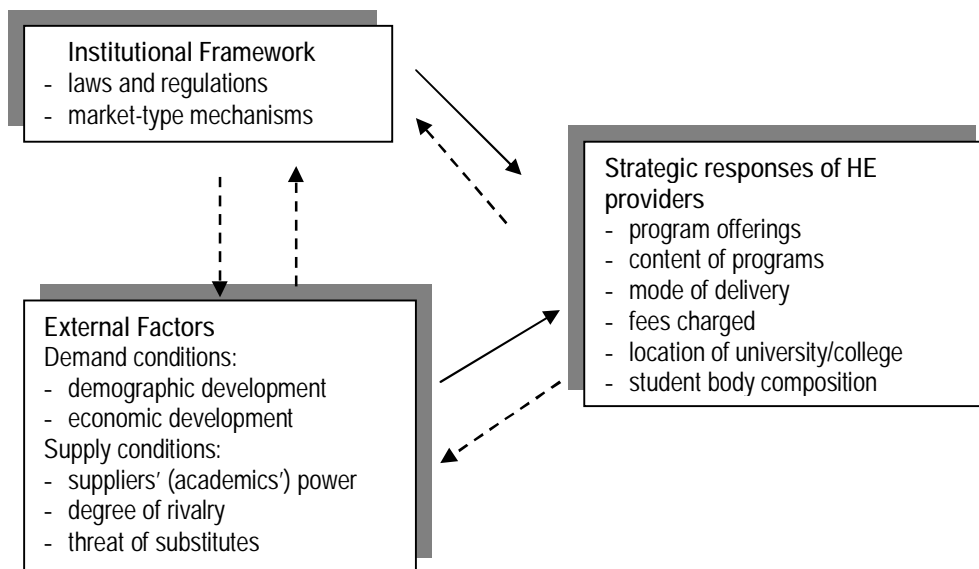
This chapter is organized as follows: In section 8.2 we clarify the methodology chosen to achieve our objectives. The research framework is presented, together with the research hypotheses derived from it. Section 8.3 then presents the operationalisation of the central concepts and variables that feature in the hypotheses. The data sources used to structure our exploratory analysis, which is carried out to find whether there is support to our hypotheses are the subject of section 8.4. Finally, section 8.5 clarifies the combination of qualitative and quantitative statistical analysis used when conducting the analysis.

8.2 Methodology

In our central research question we stated that our objective is to study how marketization policies and other institutional reforms in Polish higher education, together with other rapid changes in the external conditions, have impacted the behaviour of both public and private providers of higher education in the period 1990-2004. This behaviour is understood as the providers' strategies in terms of the programs offered, prices charged, clients served, and the location chosen for their operation. Evaluating the general developments in Polish higher education and the strategic responses of higher education providers requires, first of all, an understanding of the reform policies implemented from 1989 onwards, their

origin and their rationale. These reform policies have led to rapid changes in the institutional framework governing higher education. However, the behaviour and performance of Polish universities and colleges is also shaped by the environment in which they find themselves. This external environment is characterized by a number of factors, some of them shaped by government policies and others by external conditions, which we have grouped under the heading of basic conditions. In other words, to answer the question why a particular outcome is observed, we have constructed a framework for analysis, based on institutional theory and industrial economics. This theoretical framework highlights the relationships between the main sets of variables on which we focus in this study. It is presented in figure 8.1.

Figure 8.1: Research framework



The research framework points to relationships between institutional arrangements and basic conditions on the one hand and the strategic responses of higher education institutions on the other. The strategic response of higher education providers is our main dependent variable. We shall elaborate further on its operationalisation below. For the moment we should mention some of the dependent variable's dimensions: programs, prices, location and clients.

While the main arrows (i.e. the solid ones) point to the behaviour of individual higher education providers, we do recognise that their behaviour and consequently their performance will in turn have an impact on (future) government policies. This is shown by a dashed arrow. At the same time, another dashed arrow shows that external factors that shape the providers' behaviour (a

solid arrow) also have an impact on the choice of policies. This also holds for the converse relationship, viz., the impact of policies on external conditions. However, in our study we have restricted ourselves to the relationships between institutional arrangements and basic conditions, respectively, and the strategic responses of private and public universities and colleges. Both external conditions and institutional arrangements are believed to determine the providers' room for manoeuvre.

After 1989, in an attempt to change the course of Polish higher education and increase the capacity of the system, the Polish government has chosen to introduce many elements of market-type mechanisms into the higher education institutional framework. These policies are analyzed in the empirical part of the study to test some hypotheses on the consequences of injecting market-type mechanisms. As in many other Central and Eastern European countries, where the socialist system gave way to democracy and a more market oriented system, the reform policies have led to what may be called a privatisation of higher education. Privatisation is a multi-dimensional phenomenon that up to then had mostly been studied in Anglo-Saxon higher education systems but was now being exported Eastwards, along with many of the attached expectations, such as efficiency, innovation and democratisation. However, the policy reforms in Poland were implemented over a very brief period and, moreover, took place in a rapidly changing socio-economic context. All of this contributed to a sometimes ill-designed institutional context and, partly as a consequence of that, unintended effects. To analyze the institutional framework we make use of earlier work on 'markets in higher education' (e.g. Jongbloed et. al., 2004), looking at conditions impacting on the room for manoeuvre (the autonomy) for providers and the choice set for consumers (i.e. students). The operationalisation of these concepts, based on the theory introduced in chapter 3.6, is explained briefly in the next section.

We now move on to the next building block in the framework, i.e., the set of conditions grouped under the heading 'external factors'. This is another important factor that shapes the behaviour of higher education providers. Using industry analysis, the work of Michael Porter in particular, we have identified five forces that we believe impact the strategic behaviour of higher education providers. As shown in the diagram, the forces may be categorised into demand conditions and supply conditions.

Our research questions – or rather expectations – concern the relationships represented through the main arrows in the diagram. The research questions all are of the type: 'when a situation (say environment, or set of institutional arrangements) is like this, the response of the providers of higher education (private respectively public providers) is likely to be like this'. In order to come up with evidence, we shall make use of information on both the independent

variables – the first part of the statement – and the dependent ones – the second part. This information is either of a qualitative kind, as is the case for the institutional arrangements, or a quantitative kind, as is the case for the external conditions and the strategic responses. In other words, our methodology is very much exploratory in nature.

Apart from answering the research questions, the empirical part of this thesis (chapters 9 - 13) also presents a detailed description of the building blocks of the analytical model as such, focusing on the elements contained in the boxes shown in figure 8.1. To do so, and to test the hypotheses based on this model, we shall have to operationalise the elements that feature in the model's main building blocks. This will be elaborated in the next section.

8.3 Operationalisation

In order to explore the relationships presented in our analytical model and thereby to answer our research questions, we need to operationalise the main variables and their constituent parts that feature in the relationships. We start with the dependent variable – the strategic responses (section 8.3.1), and then continue with the independent ones, i.e., the external conditions (in 8.3.2) and the institutional arrangements (8.3.3).

8.3.1 Dependent variable: strategic responses of higher education institutions

Our dependent variable refers to the behaviour of higher education institutions. This is narrowed down to so-called strategic responses. The performance of higher education institutions may be characterised by looking at the higher education institutions' inputs and outputs. Table 8.1 below presents a list of the main inputs and outputs that most researchers make use of when studying the production process of higher education institutions. In general, the basic inputs of higher education are labour (or staff), students, and capital in the form of buildings, equipment and libraries. The outputs consist of education, research and public service. The outputs and inputs both have a quantitative side and a qualitative side: a tangible as well as an intangible dimension. They cannot be captured in a one-dimensional way. Higher education is a multi-product industry (Johnson, 1974), so any measure will have to reflect the multidimensional character of inputs and outputs. For instance, the degrees awarded include several different types of certificates, such as undergraduate and graduate titles, research doctorates, etc. It is also important to distinguish between degrees for part-time, evening, and full-time students.

Table 8.1: Inputs and outputs in higher education

	Tangible	Less tangible
Inputs	New students matriculating	Quality and diversity of matriculating students
	Academic staff time and effort	Quality of effort put forth by academic staff
	Student time and effort	Quality of effort put by students
	Support staff time and effort	Quality of effort put by support staff
	Building and equipment	Quality and age of building and equipment
	Library holdings	Quality of library holdings
	Supplies, travel, etc.	
Outputs	Student enrolment in courses	Quality of education obtained
	Degrees awarded	Quality of research
	Research volume	Quality of service rendered
	Service to the general public	

Source: Massy, W. F. (1999) *Productivity Issues in Higher Education*, In: W. F. Massy (ed.) *Resource Allocation in Higher Education*. Ann Arbor: University of Michigan Press.

The selection of inputs and outputs for the purpose of our study is in line with the analytical model presented above and the hypotheses based on this model. We shall limit ourselves to teaching-related activities, focusing on the tangible inputs and outputs. This limited scope follows from the fact that our main objective is to focus on the changes in the education function of universities and colleges. We are primarily interested in the changes in the programs offered by private and public higher education institutions and the study places they have made available to undergraduate and graduate students. We shall not examine the changes in research and public services. While we do not question the importance of research, a number of factors limit the degree to which it will be analyzed here. First, not all higher education institutions conduct research activities. In particular the new private higher education institutions established after 1989, as well as many public institutions with a regional mission, are devoted primarily to teaching activities. This is why our hypotheses mainly refer to the education programs. Secondly, data on academic research activity in Poland are scarce. Equally, the public service function performed by higher education institutions also has a highly intangible character, which makes it operationally difficult to handle. For these reasons we do not cover issues related to higher education outputs in terms of public services. For similar reasons, we do not analyze the less tangible inputs and outputs of higher education. In other words, we shall not expose the quality issues. However, we shall not dispose of them entirely. Where possible, we shall use more quantitative indications of quality when looking at the outputs and inputs. Our dependent variables focus on two levels, viz., the macro level (i.e. the system of higher education), as well as the level of individual higher education institutions. In our macro level analysis of Polish higher education, the following inputs and outputs will be taken into consideration:

Table 8.2: Dimensions of the dependent variable

System level analysis	Analysis for our sample of individual higher education institutions
For private and public higher education sectors:	Per institution:
<ul style="list-style-type: none"> • Total student enrolment • Student enrolment across the different modes of delivery, such as part-time, full-time and evening-classes • Student enrolment across the different levels of degrees, such as bachelor, master and doctoral degree • Student enrolment across the different groupings of disciplines, such as business studies, humanities, social sciences, technical studies, etc. • Total number of degrees awarded • The number of degrees awarded across the different modes of delivery, such as part-time, full-time and evening-classes • The number of degrees awarded across the different levels of degrees, such as bachelor, master and doctoral degree • The number of degrees awarded across the different groupings of disciplines, such as business studies, humanities, social sciences, technical studies, etc. • Average age of students attending various types of study programs and modes of delivery • The share of income from non-state sources in relation to the total income of higher education institutions, • The level of tuition fees • Admission policies adopted 	<ul style="list-style-type: none"> • Total student enrolment • Student enrolment across the different modes of delivery, such as part-time, full-time and evening-classes • Student enrolment across the different levels of degrees, such as bachelor, master and doctoral degree • student enrolment across the different groupings of disciplines, such as business studies, humanities, social sciences, technical studies, etc. • Total number of degrees awarded • The number of degrees awarded across the different modes of delivery, such as part-time, full-time and evening-classes • The number of degrees awarded across the different levels of degrees, such as bachelor, master and doctoral degree • The number of degrees awarded across the different groupings of disciplines, such as business studies, humanities, social sciences, technical studies, etc. • Socio-economic background of students (for selected institutions only³) • Study fields covered • The level of tuition fees • Admission policies adopted

We note that most of the variables chosen for the system level analysis are also used in a detailed analysis of a sample of public and private higher education

³ Data available only for the following sample of 10 institutions: Warsaw School of Economics; Opole University; Radom Technical University; Academy of Economics in Wroclaw; Academy of Tourism in Czestochowa; Private Academy of Environment in Radom; Academy of Entrepreneurship and Management in Lodz; Academy of Management and Administration in Opole; Academy of Local Development in Zyrardow; Academy of Computer Sciences and Management "Copernicus" in Wroclaw.

institutions. While information on revenues is not available for individual institutions, one is able to study more in detail the type of programmes offered by individual institutions.

8.3.2 Independent variable set – institutional arrangements

The first group of independent variables refers to the institutional arrangements. In the case of higher education, institutional arrangements include legislation, national regulations and policies regarding higher education. The emphasis of our research lies on market oriented mechanisms. The set of conditions that characterize the market-related mechanisms in higher education were presented in chapter 3.5. In line with table 3.3, the following dimensions of institutional arrangements are taken into account:

1. Barriers to entry
2. Institutional autonomy
3. Funding mechanisms
4. Accreditation and accountability arrangements
5. Students' freedom to choose and determine their degree program.

We now briefly summarise the type of qualitative information that refers to these five dimensions of the independent variables.

The barriers to entry for new higher education providers is operationalised in terms of the ability afforded new (private and public) providers to enter the higher education market, and to become a recognized, accredited provider. It also refers to the conditions governing eligibility for state financial support.

The degree to which higher education providers enjoy some form of autonomy depends on several dimensions. We shall look at:

- financial autonomy (such as funding and budget conditions in terms of transfer of funds, internal allocation of funds, expenditure oversight practices, bookkeeping rules, and setting tuition fees);
- academic autonomy (in terms of: freedom to determine institutional mission, determining instructional process and program offerings, conditions for approval, review and elimination of study programs, and admission policy);
- appointive autonomy (in terms of hiring staff, determining salary scales, conditions for promoting staff, determining terms of employment);

The mechanisms for allocating state financial support to higher education providers are characterized by looking at the rationale, the funding conditions and the issue of whether one can speak of direct payments by the state to selected higher education institutions or payments that are targeted at students. Another

dimension of the institutional arrangements related to funding is the availability of student support to assist students pay for their costs of living and tuition.

Information plays a crucial role in the higher education market. The existence of evaluative information about the performance of higher education institutions will to a large extent determine whether students can make informed decisions. We shall therefore operationalise this variable by looking at the existence of accreditation systems or rules related to the collection and availability of information on the type and quality of the providers and their degree programs.

The extent to which students are free to choose their preferred provider, their education programme and whether they have some say in the specification of their curriculum, relates directly to the extent to which one can speak of a market-like higher education system. In other words, this is an important characteristic of the institutional arrangements that will shape the behaviour of higher education providers. While we do not intend to explain the actual reasons why particular policies were chosen or implemented, we do briefly sketch the context in which they were designed and their underlying reasoning. Therefore, institutional arrangements are primarily seen as independent variables.

8.3.3 Independent variable set – basic demand and supply conditions

The demand and supply conditions for higher education institutions will have an impact on their behaviour in terms of products, prices and clients. These basic conditions form the second group of independent variables that need to be operationalised. We do this by representing them through indicators that are derived largely from the work of Michael Porter in his “five forces” diagram (see section 6.1). When translated to the case of higher education, these five forces may be grouped into demand conditions and supply conditions. We now introduce the way we have operationalised these external conditions.

Demand conditions are:

- overall economic conditions
- demographic trends/students’ power

The supply conditions include

- threat of substitutes
- academics’ power
- degree of rivalry between providers

Looking at the first variable in this list, the state of the economy will determine the growth of any industry, including higher education. A situation of structural

economic growth will contribute to an increase in the demand for higher education, as students will expect a growth in their rate of return on investments in higher education. Therefore, to operationalise the economic conditions we have selected the following indicators:

- the average unemployment rate;
- the unemployment rate per level of educational achievement;
- the unemployment rate for higher education graduates;
- the 'premium wage', which is the difference in salaries between those holding a higher education degree and those who do not;
- the amount of funding made available to higher education institutions from the state budget, as well as the private funds spent on higher education;
- changes in the structure of the national economy (in terms of the relative size of the services sector, the manufacturing sector and the agricultural sector).

Buyer power can be defined as the market power that buyers possess vis-à-vis their suppliers or producers (see section 6.6.2). Buyer power exists when a group of clients, either because they have a dominant position as a purchaser of a product or service or because they have strategic or leverage advantages as a result of their size or other characteristics, are able to obtain from the supplier more favourable terms than those available to other buyers (OECD, 1981).

The theoretical and empirical research on the determinants of buyer power states that buyer size and concentration determine the buyer's power. An important factor is the structure of the selling side of the market, particularly whether or not a buyer can easily switch from one producer to another. In general, buyers are more powerful when they can exercise bargaining power over their suppliers. Their bargaining power is stronger when the products are undifferentiated, when there are many substitute products, when the buyers are purchasing large volumes of products, and when switching costs are low. The bargaining power is also determined by the variability in demand. When demand is growing, the producers can more easily switch their production to new buyers and thus decrease the buyers' power.

The higher education market, as described in chapter 4.2, is characterized by monopolistic competition – which implies a market with relatively many suppliers and many fragmented buyers, where, because of the asymmetry of information, buyers have less influence on product or price than on a competitive market or in the case of a monopsony.

Drawing on our theory, we operationalise the students' power by means of the following list of factors:

- student unions: number and bargaining power in terms of authorities granted to those organizations
- number of students (demographic trends)
- the demand for higher education from 'third age' students
- the size and structure of the secondary education system and the transition rates between secondary and higher education

As part of the external conditions affecting the higher education institutions' responses, this list of indicators is assumed to represent the demand conditions. Obviously, demographic developments, together with the other variables listed here, will determine the available pool of clients to which the higher education providers can cater. Periods of demographic decline will affect the institutions' 'hunting ground', so to speak. The available pool of students will also be affected by the number of mature – or *third age* – students that seek to upgrade their qualifications by means of higher education. The last variable in the above list also relates to the number of applicants. When government policies have a positive effect on the number of secondary education graduates that qualify for higher education, this will increase the pool of clients for higher education providers and, consequently, the clients' power. In other words, demand conditions are affected by the size and structure of primary and secondary education and the number of secondary education graduates that continue their education on to a higher level.

The basic supply conditions for higher education providers are operationalised by means of the following indicators:

- threat of substitutes
- supplier/academics' power
- degree of rivalry

The threat of substitutes refers in particular to the availability of vocationally oriented courses that are offered by a variety of non-higher education institutions. If students show a greater preference for these substitutes, the threat of substitutes increases. In addition, the option for secondary school graduates to take up a job on the labour market may also be regarded as a substitute for embarking on a higher education program. Therefore, the employment opportunities for secondary school graduates form an indicator of the supply conditions.

An indicator of the power of suppliers is the number of academic staff working in higher education institutions. Academics are an essential part of the production process. This is why we operationalise suppliers' power by means of the number of academics holding higher scientific degrees (indicated by the number of habilitated doctors and professors), the number of teaching posts held by

academics, and organisations representing academics (looking at their bargaining power).

Rivalry between suppliers is partly a result of government policies and partly one of economic competition between higher education providers. This supply condition is operationalised by looking the concentration of higher education providers on the market, the growth of the higher education market, variety of degree programs on offer, and the switching costs that students incur if they were to switch from one higher education institution to another.

8.4 Data sources and research design

In order to conduct the analysis, which finds whether there is support for hypotheses in this study, we have to gather the necessary information related to the concepts and variables that play a role in the hypotheses. These variables, presented in the 'operationalisation' section (8.3), relate to both quantitative and qualitative information. Part of this information may be found in documents of various sorts. Another part can be collected through field research. Document research includes reviewing sources that contain raw (primary) data and relevant literature on the Polish higher education system, whereas field research includes interviews and gathering new (original) data. Naturally, relying on existing documents may not produce all the required information, while carrying out a survey on a multi-dimensional phenomenon is a costly affair, which is why we have sought to find a reasonable compromise between the two instruments.

Data on the higher education institutional arrangements were collected from two sources. First, documents relating the Polish State's higher education legislation and its policies. This leads us to the legislation implemented by various ministries and other government bodies. On the state level, several sources can be distinguished: the legislature (Parliament), the executive (Prime Minister, Ministry of Education and Sport, Ministry of Science, Ministry of Finance, etc.) and the administration (the particular departments in ministries). The second source of information consists of funding organizations, like the Polish Academy of Science and the Committee for Scientific Research. As was shown in section 8.3.2, information on the institutional arrangements is mostly of qualitative in nature. For the second independent variable set, the external conditions, we use statistical records and archives. In particular we use the archives of the Main Statistical Office and the Ministry of Education. Often, this information is quantitative in nature (see 8.3.3). To complement the data collection, we also make use of magazine and newspaper articles from the popular press to point us to documents and other sources of information as well as opinions and quotations from higher education stakeholders. The data on both sets of independent variables is used mainly for analyses relating to the system (or macro) level. Our

study requires longitudinal data that follow the developments on the higher education system over a number of years.

In relation to the dependent variable – the strategic responses of higher education institutions – the data refers to the macro level (i.e. the system of higher education in Poland) as well as the level of the individual higher education provider (see table 8.2). Apart from the data available from the Main Statistical Office and the Ministry of Education, we make use of data published by individual universities and colleges or found in articles and books about higher education in Poland. Some of the data referring to individual institutions were acquired by direct questioning. For this, we used E-mail surveys and paper-and-pencil questionnaires. Where possible, our empirical analysis will cover the entire population of higher education institutions in Poland. However, as some data are not available for all higher education providers, or when it is simply too time consuming to cover the details for all providers, we confine ourselves to a sample of the private and public providers. This is the case when it comes to historical information on the level of tuition fees, the changes in program offerings, admission policies, or the students' socio-economic background. For instance, data on the socio-economic background originate from studies by Rakowski (1993, 1997, 2001, 2004) and Swierzbowska-Kowalik & Gulczynska (2000).

To construct our sample of higher education institutions we use stratified random sampling (Hoyle, Harris, Judd, 2002). In stratified random sampling, the population is first divided into two or more strata. A stratum is defined by one or more criteria that divide a population into mutually exclusive strata. First, the strata are based on a single criterion or on a combination of two or more criteria. Secondly, a simple random sample is taken from each stratum. It is important to note that stratification contributes to the efficiency of sampling and the testing of our hypotheses if it succeeds in establishing classes that are internally comparatively homogenous with respect to the characteristics being used. This assumes that the differences between classes are larger than the variation within classes. For these reasons we divided the population of higher education institutions into four groups, where institutions in each group, according to our theoretical assumptions, are relatively homogenous compared to institutions in the other groups. In our case, we use two criteria to obtain the strata. The first one is whether the institution is public or private. The second refers to the year of the institution's establishment. We distinguish two periods: 1990 – 1997 and 1997 – 2004. We take 1997 as a dividing point in time between two periods. This is done for two reasons. First, we are investigating a fourteen-year period, 1990-2004. Half of that period is seven years, and therefore we assume, especially in the case of private institutions, that the providers established before 1997 may be considered relatively old and mature compared to those established later. And second, and an even more important reason concerns the change in the institutional arrangements and in external conditions for higher education. The former is

reflected in the new regulations concerning the establishment of new higher education providers, implemented in 1997. All institutions set up after 1997 are governed by the new Vocational Higher Education Act, which sets down different rules and conditions for establishing new providers. Because neo-institutional theory states that the institutional framework provides an opportunity set that to a large extent determines the providers' opportunity set, we regard the implementation of this act as a turning point. Moreover, in the 'interdependency model' shown in diagram 8.1 we also take into consideration the impact of basic demand and supply conditions on strategies of educational providers. These conditions were very different at the beginning of the 90s compared to the second part of the decade and the early years of the 21st century. In particular, the second period is characterized by very different demographic developments and a saturated higher education market.

In order to have more homogenous groups we further subdivide the institutions according to their location, that is, whether the institution is situated: (1) in Warsaw, (2) in a large city or metropolitan area, (3) in a medium-sized city, or (4) in a small town. We define large cities as those having more than 300,000 inhabitants, medium-sized as having between 100,000 and 300,000 inhabitants, and smaller towns as having a population of less than 100,000 inhabitants. This is done in the belief that location has an impact on the opportunities for higher education providers, in particular when it comes to access to potential staff, labour markets, student population, competition, etc.

The criteria for obtaining the strata are presented in the table below (table 8.3)

Table 8.3: Dividing the population of HEIs into strata.

Public institutions established before 1991					
	- in Warsaw	- in large cities	- in medium-sized cities	- in small cities	- in sum
	5	22	17	0	44
Institutions established between 1991 and 1997					
	- in Warsaw	- in large cities	- in medium-sized cities	- in small cities	- in sum
Public	0	2	0	0	2
Private	34	34	32	28	128
					130

Institutions established between 1997 up to 2004

	- in Warsaw	- in large cities	- in medium-sized cities	- in small cities	- in sum
Public	0	0	7	17	24
Private	24	41	25	42	133
					156

Excluding the already existing private, church-funded institutions (11 in 1991), the first private provider emerged in 1991. After that year, a rapid expansion of private higher education took place, which led to 128 private institutions in 1997. Another 133 were added in the period 1997-2004. Student enrolment increased from 13,700 in 1990/1991 to over 582,100 in 2004/2005. Private higher education institutions are located throughout Poland, although (in keeping with typical patterns cross-nationally) the most prestigious ones are concentrated in and around large cities. On the other hand, the number of public providers hardly changed during the period 1991-1997. After the implementation of the new vocational higher education act, 24 new public providers were established.

In the empirical analysis of the private higher education sector, where we focus on the individual institutional level, our stratified sample contains 35 private providers. The distribution across the various strata is shown in table 8.4. The sample is an adequate representation of the population of private providers, which contained 301 institutions in 2004, 14 of which are church-funded. It is worth noting that the term "university" in Poland is not used by private higher education institutions. We have translated the names of the institutions as Academies, although the majority of them call themselves 'High school', which in Poland means higher education institution, but in English refers to a secondary school.

Table 8.4: Sample of private higher education institutions

Private providers established in Warsaw before 1997	
1.	Private Academy of Business and Administration
2.	Warsaw Academy of Management
3.	Łazarski Academy of Commerce and Law
4.	Koźmiński Academy of Entrepreneurship and Management
5.	Polish-Japanese Academy of Computer Sciences
Private providers established in large cities before 1997	
1.	Academy of Entrepreneurship and Management in Łódź
2.	Academy of Marketing and Business in Łódź
3.	Academy of Banking in Poznań
4.	Academy of Banking and Finances in Katowice
5.	Academy of Management and Finance in Wrocław

Private providers established in medium-sized cities before 1997	
1.	Academy of Management and Administration in Opole
2.	Private Academy of Environment in Radom
3.	Academy of Finance and Management in Białystok
4.	Academy of Computer Sciences in Bielsko-Biała
5.	Polonia Academy in Częstochowa
Private providers established in small sized cities before 1997	
1.	Academy of Business – National Louis University in Nowy Sącz
2.	Academy of Management in Słupsk
3.	Academy of Marketing and Management in Leszno
4.	Academy of Entrepreneurship and Marketing in Chrzanów
Private providers established in Warsaw after 1997	
1.	Academy of Advertisement
2.	Academy of Personnel Management
3.	Academy of Administration and Social Sciences
4.	Academy of Beautician and Health Care
Private providers established in large cities after 1997	
1.	Pedagogical Academy in Łódź
2.	Academy of Business and Foreign Languages in Poznań
3.	Academy of Economics and Computer Sciences in Kraków
4.	Academy of Computer Sciences and Management “Copernicus” in Wrocław
Private providers established in medium-sized cities after 1997	
1.	Academy of Tourism in Częstochowa
2.	TWP Academy of Humanities in Szczecin
3.	Academy of Management in Szczecin
4.	Academy of Informatics in Gorzów Wielkopolski
Private providers established in small cities after 1997	
1.	Academy in Humanities and Economics in Brzeg
2.	Academy of Business and Administration in Łukow
3.	Academy of Local Development in Żyrardw
4.	Academy of Management and Administration in Zamość

We now turn to the sample of public providers. According to our theory, we claim that public providers will behave in a different way than privates, because of the different institutional arrangements that the two groups face. Public institutions are less evenly distributed across the country. Most of the oldest, prestigious ones are located in large cities, such as Warsaw, Krakow, Poznan, Wrocław, and Lodz. Only when the new Vocational higher Education Act was implemented in 1997, were new vocational higher education institutions established in smaller towns, outside the metropolitan areas. In 2004, there were 126 public institutions. A total of 71 of these are institutions that operate in the same field as the private institutions, whereas the others (55 in total) are relatively unique, single-discipline institutions, focusing mainly on medicine, arts, architecture, sports, navy, or police and military instruction, regulated by different laws and their ‘own’ ministries.

Leaving aside these specialised institutions, we have taken a sample of 11 institutions out of the 71 public institutions. The sample provides an adequate representation of public providers, because it comprises institutions from Warsaw, and from large and medium-sized cities. These were established well before 1990. From the set of new vocational public higher education institutions established after 1997 we selected 3 representative institutions, set up in small to medium-sized towns. Briefly, the public institutions included in our sample may be divided into two strata, according to their year of establishment (see table 8.5).⁴

Table 8.5: Sample of public higher education institutions

Public providers established before 1997	
1.	Warsaw School of Economics
2.	Academy of Economics in Wroclaw
3.	Warsaw University
4.	Opole University
5.	Pedagogical Academy in Siedlce
6.	Radom Technical University
7.	Opole Technical University
8.	Warsaw Technical University
Public providers established after 1997	
1.	Public Vocational Higher Education Institution in Nysa
2.	Public Vocational Higher Education Institution in Krosno
3.	Public Vocational Higher Education Institution in Leszno

We do consider two public institutions specializing in economics and business study programs, because they operate in the same environment as public multi-discipline providers and compete directly both with private universities.

In the next part of this thesis we explore our research questions, using the methodology, operationalisation and data presented here. Our research takes place on the macro level (all institutions, publics and privates) as well as the level of the provider (the samples introduced here). Institutional arrangements, external conditions, strategic responses and the links between these three building blocks in our analytical model are studied, using descriptive and statistical methods.

⁴ The numbers of higher education institutions in the samples of private and public higher education institutions differ considerably because of the size of their population. In 2005, there were 301 private higher education institutions, compared to 128 public ones.

IV Empirical analysis

The empirical analysis consists of three major parts. The first chapter provides the data on Polish higher education before 1989. In order to understand the changes in Polish higher education policy that took place in 1990s there is a need to present a broad historical context. Therefore, the aim of the first empirical chapter is to outline the legal, political and economic conditions that prevailed in Poland before 1989, which shaped the higher education system and to present the situation in Polish higher education at the verge of transformation process, i.e. in the year 1990.

The second major part of the empirical analysis consists of two chapters 10 and 11. In this part we answer the research question: how is the Polish higher education institutional framework studied in the context of marketization policy, and which conditions for marketization are fulfilled in the Polish higher education system during the transformation process? We also address the changes in the external conditions affecting Polish higher education.

Finally, the third part, which consists of chapter 12 and 13, provides the answer to the research question concerning the responses of private (chapter 12) and public (chapter 13) higher education institutions to the new institutional arrangements and external conditions.

9 A brief history of Polish higher education – introduction to the case study

9.1 Introduction

Higher education in Poland has a long, rich history and tradition. The first university, Jagiellonian University in Cracow, was founded in 1364. Two other universities, the University of Vilnius and the University of Lvov, were founded in 1578 and in 1661 respectively. Warsaw University, the first academic institution located in Warsaw, the capital of Poland, was created in 1816, while the first technical university, the Warsaw Polytechnic, was founded ten years later in 1826. After the First World War, when Poland regained its independence after more than a century of being portioned between Russia, Prussia and the Austrian Empire, higher education played an important role in restoring Polish culture and science. The higher education system expanded to thirty-two institutions up to the Second World War. There were five state universities in Cracow, Vilnius, Lvov, Warsaw and Poznań, three Polytechnics in Warsaw, Lvov and Cracow, one private university, the Catholic University of Lublin, founded in 1918, and several other, mostly public higher education institutions in larger cities. Apart from the Catholic University of Lublin, there were fifteen private higher education institutions, which offered various types of study courses, mostly in economics and political sciences. The private sector enrolled about 10.5 thousand students, which accounted for 18.5 % of all students, and employed about 900 high ranked academics. In order to become fully-recognized higher education institutions, educational establishments had to fulfil the following requirements: provide sufficient funds and infrastructure for teaching activity, enrol only secondary school graduates with state matriculation certificates, employ highly ranked academics, and develop study programs similar to those offered in public institutions. The private sector played an important role in disseminating knowledge to society and training professionals for the national economy.

Generally speaking, the higher education system was an elite system with low enrolment rates and it did not reflect the structure of society. In the pre-War period in 1938/39 there were some 120 000 students in total, almost half of them studying in Warsaw, followed by Cracow and Poznań, each with a fifteen percent enrolment share. The great majority of students came from higher income families, usually the aristocracy and the upper class. The cost of the study, in terms of tuition fees and opportunity costs, prevented less wealthy students from attending higher education and therefore contributed to and strengthened the existing social disparities. The system of state student support was underdeveloped, consisting mainly of student loans. According to Ratuś (1995),

the structure and composition of the student body was similar in both private and public institutions, with almost 20 % of students drawn from rural areas, but it is worth noting that before the Second World War the majority of the population lived in rural areas, accounting for almost 80 % of all Polish citizens. To summarise, during the pre-War times, higher education institutions awarded about 60 thousand diplomas, but higher education graduates made up only 0.3 % of society.

Before the Second World War, higher education enjoyed broad academic and institutional freedom, each institution being allowed largely to determine and manage its own internal affairs.

9.2 Higher education in years 1945-1989

Between 1945 and 1989 the development of higher education was shaped by the presence of communist rule. Despite the fact that higher education in Central Europe was not hermetically sealed off from external influences, there are some aspects in which higher education differed from the Western models.

The academic systems in Central and Eastern Europe were very tightly associated with and subordinated to the economic system. The desire to relate the outputs of higher education to the manpower needs of the economy was much more pervasive in Central Europe than in the Western societies (Scott, 2002). In centrally regulated economies the close co-operation of higher education institutions with state-set manpower planning went far beyond the political sphere. This trend, together with the overall communist ideology, imposed comprehensive instruments of political control on higher education institutions. Government agencies used stringent rules and extensive control mechanisms to steer the organizations according to the central planer's objectives. The aims, tasks and resources devoted to teaching and research were defined and allocated by the state. Detailed regulations dictated almost all activities of higher education institutions. The Planning Commission at the Council of Ministers determined the number and type of higher education graduates needed and used this data to project the number and kinds of study places to be allocated. The state gained control over the free movement of the qualified labour force, eliminating market mechanisms within the job market.

9.2.1 *Stalinism period*

Polish higher education suffered an enormous loss during the Second World War. The loss of human life as a result of the War accounted for almost six million people. Only about 40 percent of professors survived. Material losses were equally substantial. Therefore, the purpose of the first decree on higher education

after the War was to rebuild the higher education sector. It was purely temporary in character. The first state regulation concerning higher education was the decree on the organization of science and higher education, which was passed by the government in 1947⁵. The decree set down only general rules for the functioning of higher education institutions. While local Socialists were dedicated to transplanting the Soviet university system in the country, they proved able to re-create only its external structures, in terms of new structure of the higher education system in Poland. Polish academics, who had never surrendered their control of university affairs, who had continued to teach during Nazi occupation, considered it their right to reopen free universities.

In general, the first years after the War, up to 1949, were relatively liberal and the state did not interfere too much in the internal decisions of higher education institutions. Higher education institutions functioned within the same institutional structure and enjoyed almost the same degree of autonomy as they had before the War. New higher education institutions were established in Gdańsk, Szczecin, Toruń, Opole and in Wrocław, as there was a need for trained specialist for the reconstruction of different branches of the economy. Some establishments were founded as universities or polytechnics, but the majority functioned as pedagogical higher education institutions or engineering higher education institutions, which were less prestigious, had fewer faculties and initially offered short vocational study programs. They grew quickly and in a few years they enrolled the majority of students and offered master's degree programs. As early as 1946 there were 54 higher education institutions with some 86 000 students and 11 000 academics. By 1948, higher education quantitatively surpassed the achievements of the period before the War (Poznański, Kucha, 1992). In relation to teaching, the important change was the abolition of tuition fees and the provision of free education for all students.

However, higher education soon became an arena of intense political struggle, the tendency being to abridge and reduce the autonomy of higher education institutions. The Act of 26 April 1950 subordinated all institutions to the Ministry of Science and Higher Education, which implied a change in the patterns that functioned before the War.

The years from 1949 to the mid-fifties can be characterized as the 'Stalinism period'. The government severely limited academic freedom, imposed ideological criteria for the selection of the academics and isolated the universities from the Western countries. In 1949 the government nationalized all private higher education institutions, excluding the Catholic university. The imposition of the 'socialist shape' on the institutions led to the subordination of all institutional

⁵ The Decree, dated 28th October 1947, on the organization of science and higher education was passed by the Polish government, Dz.U.47.66.415.

decisions to the needs and requirements of the socialist party. Many academics left their posts or changed their academic fields, especially in economic science, as most of the business higher education institutions had been private before the War, providing the courses according to a liberal ideology. The comprehensive regulatory framework on higher education in that period was implemented in 1951. Parliament introduced the Higher Education Act of 1951 to replace the decree on organization of higher education.

The Act imposed on higher education institutions the responsibility of promulgating the socialist ideology in the society, and for this reason the study programs were modified to take account of the needs of socialist ideology. The management system in higher education was based on a single authority, responsible to and under the control of the Ministry, which was Ministry was responsible in such areas as the development goals and directions of higher education institutions; the internal organization of education and research; study programs, and appointments and financial regulation. The socialist party representatives who were present in the collegiate organs of universities and colleges oversaw the day-to-day management. Top level positions in the higher education institutions were appointed by the Ministry, which based its choice on the opinion of the central screening body for academic staff, which took account not only of academic merit but also the political soundness of the candidate (Sadlak, 1991). Another consequence implied from the Soviet model was the separation of the following disciplines from the universities: medicine, sports, agriculture and theology, each of which was established in a separate higher education institution. Finally, on the top of this policy came personnel repercussions. Academics ranging from junior assistants to full professors – especially in the social sciences – were removed from universities and other institutions and replaced by graduates of the Institute of Development of Academic Staff supervised by the Polish United Workers' Party – the only legal political party, which until 1989 played the most important role in shaping and implementing policies in all sectors of the economy.

In general, the doctrine of Stalinism in research and teaching tried to eradicate the traditional pre-War features of Polish higher education, such as strong adherence to democratic values, academic freedom, the important status of the Roman Catholic Church and a strong intellectual identification with European culture. Academics who valued the intellectual freedom and were ready to express critical views on policy and social issues were dismissed from higher education institutions. The Higher Education Act clearly stated that only persons who represent the appropriate political and social views, are party member and educate the students according to the communist ideology can become an academic staff member. Professional qualifications were of secondary importance. The strong, indeed dominant involvement of central political institutions in issues of higher education and the political criteria governing

personnel decisions practically eliminated academic freedom and weakened the standing of Polish higher education institutions.

In the context of social equalization policy, in order to enhance student participation rates from lower socio-economic groups and the growing need for a qualified workforce, new forms of part-time study were implemented, such as evening, correspondence and extramural courses.

9.2.2 Higher education developments in the 1970s and 1980s

The de-Stalinization process, which began after 1956, brought a new political climate to higher education. The associated changes were insignificant, though, and the new law on higher education adopted by the Polish parliament on November 1958 introduced only minor changes. In 1968, after the 'March Events', when deteriorating economic conditions and restraints on intellectual life sparked a wave of student and academics strikes (Sadlak, 1991), the government responded with brutal measures directed at professors, students and other intellectuals. Legislative measures implemented in 1968 again devolved unrestrained control to the Socialist Party. The government's policy, together with the anti-intellectual campaign, led to complaints about the overproduction of intellectuals and increased demands for intensification of the ideological indoctrination of students.

In the 70s higher education experienced a growth in terms of student and faculty numbers. The increase was associated with the rapid economic growth in Poland, based mainly on foreign credits. The policymakers encouraged the expansion of student enrolment in order to respond to manpower needs and to promote the role of higher education as an agent of economic and social change. Student numbers increased from 330 789 in the academic year 1970/71 to 453 652 in 80/81. Moreover, faculty numbers rose from 31 320 in 1970/71 to almost 55 000 in 1980/81 (see table 9.1).

Table 9.1: Basic facts on Polish higher education (selective academic years 1965/66 – 1988/89).

Academic years	1965/66	1970/71	1975/76	1980/81	1985/86	1989/90
Number of HEIs	76	85	89	91	92	96
Number of students	251 864	330 789	468 129	453 652	340 709	376 780
Full time	152 364	209 789	283 159	299 048	265 753	290 946
Part time	99 500	121 000	184 970	154 604	74 956	85 834
Foreign students	1 121	2 576	2 438	2 913	2 986	4 118

Academic years	1965/66	1970/71	1975/76	1980/81	1985/86	1989/90
Polish students abroad	486	803	2 680	3 542	2 293	3 190
Number of graduates	25 200	47 100	63 236	83 955	59 919	52 300
Full time	16 500	28 400	37 046	50 145	41 765	38 200
Part-time	8 700	18 700	26 190	33 810	18 154	14 100
Academic staff	22 523	31 320	48 837	54 681	57 280	61 400
Students per 100 000 inhabitants	798	1 013	1 369	1 269	912	767

Source: Sadlak (1991) and National Yearbooks for Higher Education (1991)

At the end of the 70s, when it became clear that the government's ambitious plans would fail without fundamental changes in the economic system, relations between governing bodies and academic community became strained once again. In the 80s, parallel to the economic downturn, student numbers decreased substantially to 378 387 in the 1989/90 academic year. The most significant fall in student enrolment was in engineering, economics and management studies, where the decline exceeded 50% (see table 9.2). During the 1980s, only one public higher education institution was established, compared to the six established during the 1970s. The number of graduates fell from 83 955 in 1980 to 52 300 in 1990.

In Polish higher education, methods of central planning sought to match the real labour market needs of the economy and society with a supply of well-trained higher education graduates. As we can see from table 9.2, the stress was on technical sciences, medical sciences and agriculture and veterinary science, rather than on the humanities, social sciences and economics. During the socialist period state policy and the behaviour of individual enterprises both encouraged over-employment in the so-called productive industrial sector, with a great number of engineers employed in jobs requiring lower level qualification, and underemployment in the service sector.

Table 9.2: Students per major group of disciplines (selective academic years 1960/61 – 1987/88)

	Engineering		Agriculture and Veterinary		Economics		Humanities		Total
	I	II	I	II	I	II	I	II	
	1960/61	54 816	33,1	12 063	7,3	21 447	13,0	23 305	
1965/66	85 967	34,2	22 295	8,8	35 775	14,2	35 259	14,0	251 864
1970/71	131 365	39,7	25 375	7,6	37 117	11,2	48 225	14,5	330 789
1975/76	150 272	32,1	34 055	7,3	48 791	10,4	97 729	20,7	468 129
1980/81	145 866	32,1	40 548	8,9	54 459	12,0	84 135	18,7	453 652
1985/86	84 890	25,0	23 207	6,7	34 780	10,2	87 121	25,4	340 709
1989/90	84 640	22,5	22 538	5,9	38 417	10,1	106 079	28,0	378 387

Law and Administration		Medicine		Mathematics and Natural Sciences		Fine Arts		Others	
I	II	I	II	I	II	I	II	I	II
10 234	6,2	23 728	14,3	15 160	9,1	3 742	2,2	1 192	0,7
14 001	5,7	24 962	9,9	26 528	10,5	4 815	1,9	2 262	0,8
22 729	6,9	22 851	7,0	31 717	9,6	5 237	1,6	6 173	1,9
32 101	6,9	29 707	6,4	54 842	11,7	7 210	1,5	13 422	3,0
32 037	7,1	35 143	7,7	36 598	8,1	7 772	1,7	17 094	3,7
19 911	5,6	34 167	10,1	32 723	9,4	7 617	2,3	18 408	5,3
23 848	6,3	37 453	9,8	36 394	9,5	6 247	1,6	23 026	6,0

Source: Sadlak (1991) and National Yearbooks for Higher Education (1991)

I – Total number of students in a given discipline

II – Percentage of students in the given discipline to the total student number

As the labour force approach to planning in higher education was steadily changing in the face of various unforeseen developments, the anticipated number of graduates needed often proved in error. On the other hand, it is not possible to analyze the employment of higher education graduates, because in socialist countries there was no official unemployment. Most graduates were assigned to compulsory employment schemes in order to compel them to accept jobs in the field corresponding to their original specialism and to decrease the imbalance of demographic conditions, especially lower number of highly qualified workers in the eastern part of Poland. Nevertheless, statistics showed that at the end of the 1970s only 60 % of graduates stayed in their jobs after three years of obligatory employment. During the socialist times, state enterprises employed as many graduates as they could, even if they did not have enough positions for them – because the central authorities ordered them to do so. The certainty of employment was accompanied by relatively low salaries in all graduate professional groups.

A similar trend to the student numbers was observed in the number of academic staff. In 1990, higher education institutions employed some 61 400 academics ranging from masters to full professors, whereas in 1980 it was about 55 000. The relatively low (10 %) increase in the number of academics was the result of several issues, such as the small number of starting positions for academic staff, the decline of the financial and professional attractiveness of an academic career, restraints on intellectual life, and the professional prospects for the adjuncts (PhD students) who were and still are the largest group among academic staff. The previous anachronistic system of academic faculty development was felt to be too lengthy and too bureaucratic. The procedures for a given academic nomination involved more than ten academic, political, social and governmental institutions, from the level of the faculty up to the state council (Sادلak, 1991). The procedures also required seeking approval three times from the Central Qualification Commission for Scientific Personnel (CKK): at habilitation, at nomination as

associate professor, and at nomination as full professor. Decisions were based not only on merit arguments but also on political issues.

It must also be noted that Marxist ideology favoured and tended to overestimate – that is, place a higher value on – workers and peasants and underestimate the intellectuals. The salary structure for positions which required higher education did not reflect the opportunity costs of the education. The salary structure was highly unbalanced compared to Western countries. For instance, the relative salary scale between engineers and unqualified workers declined from 1.6:1 in 1960 to 0.8:1 in 1990. Sadlak (1991) reports that this trend was endorsed by the government as the positive outcome of the socialist policy of breaking down the three characteristics of social status: nature of work, level of income and social prestige. These thus no longer went hand-in-hand, as they did in the market-driven economy. As a result, the higher education systems in Central Europe did not experience the expansion of enrolment rates after 1970 that was witnessed in Western countries. In 1989, only 6.6 % of Polish citizens were graduates of higher education studies (see table 9.3), which was significantly lower than Western European countries.

Table 9.3: The structure of education in Poland for people over 15 years old

	1970		1980		1985		1989	
	I	II	I	II	I	II	I	II
Total number of inhabitants;	24 015	100	27 028	100	27 783	100	28 425	100
with higher education	655	2,7	1 338	5,0	1 602	5,8	1 871	6,6
with secondary education	3 198	13,4	5 687	21,0	6 478	23,3	7 118	25,0
with vocational education	2 531	10,6	4 937	18,3	5 615	20,2	6 812	24,0
with elementary education	11 620	48,8	12 134	44,0	11 906	42,9	10 913	38,4

Source: National Yearbooks for Higher Education (1991)

I – in thousands

II – in percentages

Before 1989 the majority of young people (about 75 %), attended vocational secondary schools, where they did not receive the *matura*, which is a secondary school final examinations certificate and is a legal and obligatory requirement for access to higher education. They were therefore practically excluded from participating in higher education. The persistently low salaries for most professions that require university level education, the low number of student places and strict admission requirements created an elite higher education system where in 1988 only eight percent of relevant age cohorts attended higher education. During the socialist period, public higher education institutions were not able to enrol all secondary school leavers who wished to continue to the higher education level. The insufficient number of places necessitated strict entry examinations. In general only about fifty percent of candidates were admitted to

universities and colleges (see table 9.4). Table 11 shows that in the 70s, when higher education experienced a large growth, fewer than half of all applicants were accepted to higher education. In particular, the most difficult places to enrol were universities and pedagogical institutions. It was relatively easier to enrol in technical universities. This pattern was in accordance with state policy, which encouraged engineering instead of the humanities.

Table 9.4: Candidates and enrolments in higher education (selective academic years 1970/71 – 1989/90)

Academic years	Candidates	Enrolled	Percentage of admitted to total number of candidates
1970/71	97 944	40 571	41,4
1980/81	128 785	58 973	45,8
1985/86	106 465	48 686	45,7
1988/89	111 925	65 983	58,9
1989/90	119 425	64 297	53,8

Source: National Yearbooks for Higher Education (1991)

A precondition for applying for higher education was the certified completion of secondary education, called *matura* (matriculation). The main criterion for admission was the entrance examination. Enrolment was based on a so-called Preferential Points System. A total number of points were awarded for the entry examination, marks in secondary school, and social origin, to ensure a more equitable composition of the student body.

It is worth noting that, compared to the pre-War, elite higher education, the student body's composition was more diverse during the socialist period. Despite the relative failure of the Preferential Points System, which granted additional points to an applicant according to social origin (such as working-class or peasant families) during the higher education entrance exams (Sadlak, 1991), the free tuition system increased the participation in higher education by students from poorer social and economic backgrounds (Sorensen, 1997). The student support system was relatively well developed and the state provided substantial funds for student assistance. The student support system was divided into three main parts: merit-based scholarships, means-based scholarships and extra payments for lodging in students hostels for needy students. Most of the resources (about 50 %) were allocated to means-based scholarships.

Analyzing the percentage of students who received scholarships, one may say that state higher education policy aimed particularly to ensure a more equitable composition of the student body. On average in the 1970s about 30 % of students received some form of scholarships, the ratio increasing to more than 40 % in the

eighties. In fact, before 1990 study courses were relatively low cost for students: they did not pay for education; the costs of students hostels were partly covered by the state, as was rail and bus transportation. Needy students received state scholarships and, additionally, the brightest students received merit-based scholarships.

However, the analysis of student social backgrounds at that time clearly shows that the great majority of student came from better-educated families. The research was conducted by the Research Centre for Recruitment for Higher Education, which, since 1984, functioned, at the Institute of Science Policy and Higher Education in Warsaw. The analysis did not focus on backgrounds of the students in terms of parental income, because the salary structure was very flat at that time. Salary levels were similar for unskilled workers, skilled workers and those with higher education. The research conducted at the end of the eighties indicated that 58 percent of the students admitted to higher education had fathers who had received higher education, 27 percent had a father who had completed secondary education, 5 percent had fathers whose education ended with primary school, and only 2 percent had fathers who had never completed primary education. Furthermore, the relevant date showed that the majority of the student population from working-class and peasant backgrounds were enrolled in less prestigious academic institutions, mostly in the pedagogical institutions and technical institutions, in which studies were predominantly vocationally oriented.

Table 9.5: Students receiving scholarships

	In total		Universities		Technical universities	
	I	II	I	II	I	II
1970/71	89 548	27,1	21 953	22,7	31 877	25,0
1980/81	131 456	29,0	30 213	23,0	39 912	31,5
1985/86	130 718	38,3	40 243	34,5	26 167	36,1
1989/90	181 217	47,9	57 087	42,8	34 662	47,2

	Academies of Agriculture		Academies of Economics		Pedagogical institutions	
	I	II	I	II	I	II
1970/71	12 567	36,3	5 349	20,1	5 549	35,7
1980/81	22 910	37,5	8 099	23,5	8 743	22,5
1985/86	14 427	40,0	6 432	28,5	15 280	41,6
1989/90	18 697	49,9	9 726	43,3	21 000	45,6

	Academies of Medicine		Academies of Sports		Others	
	I	II	I	II	I	II
1970/71	8 752	34,6	1 577	29,6	1 924	26,4
1980/81	14 919	40,0	2 919	23,0	3 750	28,6
1985/86	18 145	52,9	4 235	36,1	5 789	43,8
1989/90	26 046	70,1	5 987	42,8	8 012	50,1

Source: National Yearbooks for Higher Education (1991)

I – student numbers

II – in percentages to total number of students in given types of institution

The conclusions drawn from the data available reveal the uneven social composition of the student body in higher education. The financial barriers that prevented poor students with satisfactory intellectual ability from entering higher education were not the reason for the unequal representation of student from lower social backgrounds in socialist times. As we have demonstrated before, studies were free and the costs of student living were low. The main reasons can be traced to problems lower down in the education system and the insufficient number of higher education institutions. First, only about 40 percent of graduates of primary education could be admitted to the types of schools that gave a foundation for higher education: general lyceum, technical secondary school and vocational lyceum. An extensive analysis of the secondary school system can be found in the next section. Here, it is only necessary to say that admission procedures to the general lyceum, the graduates of which made up the majority of students, were very strict and involved entrance examinations. Moreover, the differences in curriculum and in quality of learning between general lyceums and the rest of the schools practically excluded their graduates from entering higher education. Second, the main important reason for the uneven composition of the student body was the rigorous admission systems, which supposedly protected the quality of education but in reality existed because of budgetary limits and a socialist ideology that favoured and tended to overestimate social groups like workers and peasants and underestimate the intellectuals.

9.2.3 Summary

Prior to 1989, higher education institutions in Poland were not self-governing. Even in the 1980s, though, when the supervisory nature of the party was not spelled out directly in the legal acts regulating higher education, the individual institution's statutes, its control over the nominations of Ministerial posts, advisory councils and bodies, rectors' positions, and academic nominations expressed de facto directive authority over the higher education policy making and implementation. In addition, through its representatives in organs within higher education institutions as well as its monopoly over the student organizations, the party and the government possessed broad knowledge of the actions of individual academics (Sorensen, 1997).

The higher education sector comprised only state institutions, the sole exception being the Catholic University of Lublin. Until 1990 the number of places available for new entrants was fixed by the Ministry. Higher education institutions throughout the country were also enrolling students in accordance with a uniform system. The minimum requirement for access to higher education was the secondary school certificate, and applicants were evaluated on the basis of the marks obtained in entrance examinations. The chance for admission, though, was ultimately determined by the limits on places in the first year of study.

Nearly all higher education institutions were offering uniform, master-level courses lasting 4.5 or 5 years, which ended with students writing and defending a master's thesis. Graduates were awarded the professional title 'magister' (master) or 'magister inzynier' (master in engineering studies) in a given specialization. Those graduating from the departments of medicine and the departments of veterinary medicine were awarded the title of physician or veterinarian respectively. Those who had completed master studies were entitled to apply for admission to doctorate studies that ended with them being awarded the title of doctor. The next academic degree, conferred in a final stage of a specific procedure, was the degree of habilitated doctor.

The only type of higher vocational education institution was the 4-year technical higher education institution or technical university. The differences between them related to the number of study programs: technical universities offered more courses and master-level courses, while technical higher education institutions could only confer the engineer title. Both types of higher education institutions had courses that led to the diploma of engineer. Their graduates could continue their education in complementary master-level courses, offered by technical universities. Courses in all types of institutions were organized in the form of day studies. The part-time and extramural courses were designed only for working adults.

The internal structure of higher education institutions was established in 1968 and served to 1990. The internal structure of higher education institutions was formally specified in their statutes, drawn up by senates. However, as already indicated, the documents had to be approved by the Ministry. Additionally, the Ministry had right to modify the statutes. Traditionally, the rector and the senate stand at the top of the administrative hierarchy. The rector was elected by senate and approved by the Ministry for three years. The rector had to be a tenured professor. Senate members served for three years, the members being elected from among the faculty and students. The rector was assisted by two or three pro-rectors for specific tasks. Moreover, each higher education institution also had the Rector's Kolegium, an advisory board with broad responsibilities, the members of which included party members as well as other political organizations functioning in a particular institution.

Each higher education institution was divided into faculties, which in turn were subdivided into institutes. Faculties were established by the Ministry. Faculties concentrated mainly on teaching activities and were responsible for organizing instruction. Faculties were run by a dean. Institutes were in turn responsible for research and were relatively independent of the faculties. Study programs were designed at the Ministerial level, although institutions could add some courses as they wished.

All universities and other higher education institutions were financed by the state. Education was free to all students. Institutions conducted research mostly under contract from state agencies. Individual economic activities that provided additional private funds to universities, such as cooperation with companies, were permitted, but the Ministry first established the state company as a subunit in higher education institution and secondly had to give permission for all activities undertaken. In reality the non-state subsidies accounted only for one percent of total income of the higher education sector throughout the 1980s.

To set in context the situation of the higher education system in Poland on the eve of the transformation process according to our theoretical framework in terms of elements of institutional arrangements and external factors, we may conclude the following:

Institutional autonomy of higher education providers was highly restricted. The situation resembled the state agency model where universities are treated as branches of state government. The Minister of higher education and other central authorities were responsible for planning, coordinating, supervising and controlling the activities in all institutions, except the Catholic University of Lublin. Although schools were operating according to their statutes, ministries and official university committees operating in a given school had a decisive voice in verifying the statutes. Regarding academic autonomy, the general principles for management of higher education institutions were determined by the fact that education was an integral part of the planned economy and must therefore meet labour force targets and ensure congruence between education and projected employment. Nevertheless, the government regulated the admissions to each institutions and each faculty, approved and eliminated academic programs, specified the content of academic teaching and research programs, and set the standard entry requirements for higher education.

In terms of *appointive autonomy*, institutions had more room for manoeuvre, but the Ministry strictly regulated important decisions with regard to academic staff. An academic career path involved many steps and promotions depended not only on the merits of an academic's professional achievements but to a great extent on appropriate behaviour, which meant dissemination and promulgation of socialist ideology. According to the Higher Education Act of 1982, to become

appointed to an academic post, the applicant first of all had to possess the appropriate ideological and moral qualifications essential to educate students according to socialist rules of social cohabitation. The academic qualifications were only secondary criteria. Similar rules held in evaluating academic criteria. Finally, the content of employment contracts was predetermined and fixed by the Ministry, in terms among other things of working hours, wages, and promotion. On top of that, the Ministry had the right to relocate academics from one university to another as needed.

Financial management in higher education institutions was regulated by the ordinances of the Ministry. Internal allocation of funds was precisely defined. Institutional funds were roughly divided into five categories: instruction fund, research fund, post education of academics fund, student aid fund, and award fund. Internal transfer of funds was prohibited. Moreover, the ordinances regulated even the allocation of annual net profit, indicating exactly how many percentage points of net profit had to be transferred to each fund. However, the year-end surpluses in each fund could be transferred to the next year. The great majority of funds were provided for instruction, as the higher education institutions were not the main research centres. Following the Soviet model, a large framework of research institutes was set up as a part of Polish Academy of Sciences (PAN), the highest authority in scientific matters. PAN had no direct link with higher education. The most prestigious and most expensive research programs, in both the natural and social sciences, were conducted by PAN institutes. Only technological research was more equally conducted by technical universities and PAN institutes. As mentioned before, at the end of the eighties the expenditure of higher education institutions on research and development was only 20 % of total national expenditure on research and development.

In terms of *barriers to entry*, higher education institutions were established, dissolved and transformed by act of parliament. In the socialist economy there was no private ownership of enterprises, almost all companies were state owned, and the same pattern applied to higher education. Despite the fact that all higher education acts at that time set the rules for private providers, on the other hand, they did not regulate the issue of how private providers can be established. Therefore, during the 45 years of socialism in Poland, no private higher education institution was established.

Regarding *student financial support*, and looking at the table 12, one can say that the state has spent a considerable amount of financial resources on student aid. During the socialist period, almost 40 percent of all students received some form of state support.

An interesting characteristic of the previous higher education system in terms of *students' choice of provider* was also the rigidity of the system of access, whereby

students could apply to only one higher education institution. This meant that, if a secondary school graduate with relatively high achievements failed the severe entrance examination of a prestigious institution he or she could be lost for education for good, while other applicants with lower achievements might be admitted to lower prestige institutions and graduate. Similarly, when students entered higher education they had no room for individual planning of studies according to their individual interest. All significant choices were made by the central manpower authorities. The rigid courses were similar to those in secondary schools.

Finally, the *external factors* affecting higher education were significantly negative. It is not necessary to repeat what we have already said about the external environment in which higher education was operating, so we shall only summarize the most important issues.

There were only four legal student organizations in higher education: Polish Students' Association (ZSP), Union of the Polish Socialist Youth (ZSMP), Union of the Rural Youth (ZMW) and the Polish Scouting Organization (ZHP). Even though the Higher Education Act of 1982 allowed the establishment of new independent unions or associations, it was only after 1990 that the new students' organizations started to proliferate. The two most important students' associations, ZSP and ZSMP, had their branches in each higher education institution. The unions had a wide range of prerogatives, especially regarding the student matters in higher education, but in reality the organizations were highly politicized and supervised by the socialist party; their activities were totally subordinated to the ruling party.

In terms of academic organizations, the presumably most important one was the Rectors' Conference of the Academic Institutions; however, its ability to influence state higher education policy was very restricted, boiling down to opinions expressed on the main legislative acts on higher education, but with no legislative or decisive power.

In 1947, a decree on the organization of science and higher education set up a central advisory body, the Central Council on Higher Education. The prerogatives and roles of the council included several dimensions of higher education policy, mostly in an advisory capacity, in such issues as establishing new higher education institution, fixing the curricula and the number of available student places at the first year, and in introducing new regulations on higher education. The members of the council were chosen among the full professors employed in higher education institutions. The roles and prerogatives of this body were usually extended almost every time new legislation on higher education was passed, and since its creation it has been an important element in the Polish higher education system. However, it is not possible to view the

council as an independent organization of academics because of the subordination of the council to the Ministry and other central authorities. In addition, the Council was only an advisory body, whereas all decisions were made at Ministry level.

Other external forces, as demonstrated before, such as the size of secondary education, student demand, socioeconomic development, and economic growth also had a negative influence on the higher education system.

To conclude the analysis of the higher education system before the 1989 one can state that the Act on Higher Education of 4 May 1982 increased the degree of general autonomy of higher education. During the second half of the eighties the prerogatives of universities and colleges were extended almost every time new legislation on higher education was passed. As a result of ongoing political changes that occurred in the eighties, such as ideological and economic liberalization, the entire system of education progressed along a similar path. Growing reformist tendencies among academics pressured for reforms that would create more academic and financial autonomy in Polish higher education. Finally, in 1989, when the socialist system collapsed, higher education enjoyed relatively substantive autonomy compared to other sectors of the economy.

Under the higher education regulations in 1990, institutions had more freedom to determine their own statutes, to plan the program of research and study curricula, to determine their internal organizational structure, and to decide on funding allocation. However, all these activities were supervised by the Ministry, which had a final say in all aspects of higher education institutional performance.

9.3 Higher education in the year 1990

9.3.1 *Economic situation and reforms*

During the 1980s there was a noticeable slowdown of growth in the economy. National income, investments, employment and the general standard of living declined. The number of newly finished apartments was down, efficiency coefficients were worsening, while the rate of inflation was up. All the reforms designed by the ruling party at the beginning of the 1980s were shelved due to the resistance of party and economic bureaucracy. In early 1989 the economic situation was worse than a year before and Poland was drowning in hopelessness. The long years of communist ideology had created an exhausted society. Many hundreds of thousands emigrated.

The economic situation in 1989 was disastrous. The most urgent difficulty was the inflation rate, which was approaching 700 percent and displaying the tendency

towards hyperinflation. The reasons for this price surge was because the government bowed to the trade unions' demands for wage increases, printed and issuing so-called empty money, which did not have any coverage and backing from the products on the market. Since the supply of products was not in adjustment with demand, the market experienced both shortages of particular products as well as overproduction. In addition, because of the low confidence in Polish currency, transactions were often carried out in foreign currencies, especially US dollars. The whole price setting system, subordinated to the needs of a centrally planned economy, was extremely deformed. Government artificially set the prices of most common products, but on the real market prices were significantly higher because of the shortages.

The economy in Poland was dominated by the public sector with little private enterprise. The state subsidized and regulated both the production process and consumption. For these reasons the economy was inelastic and inefficient. Because of the lack of the simple demand – supply rule on the market the producers' choices were driven by orders from superior authorities. Most public enterprises experienced overemployment. The production system focused on the internal market, because of export constraints. The structure of the centrally planned economy was very imbalanced, with a predominance of heavy industry, which produced more than 70 percent of all economic output and gave employment to the majority of the working population. Besides heavy industry, agriculture also had an enormously high share of national production. In contrast, the service sector, which accounted for 40 percent of all economy in western European countries, did not exceeded six percent in Poland.

As the government focus was on quantitative rather than qualitative development, the enterprises channelled the majority of their resources to investments to increase their production capacity rather than investing in innovation. As such, enterprises were backward in terms of modern technology. One of the major problems for the Polish economy was also the foreign debt, which 1989 amounted to 41 billion US dollars. The loans were raised in the 1970s, but they were used mostly for consumption instead of investment in new technologies. The main creditors were Western European governments organized in the so-called Paris group and commercial banks organized in the London group.

More than ten years ago, after breaking out of the Soviet-dominated communist bloc, Poland took a chance and decided to transform its inefficient, centrally planned economy into a market economy. In 1989, on December 29, parliament amended the Constitution. The state was renamed the Republic of Poland and defined as a democratic republic of law. The unrestricted development of political parties was allowed. Self-governance and economic freedom were the foundations of the new system. The leading role of the party and subordination to

the USSR were voided. References to socialism and centrally planned economy were removed. Together with the change in ideology the new government introduced a set of bills that moved the economy into market directions.

On January 1, 1990, the first post-communist Polish government introduced an unprecedented economic reform plan known as the Economic Transformation Program. This plan was designed to stabilize the economy, promote structural reforms, and put the country on the right path to becoming a market economy. Poland benefited from the difficult but effective introduction of truly market-driven mechanisms into the economy and became the first country in the region to rebound from transformational recession and exceed GDP levels seen before post-communist reforms.

In general, the Economic Transformation Program consisted of two major parts: a stabilization part and a second part that was designed to introduce free market mechanisms into the economy.

The main purpose of the stabilization program was to suppress inflation and restore market equilibrium. To achieve these goals the following regulations were introduced: rigorous budgetary policy in terms of strict discipline in salary increases in the public sector and more cost-efficient expenditure in public administration; an increase in bank interest rates to reflect the high inflation; low salaries formula in the public sector, which in turn neither reflected nor protected from inflation – in reality the wages in public sector were frozen; internal official convertibility of foreign currencies; and introduction of limits to internal public debt.

The major innovative provisions, which aimed to implement market forces in the economy, introduced the following changes to the economy's institutional framework: the new law erased the privileges of public enterprises in terms of providing the threat of bankruptcy and takeover as the market value of the firm's assets falls below its outstanding liabilities; second, the new regulations introduced competitive forces into the economy by abandoning the barriers to entry for private providers in most industries and by opening the possibility of competition with public enterprises by suppressing the existing monopolies; third, the same taxation system was introduced for public and private sectors; fourth, the new banking system was implemented with private banking; fifth, the government restored the Warsaw Stock Exchange; and finally, the existing export and import constraints were abandoned.

Until the 1990s the Polish higher education system was an elite system with very low enrolment rates. The sluggish economy, little flexibility in higher education system, resistance in the academic community to the introduction of changes and the poor remuneration and working conditions discouraged many bright

graduates from an academic career and forced many academics to leave the country in search of better job prospects abroad (Sorensen, 1997). This situation conformed to the state socialist policy, which aimed to maintain the structural majority of the labouring class and was supported by the salary structure where on average less qualified people earned more than higher education graduates. The transition period changed and reversed this situation by introducing market forces into the labour market. High-qualified skills became the condition for having an interesting, well-paid job. A strong correlation between higher education and future work and remuneration motivates secondary school graduates as well as older, less qualified people to participate in higher education.

9.3.2 The structure of higher education system

Polish higher education system in 1990 was entirely public with one private religious university, the Catholic University of Lublin, and seven higher education theology institutions, established in 1989 but in large part funded from the state budget. In 1990 higher education institutions enrolled 97 300 of total new entrants and graduated some 52 300. As indicated in the previous section, the higher education system in Poland before the transformation process, as implied by the Soviet model, consisted of several different types of higher education institutions (see table 9.5). In 1990 among 96 institutions were 11 universities, which provided broad, academically oriented training in many disciplines. Universities situated in large academic cities enrolled the greatest part of students, about 141 100 in 1990. The second largest group of providers comprised the technical universities, called engineering higher education institutions, which were less prestigious and offered fewer faculties, mostly in technical sciences. In 1990 there were already 18 such institutions with 76 000 students enrolled. Similar to the universities, engineering schools were located in academic cities, but some of them were in smaller centres, such as Opole and Częstochowa. The last group of institutions that offered diversified study were pedagogical higher education institutions, which were actually equivalent to universities, but with smaller enrolment, fewer faculties and, obviously, greater teaching orientation. The remainder of the students attended specialised higher education institutions that offered only study programs in a single discipline, such as medicine, sport, economy, agriculture, marine, theology and economics. In total they enrolled some 128 000 students in 57 institutions. Under the previous higher education act, higher education institutions were divided into two categories. Universities were engaged in basic research and continued the tradition of general education, theoretical sciences and training researchers. The second category, in particular technical universities, mostly conducted applied research. Pedagogical higher education institutions had mostly a teaching character. The specialised institutions conducted research in line with their study offer. The dividing line was not always clear. Universities, the oldest and presumably the most

prestigious higher education institutions, stand at the top of the hierarchy, but in a socialist society, technical universities and other institutions directly linked with the economy were the most appreciated.

In Poland, as well as in other central European countries, the Ministry of Defence as well as the Ministry of Internal Affairs had their own tertiary education institutions, where the armed forces and the police acquired the particular degrees. There were 16 such institutions enrolling a total of 9 500 students in full-time study programs.

It is important to note that the Higher Education Act of 1982, which functioned up to 1990, did not differentiate between the higher education institutions. The universities and technical universities differ from other, less prestigious institutions in certain important aspects, like the number of faculty, students, or research conducted, though in terms of their legal basis they were the same institutions, all under the close administrative, financial and instruction control of the Ministry and without full self-government of their academic issues. None of these institutions had more freedom or less. As a matter of fact, the quality and prestige gap between the universities, technical universities and the rest has narrowed, particularly in the 1980s. In times of economic downturn the outlays on higher education were cut, and all institutions had to cut expenditures and limit their instruction, but most of all their research activity. Of course, universities were the most selective institutions with the great majority of highly ranked academic staff employed.

9.3.3 Enrollment

The table below shows that in 1990 there were some 394 300 students enrolled in 96 higher education institutions. In 1990, students made up 76 per 10 000 inhabitants, while in the western European countries this ratio exceeded 350. In general, the society structure was deformed compared to developed countries. Only 6.7 percent of the population had graduated from higher education: the ratio was slightly higher for women (about 7.3) than for men (6.1). The highest share of the population was represented by those with primary school certificates. Among the young people who chose to continue their education in secondary school more than 60 % attended vocational secondary schools, where they did not receive the matriculation certificate, which is a secondary school final examinations certificate and is a legal, compulsory requirement for access to higher education. These were therefore practically excluded from participating in higher education.

Only fewer than 40 % of young people chose secondary schools that graduate with matura. At the start of the nineties students of ages between 19 and 24

accounted only for 9.8 percent of relevant age cohorts, while the ratio for developed countries usually exceeded 30 at that time.

Analyzing the table below we can identify several important factors that characterised higher education at the beginning of the transformation process. First of all the great majority of all students were attending full-time study programs. In total, full time students accounted for almost 77 % of all students, amounting to 302 639 students. In particular, the largest percentage of part time students was enrolled in less prestigious higher education institutions, such as pedagogical institutions, with a share of more than 40 %. In universities and technical universities this ratio accounted for 27.7 % and 14 % respectively (see table 9.6). Accordingly, the highest percentage of part-time students was reported in the humanities and social sciences, which, apart from universities, were mainly provided in pedagogical institutions. The ratio of part-time students was lower than in Western European countries at that time (Teichler, 1991). The relatively high share of full-time students was partly a result of the previous system, in which the part-time programs enrolled mainly working adults. Yet the most prestigious universities and technical universities usually did not offer many part-time programs, which were perceived as non-academic and 'reserved' for less prestigious providers, particularly pedagogical institutions. The specialised institutions, such as medicine, marine, sports, theological and art academies, were offering particularly full time courses.

However, there are additional reasons for relatively low student numbers in part time study modes. Usually, in most developed countries, the part time study mode of delivery is provided mostly for mature, so-called third age students, who did not enter higher education after secondary school graduation and decided to acquire higher education later on, or those higher education graduates who want to upgrade their qualifications in order to find better, more satisfactory employment or to be employed at all. In the last decades the great emphasis in higher education has been put on lifelong learning, which lays weight on an assured educational system in which learners have access to lifelong education. New technologies, rapid economic development, and in general the so-called 'knowledge economy' require that individuals update their knowledge and skills. Since the beginning of the eighties, lifelong learning has been recognized as an issue of common importance by many developed countries and international organizations. At the turn of the 21st century, countries have begun to devise educational systems suitable for lifelong learning and to meet the increasing needs of society in the future.

Nevertheless, it cannot be denied that there is a difference in the development and application of science and technology as between developed and developing countries. In most democratic, developed countries, in most economic areas, information science and technology had undergone major developments, and the

application of new technologies had found its way into production. But most Central European countries, including Poland at the end of the eighties, still relied on the exploitation and development of traditional industries, with low participation of new technologies. Therefore, in Poland, we can say that the economy did not require the continuous renewal of knowledge to be undertaken by qualified workers or even by white-collar workers.

Table 9.6: Basic facts of Polish higher education in 1990

	In total	Univer- sities	Technical universities	Academies of Agriculture	Academies of Economics		
Number of HEIs	96	11	18	9	5		
Number of faculties	438	88	118	57	16		
Academic staff	61 143	17 039	15 847	6 215	2 478		
Students	394 313	141 121	75 668	36 456	24 021		
Full time	302 639	102 667	65 345	27 838	18 175		
Part time*	91 674	38 454	10 323	8 618	5 846		
Graduates	52 314	17 919	8 208	5 465	2 971		
Full time	38 215	12 427	7 497	3 895	1 776		
Part time	14 099	5 492	711	1 570	1 195		
First year entrants	97 303	33 965	21 791	9 079	6 154		
Full time	76 285	25 246	19 094	7 124	4 522		
Part time	21 018	8 719	2 697	1 955	1 632		
		Peda- gogical Insti- tutions	Aca- demies of Medicine	Navy Aca- demies	Aca- demies of Sports	Aca- demies of Art	Theo- logical Aca- demies
Number of HEIs	10	11	2	6	17	7	
Number of faculties	29	28	6	10	70	16	
Academic staff	4 380	10 243	490	1 566	2 471	414	
Students	47 585	37 475	2 507	14 572	8 174	6 734	
Full time	28 127	37 076	2 044	9 519	7 021	4 827	
Part time	19 458	399	463	5 053	1 153	1 907	
Graduates	7 931	5 253	379	2 259	1 157	772	
Full time	4 043	5 253	349	1 515	953	507	
Part time	3 888	0	30	744	204	265	
First year entrants	11 135	7 068	708	3 905	1 755	1 745	
Full time	7 111	7 005	585	2 835	1 474	1 289	
Part time	4 022	63	123	1 070	281	456	

Source: National Yearbooks for Higher Education (1991)

* Part time type of study delivery includes evening time and extramural modes of delivery.

On the other hand, it must be noted that Polish higher education policy, up to 1990, provided well-developed opportunities for adults or non-traditional students to attend some forms of higher education (Teichler, 1992). The legislative

acts allowed working people to apply to colleges and universities, and imposed a duty on enterprises to second employees to further education at a higher level in terms of giving benefits to part-time working students in the form of paid educational leave. However, the obvious barriers faced the workers employed in companies that did not feel the need to second their workers to education, as the admission procedures in higher education institutions required that the applicant to part-time courses produce a letter of recommendation from his or her enterprise. Thus, if the individual wanted to be enrolled on such a course but his enterprise felt differently, he had small chance to be enrolled.

Table 9.7: Student distribution by age and type of enrolment in the academic year 1990/91.

	total	Students' age			
		24 years and younger		25 years and older	
		number	%	number	%
In total *	388 589	297 463	76,6	91 126	23,4
Men	187 657	142 560	76,0	45 097	24,0
Women	200 932	154 903	77,0	46 029	23,0
Full time	298 380	265 217	89,0	33 163	11,0
Men	150 747	130 002	86,6	20 745	13,4
Women	147 633	135 215	91,8	12 418	8,2
Part time	90 209	32 246	35,6	57 963	64,4
Men	36 910	12 558	35,6	24 352	64,9
Women	53 299	19 688	37,7	33 611	62,3

Source: National Yearbooks for Higher Education (1991)

* Without foreign students, students with individual track of study⁶ and students enrolled in Ministry of Defence institutions

The distribution of students according to the study field did not change much compared to the 1980s, but student numbers in the humanities exceed student numbers in technical fields of study (see table 9.8). Comparing the distribution of students by fields of study we may still see significant differences between Poland and other Central European countries and Western Europe. The proportion of those enrolled in the humanities and social sciences was greater than 60 percent in most Western European countries, while in Poland the ratio did not exceed 40 percent. In contrast, about 15-20 percent of students in most Western European countries were enrolled in technical fields, while in Poland and other post-socialist countries it averaged about 30 percent, although Poland, with less than 25 percent, had one of the lowest technical enrolments among those countries. Yet it has to be said that Poland at the end of the eighties, up to 1990, had already experienced a 'curricular modernization' characterized by growth and steady predominance of those areas of knowledge more directly related to

⁶ Individual track of study – mode of study delivery, in which students are not obliged to attend the lectures.

the service sector of the economy, especially in terms of the rising number of private firms as well as rationalization of the state-owned companies and the new administration. At the end of the eighties the humanities experienced the fastest increase in the percentage of students enrolled (almost 50 percent), while the study fields most appreciated in the socialist period had considerably decreased in popularity, especially engineering (by 34 percent) and agriculture and veterinary studies (almost 40 percent).

In 1990 Polish higher education institutions offered 170 course programs, distributed as follows: engineering sciences – 36; agriculture and veterinary – 17; economics and management – 17; law and administration – 2; humanities – 54; mathematics and natural sciences – 16; medical sciences – 5; sports – 4; arts – 8; and theology – 11. The most popular are presented in the table below.

Table 9.8: Students at higher education institutions according to discipline and mode of enrolment in 1990.

	In total		Full time		Part time	
	I	II	I	II	I	II
In total	394 313	100	302 639	76,9	88 637	22,4
Engineering	87 950	22,3	75 088	85,4	12 237	13,8
Economics	42 177	10,7	31 204	74,0	10 796	25,6
Humanities	108 897	27,6	73 583	67,6	33 980	31,2
Law and Administration	25 196	6,3	15 126	60,1	10 070	39,9
Mathematics and Natural Sciences	38 568	10,1	29 930	77,7	8 496	22,0
Others	91 425	23,0	77 708	85,0	13 058	14,3

	In total		Evening time		Extramural*	
	I	II	I	II	I	II
In total	394 313	100	1 572	0,4	1 465	0,3
Engineering	87 950	22,3	531	0,7	94	0,1
Economics	42 177	10,7	173	0,4	4	0,0
Humanities	108 897	27,6	544	0,5	790	0,7
Law and Administration	25 196	6,3	0	0,0	0	0,0
Mathematics and Natural Sciences	38 568	10,1	136	0,3	6	0,0
Others	91 425	23,0	188	0,2	571	0,5

Source: National Yearbooks for Higher Education (1991)

I – student numbers

II – in percentages

* - Individual Track of Study

Despite the fact that universities and technical universities offered the broadest range of study programs, and employed more than half of all academic staff in 1990, they did not enrol the majority of students. Enrolment was relatively evenly distributed across all types of higher education institutions, with 34 % of students in universities, 19 % in technical universities, 9 % in agricultural academies, 6 % in economics academies, 13 % in pedagogical institutions, 10 % in medicine academies, 4 % in sports academies and the remaining 5 % in arts, marine and theological academies

The breakdown of the country's centrally planned socioeconomic system also changed the shape of higher education. As government ceased forecasting manpower needs in order to establish study place quotas, higher education was free to decide how many students to enrol and on which study programs – the precise changes in the higher education system will be provided in the next section. However, at the beginning of the nineties the number of academics with their fields of specialization was still in line with the previous student enrolment structure. Therefore, public higher education institutions were not able professionally to enrol more students into study fields that became most important for the economy and the new type of public administration, such as: management, finance, banking or public policy.

At the beginning of the transformation process, public higher education institutions were not evenly distributed across the country; most of them were concentrated in and around large metropolitan areas (see table 9.9). The largest majority of students were enrolled in eight large academic centres with more than 293 000 students, which accounted for about 75 % of all students. Accordingly, institutions situated in these cities employed almost 80 % of total academic staff. The biggest academic centres were Warsaw with 13 higher education institutions and 68 181 students, Kraków with 13 institutions and 49 969 students, and Wrocław with 9 higher education providers enrolling some 34 000 students. Despite the existence of 12 higher education institutions in smaller cities, they were not able to enrol a sufficient number of students due to a lack of academic staff; on average each institution located outside the big academic centres employed less than 400 academics; moreover, the majority of them had lower staff positions, such as assistant professors and lecturers. Full professors and habilitated doctors accounted for only about 12 % of their staff and their number made up to about 700 in total, which contributed to the uneven distribution of higher education across regions.

Table 9.9: Distribution of higher education institutions by location in 1990

Location	Number of HEIs		Students		Academic staff	
	I	II	I	II	I	II
Cities with more than 150 000 inhabitants	84	87,5	355 413	90,1	56 411	92,2
Warsaw	13	13,6	68 181	17,3	10 454	17,2
Kraków	13	13,6	49 969	12,6	8 182	13,4
Wrocław	9	9,4	35 766	9,1	6 219	10,1
Poznań	9	9,4	34 867	8,9	5 540	9,0
Lublin	5	5,2	31 199	7,9	3 965	6,5
Gdańsk	7	7,3	25 580	6,4	4 150	6,8
Katowice	5	5,2	24 690	6,3	3 707	6,0
Łódź	6	6,2	22 900	5,8	4 719	7,7
Other cities	17	17,7	62 261	15,8	9 475	15,5
Cities with less than 150 000 inhabitants	12	12,5	38 900	9,9	4 732	7,8
Total	96	100	394 313	100	61 143	100

Source: National Yearbooks for Higher Education (1991)

I - in thousands

II - in percentages

9.3.4 Access

Nevertheless, similarly to previous years, only about 50 % of applicants for higher education were enrolled (see table 9.10). The most difficult fields in which to enrol were the social sciences, humanities, arts, sports and medicine faculties. Relatively the easiest way to be accepted was in technical studies, because of priorities set by the previous system for this kind of studies. Therefore we may say that, despite the previous law, which entitled everyone to free education, including higher education, the very inadequate number of higher education providers meant that higher education was a privilege only of the best students and was perceived as 'ennoblement'. The strict selection process, because of its emphasis on attainment rather than potential, transmitted into the higher education the differences in quality of education and achievement that were built into the secondary system.

Table 9.10: Candidates and enrolments in higher education in academic year 1990/91

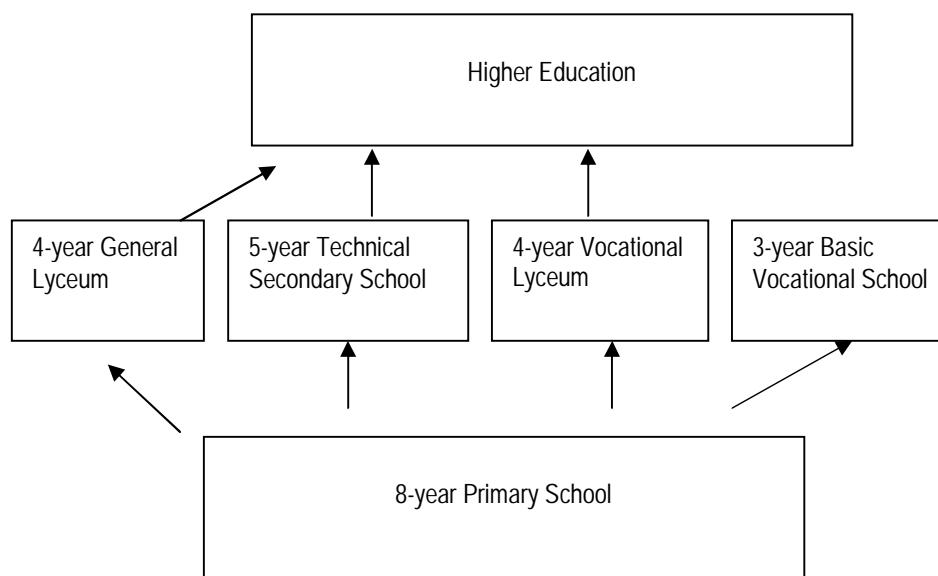
Academic year / Institutions	Candidates	Enrolled	Percentage of admitted to total number of candidates
1990/91	128 203	68 376	53,3
Universities	47 901	22 632	47,2
Technical universities	23 767	16 741	70,5
Academies of Economy	7 832	4 294	54,8
Pedagogical institutions	14 579	6 796	46,6
Academies of Agriculture	9 157	6 712	73,3
Academies of Medicine	12 465	6 129	49,1
Academies of Navy	650	563	86,5
Academies of Sports	6 500	2 800	43,1
Academies of Arts	4 870	1 412	29,0
Academies of Theology	482	269	52,5

Source: National Yearbooks for Higher Education (1991)

The secondary education system in 1990 consisted of four types of post-primary education schools: 4-year general lyceums; 5-year technical secondary schools; 3-year basic vocational schools; and 4-year vocational lyceum (see figure below).

The *4-year general lyceum* provided general education at the end of which pupils may be awarded the matriculation certificate (*matura*). Admission procedures to the general lyceum were very strict and involved entrance examinations in the Polish language, mathematics and a subject chosen by applicant. The general lyceum prepared its graduates especially for higher education. The lyceum courses were organized within several branches of sections, including mathematics and physics, humanities, biology and chemistry, and general education. At the start of his or her education in the lyceum an applicant chose one of these sections. At the end of their 4-year course in the general lyceum pupils might sit the matriculation examination, which comprised two written examinations in Polish and another chosen subject and oral examinations in three subjects. The matriculation certificate, as already mentioned, is the minimum precondition for entrance to higher education; however, it does not grant any vocational education. The advantage of general lyceums over the other types of secondary schools came down to the curriculum content of courses offered in the general lyceum. The courses provided a wide range of knowledge and skills, which prepared pupils directly for entrance examinations for higher education. Pupils attending the biology and chemistry classes were provided with expanded scope of knowledge in these courses and were better prepared to pass the entrance examinations for human or veterinary medicine than any other secondary school graduates. In the early nineties the general lyceums enrolled fewer than 20 % of those leaving primary schools. Almost 90 % of general lyceum graduates passed the matriculation examination and received the *matura* certificate. The schools accounted for only 12 % of the total number of all four types of secondary schools.

Figure 9.1: Structure of the formal education system in 1990



Sources; own analysis

The second type of secondary school which prepared its graduates for higher education was the *5-year technical secondary school*. This type of school was more vocationally oriented than the general lyceum. The technical secondary school was a school where the graduates completed general education courses, and thus might sit the matriculation examination and obtain the matura certificate, but it also provided general vocational education in a broad range of disciplines, such as environmental formation, machinery, electrical equipment, electronics, transport, economics, and administration. The curricula are based partly on the general subjects, as in the general lyceum, and on curricula for vocational training branches. The graduates might enter for the matriculation examination and obtain the matura certificate. Those who did not enter for the matriculation examination obtained the certificate of completion of education in the vocational technical school. Moreover, the graduates also passed the vocational examination at the end of their secondary education and received the diploma of vocational title. The technical schools prepared their graduates mostly for technical study fields, as the general courses they provided covered less knowledge than in the general lyceum. Nevertheless, their graduates had still less chance of being enrolled in technical study programs, since the entrance examinations in most technical universities required an extensive knowledge of mathematics from the applicants, while in technical secondary schools the emphasis was put more on vocational courses than on general courses in mathematics. In reality, the graduates of this type of schools were usually enrolled in less popular study

programs, such as electrical or housebuilding faculties. In 1990 the 5-year technical secondary schools accounted for about 15 % of all secondary school graduates, about 80 % of whom passed the matriculation examination and obtained matura certificate.

The last two types of secondary schools – *3-year basic vocational school and 4-year vocational lyceum* – practically closed the access of their graduates to higher education. The 3-year basic vocational schools offered basic, vocationally oriented courses. The schools represented a broad variety in terms of vocational branches available and the organization of practical training. The curricula consisted mostly of practical vocational training. The graduates of basic vocational schools could not enter for the matriculation examination, but they were entitled to apply for admission to general or vocational secondary schools that completed with the matriculation examination. The certificate of completion of 3-year basic vocational school confirms that its holder has been awarded the title of skilled worker. The 4-year vocational lyceum differed from the basic vocational schools in that it offered the possibility to sit the matriculation examination. However, the levels of courses offered were almost the same. Therefore, their graduates had fewer chances of enrolment in higher education than their peers from other secondary schools. The main objective of these schools was to provide vocational education in accordance with the requirement standards designed for a given group of occupations, and not to prepare their graduates for continuing education. In the early nineties, basic vocational schools (both 3- and 4-years) enrolled almost 60 % of all primary school leavers. Fewer than 40 % of them obtained the matura certificate.

The small number of higher education institutions and the limited number of places in the first year of study underlined the selectivity of the system and defined the elite type it represented. The precondition requirement of having passed the matriculation examination in practice did not secure entry to any of the higher education institutions nor to any kind of studies. Since there were *numerus clausus* in all subjects and all institutions, competition forced potential entrants to make the important choices regarding their future as early as the age of fourteen, when the children were selected for different kinds of secondary school. As different schools reflected their different styles of preparation of children for higher education, the entry examinations to secondary school were practically pre-entry examinations to higher education.

10 Changes in institutional arrangements: 1990-2004

In this chapter we illustrate the changes in the higher education institutional framework and analyze the degree to which the new framework meets the conditions identified in our study as the most important for having a competitive higher education market. Therefore, the analysis provides an answer to the following research question: which conditions for marketization are fulfilled in the Polish higher education system, at the first stage of reform?

The first sections deals with the initial phase of the transformation process – i.e. the beginning of the 1990s, whereas further on we shall deal with the changes in the institutional arrangements during the second phase of transformation process, viz., from 1997 to 2004.

10.1 Changes in the years 1990 -1997

The new regulations will be analyzed according to the framework provided in the theoretical part in the study, which in turn, recognized the most important market elements in higher education institutional arrangements. First, we will look at the issues concerning barriers to entry to higher education market for new providers. Those regulations comprise of two most important elements; eligibility of new provider to enter the market and to become a fully recognized higher education institution, and the eligibility of new recognized and accredited provider for public subsidies on the same or similar terms as existing institutions. Before looking at the barriers to entry we will first describe and analyze the major changes on the national level of higher education system and the changes within the higher education institutions' internal structure.

10.1.1 The higher education law

The change in the legal framework in the early 1990s was provided by the following legislation:

- The Higher Education Act of 12th September 1990,
- The Act on Academic Titles and Degrees of 12th September 1990, and
- The Act on Committee for Scientific Research of 12th January 1991.

The prime responsibility for the development of the higher education system rests with the Ministry of National Education. It is to this government department that the majority of higher education institutions report, such as universities, technical universities, agricultural, economic, pedagogical, and theological academies, and private institutions. Other higher education institutions report to other departments, e.g., medical academies are supervised by the Minister of Health and Social Welfare, marine academies by the Minister of Transport, fine arts academies by the Minister of Culture. Notwithstanding these diverse reporting lines, the entire system of higher education was regulated at the beginning of transformation process by a single legislative act, that is the Higher Education Act of 12th September 1990. Most of the provisions that regulated operations of the higher education system, the general framework for their organization, the institutions' governing bodies, institutions' responsibilities, academics' and students' rights, rules governing employment in higher education, and many other important tasks were determined by this Act, and executive addenda to the Act.

The Act was drafted and debated in parliament for several months, finally passing on 12th September 1990. The Act provided the basis for far-reaching changes in the Polish higher education system. Given the low popularity of state regulations among the higher education community and society, the new act was also called the "law on university autonomy" (Sorensen, 1997). New regulations completely reversed the general rules for the higher education system. However, the outcomes of the new regulations, in terms of the rapid expansion of the higher education system, were probably not envisaged by the government. As Antoni Hoffman, a member of the task force responsible for drafting an act, stated, the main assumption of the group and government, was 'to change only as much as necessary in order to introduce a system which would enforce restructuring but also allow for the system to flow' (Sorensen, 1997). In the following section we analyze the principle changes in the system laid down in the 1990 Higher Education Act and other legislation on higher education passed at the beginning of the 1990s.

The new regulations are analyzed according to the framework provided in the theoretical part of the study, which in turn recognized the most important market elements in higher education institutional arrangements. First, we shall look at the issues concerning barriers to entry to the higher education market for new providers. Those regulations comprise two most important elements: eligibility of the new provider to enter the market and to become a fully recognized higher education institution; and the eligibility of a newly recognized and accredited provider for public subsidies on the same or similar terms as existing institutions. Before looking at the barriers to entry we must first describe and analyze the major changes on the national level of higher education system and the changes within the higher education institutions' internal structure.

In general, the Higher Education Act of 1990 limited the authority of the Ministry of National Education by granting autonomy to both individual higher education institutions, to the faculties within an institution, and to the General Council For Higher Education (GCHE). The Council is the academic community's representative body that provides the Ministry with both advice and opinions, as well as a decision-making body with authority to ratify the state law on higher education. The Council is composed of fifty members, including thirty five professors, ten doctors, and five student representatives. They are all freely elected, according to a ratio that gives small higher education institutions the same voting power as larger ones. Additionally, each type of higher education institution, viz., universities, technical universities, agricultural, economic, pedagogical, and theological academies, have to be represented on the Council by at least two professors. The Council is divided into sections, the members of which are representatives of one type of institution. The representatives are elected for a period of three years, except for the students, who are elected for one year. The Ministry does not have the authority to approve the members of the Council. Under the procedures that existed before the Act, all members had to be approved and appointed by the Prime Minister, who had the power to reject candidates.

Under the new regulations, the activities of the Council cover all higher education institutions that functioned under the Higher Education Act of 1990. According to Hoffman, a member of the task force that drafted the new Higher Education Act, the Council was expected to assume the role of maintaining a balance of power between higher education institutions and the Ministry of National Education (Sorensen, 1997). However, in particular in respect of academic issues related to higher education, the authority granted to the Council gave it more real power than that retained at the Ministerial level. The Council had to express its opinion on all bills affecting higher education, in particular those about academic and financial issues, and has the right to set the law on higher education in the following areas: the conditions that an institution must fulfil to proceed with the granting of professional titles; the conditions under which an institution may develop and operate a field of study at bachelor or master level; the minimum requirements in terms of number of senior academics and the minimum curriculum content in a particular field of study. Additionally, the Council has decision-making power in terms of the state funding that is channelled to a particular institution. As such, the Council determines the number of professors and habilitated doctors in a department which can be funded from the state budget, and indirectly, can set down some conditions for budget allocation by determining the number of departments which a particular higher education institution can support.

We may therefore conclude that the Council was assigned a significant role under the provision of the new higher education law, and was considerably

strengthened compared to the situation prior to 1990, when its functions were limited to that of an advisory body. The new Act devolved the implementation of higher education policy in particular on the Council, leaving to the Ministry the role of administering available financial resources.

Despite the devolution of autonomy from the Ministry level, the authority retained at the Ministerial level was still substantial, particularly in relation to financial issues that regulated the application procedures for founding a private higher education institution. The primary task of the Minister was to supervise higher education institutions, to ensure they conform to the statutory provisions and statutes that regulate the greater part of their operations. Apart from this, the most important tasks included setting out the quota of employed professors, lowest and highest salaries for the faculty staff at the various levels of seniority, and their teaching load, as well as providing the finance spent on additional remuneration, such as awards for years in employment etc. In addition, the Ministry specifies the proportion of the basic subsidies that may be used for salaries. The Ministry also authorized the establishment and operation of public and private institutions, after advice from the General Council For Higher Education.

Most higher education institutions, except for one single-faculty institution, are divided into faculties as their “basic units”. These are subdivided into institutes and/or chairs, centres, laboratories, and other organizational structures. Inter- or extra-faculty units exist too, involved in research and/or teaching (Jablecka, 1998). Each public institution is governed by a Rector and a Senate. Private institutions were not obliged to create Senate. Faculties (departments) are in turn governed by Deans and in public institutions by Faculty Councils. In public universities and academies Rectors and Deans are elected for three-year terms by the Senates or Faculty Councils, respectively, or by a so-called Board of Electors, usually in larger institutions. The statutes set out the members of the electing bodies. Rectors, Vice Rectors and Faculty Deans are senate members *ex officio*. The remaining members are freely elected, mostly from among professors and associate professors. Other academic teachers and students are also eligible for Senate membership, the share of both these groups being not less than 10 percent, as are employees of the school who are not academic staff, who receive a share of not more than 10 percent. The proportion of different categories of elected representatives in Faculty Councils is similar to their share in the Senate. Electoral procedures are set down in the statutes.

In general, academic and appointment decisions are made by the senate. The institution’s senate also drafts the statutes and study regulations. The Rector is responsible for financial and administrative issues. All the important decisions made by the Rector concerning the development of the university, such as finance, international cooperation, and the institution’s structure are referred to

the senate for approval. Faculty Councils make decisions on the character of studies offered (full-time, evening, and part-time), admission requirements and curricula. It is they who determine the number of students and tuition fees in the case of part-time and evening courses, and adopt the subject-matter and financial plan of the Faculty. Some decisions taken by the Faculty councils need confirmation by the Senate. The former, however, obtained substantial independence within the institutional establishment.

Private institutions had substantial autonomy in their internal management structure, which was set down in their statutes. The Rector may be elected by the Senate or may be appointed by the Board of the Institution, that is by the institution' founder. A Board may also be involved in governance itself. In contrast to public institutions, non-faculty members can sit on various collective bodies representing the external environment. The main decision power in all institutional matters may be submitted to Rector or to a Chancellor.

10.1.2 Barriers to entry

The new act gave free rein for private institutions to become state-recognized higher education providers. The radical change was the permission to establish private higher education providers. Under the new regulations anyone could establish a non-public higher education institution, after meeting the requirements set by the Ministry of National Education, addressing issues such as the number of professors, curricula and infrastructure. Private higher education institutions could be established by individuals, international and domestic foundations, associations or companies. The entity that wishes to establish private higher education institution is called a founder.

In order to obtain permission to establish a new private provider, the founder had to meet several conditions set down in the Ministry of National Education Decree of 2 February 1991, which have to be fulfilled in the application for establishing a private higher education institution, and the second decree on minimum staffing requirements in order to provide study courses.

The following issues should be set down in the founder's application: the name of the founder; the name and location of the higher education institution; the amount of endowment funding provided to the new institution and a declaration of future endowments; the study courses to be delivered and their mode of delivery. In addition, the founder had to attach to the application a detailed curriculum of proposed fields of study, a list of academics employed, and a statement about endowment provided to institution.

The second decree regulated the conditions that had to be met in order to offer a particular study field. Newly established higher education providers could offer only bachelor study courses.

The next important condition that had to be fulfilled in order to establish a private higher education institution was the appropriate infrastructure capabilities. The founder was obliged to secure for the institution adequate rooms, laboratories, computer facilities and library.

In case the application was successful, the Ministry of Education, based on the opinion of the Central Higher Education Council, granted a permit to establish a private higher education institution. The permit specified the study courses offered by the institution, the institution's founder and location, the minimum assets required for establishing the institution, and the general direction of activity. The permit was valid for five years, and after that period, the higher education institution was obliged to apply to extend the permit. All other aspects of the functioning of new providers were set down in general acts governing higher education. An institution that has been granted such a permit is entered into the Register kept by the Minister.

Private providers can only be established as non-profit institutions, which means that private higher education institutions do not have owners or shareholders, but founders. A founder has rights to appoint the rector of a private university and establish the first statute of the institution, which has to be approved and ratified by the Minister. Additionally, in case the institution should close, the institution's assets, after repayment of its debts, are passed on to the founder. Additional founder rights can be set down in the institution's statutes.

Private higher education institutions are exempt from income, sales and property taxes, but only in case the revenues are spent on educational and research activity. This implies that a private university or college could pass its financial surpluses on to its founder, without the tax exemptions, whereafter the founder would have to pay income and sales taxes. In general, the institutions' statutes, as approved by Ministry, were subjected to restrictions set down in the Higher Education Act and the Ministry of National Education Decree on the financial management of higher education institutions. These requirements were in turn imposed by the Ministry of National Education and the Central Council on Higher Education. In general, financial management was left to the decision of an institution's governing bodies, with respect to the rule that the majority or all financial surpluses should be reinvested within the institution, to be devoted to teaching or research activities, rather than passed to institution's founder. The financial management of higher education institutions will be discussed in detail in the section on financial autonomy.

To offer a bachelor study field, the following numbers of academics had to be employed in the higher education institution: four professors or habilitated doctors majoring in the particular study field, and six PhDs with a relevant empirical experience in the study field. The academics with higher scientific degrees had to be employed full time. On the other hand, the professors and doctors did not have to have the institution as their first place of employment. Additionally, an institution could employ one doctor from abroad, who was also counted as part of the minimum staffing requirement.

In order to apply for master level study courses, the institution had to employ eight professors or habilitated doctors majoring in the particular study field, and six PhDs with a relevant empirical experience in the study field. In contrast to the bachelor level, the positions had to be the primary place of employment. Additionally, two foreign PhDs could also be counted formally in the staff formulas.

The staffing requirements for establishing a new private institution or a new program have led to greater opportunities for professors to hold several different positions in a number of universities and colleges (Osterczuk, 1996). In fact, the policymakers implementing new higher education policy in 1990 and 1991, which allowed private institutions to enter the higher education market, were conscious of its effects and tolerated the various employment contracts of many academics. As a result, one professor could be counted for the minimum staff requirements twice; first for a master level study course in his primary place of employment and second for bachelor level study course in a different higher education institution.

According to the regulations set down by the Central Council on Higher Education, about the conditions that must be met to allow the granting of master diplomas, providers had to provide information about the proper conduct of bachelor level study courses, and the correct proportion of highly ranked professors employed in the institution in relation to the predicted student numbers. Additional requirement for master level courses imposed on higher education institution the responsibility to conduct research within the particular study field.

The problem was that neither the Ministry nor the Central Council on Higher Education provided the detailed ratio between professors and students, and did not explain what exactly was meant by the proper conduct of bachelor level study courses. Hence, in reality, institutions that applied for master level courses first had to demonstrate that they met the criteria for bachelor level courses and, if successful, could submit the information about fulfilment of the conditions on master level courses. The ratio between professors employed and students

enrolled within the study field was of less importance and was not imposed on higher education institutions, either public or private.

As argued in the theoretical chapter, apart from the question whether private providers can enter the higher education market and which criteria the new higher education providers have to meet to become a recognized higher education institution, the next important issue is, if they do become recognized and accredited higher education providers, can they qualify for government subsidy on the same terms as the regular – public – providers and, in addition, are there any financial incentives for private universities and students from private providers, such as tax exemptions?

According to the Higher Education Act of 12 September 1990, private providers, except for the Catholic University of Lublin, were excluded from state subsidies, in terms of direct payments to institutions. However, the 25th article of the Higher Education Act gave the Ministry of National Education the authority to regulate the circumstances and conditions that private higher education had to meet in order to apply for state subsidies for teaching activities, and, as such, the law provided for the possibility that the government could subsidize private institutions. But until 2003, the Ministry of National Education did not draft and publish the Decree that would regulate and define the way in which private institutions could apply for state subsidies, and the conditions that had to be fulfilled to obtain such subsidies, which therefore excluded private institutions from the state system of subsidization of higher education.

In terms of state research funding for higher education, private institutions, even though according to the law governing the Committee for Scientific Research they were eligible for the state subsidies, in practice were excluded from the two main sources of state research funding in the form of statutory research funds and funds for the development of the research capabilities of junior staff. These funds are allocated directly to institutions or units within institutions from the State Committee for Scientific Research, which is a major public agency for research funding in Poland, based on a formula that takes account of the size of the institution and its academic ranking in terms of number of publications and academic degrees awarded. New private institutions did not have rights to confer the higher ranked academic degrees, such as habilitated doctor and professor, and had limited records of their faculty publications, so they had less chance to qualify for state research funds compared to their older public counterparts.

On the other hand, private institutions can compete for the grants awarded by KBN for a particular research activity. However, on average, KBN provides more than twice as much funding in the form of statutory research grants for public institutions than for competitive grants.

The next important aspect of state policy relates to the eligibility of students enrolled in private higher education institutions to receive state aid. The student-based aid can take various forms, such as student grants, merit and means-tested scholarships, vouchers, support to student loan systems and financial support for bus or railway transportation. The 1990 law on higher education provided the following forms of state subsidies channelled directly to students: means-tested and merit-based scholarships as well as deductions against state income tax liabilities for fees paid to higher education, financial support for transportation and the costs of student hostels.

From 1996 to 2003 the state provided working students or their parents in the private sector (as well in the public one) with deductions against state income tax liabilities for fees paid to higher education. However, this tax deduction was abolished from 2004. By contrast, up to 2001, students in the private sector were excluded from the state means-tested and merit-based scholarships as well as from the system of financial support, which covered part of the costs of living in student hostels and refectory costs. Students in the private sector were only eligible to travel at half-fare on all public transport.

To summarize, under the new higher education law, private institutions were allowed to enter the higher education market and were granted the right to issue state diplomas, at both bachelor and master level. Nevertheless, private institutions were excluded from the state financial system of financial support for instructional activities in higher education, both at the institutional and student level, with only some exceptions, such as tax deductions and half-price tickets for students. The most important elements of the system, which are state means-tested and merit-based scholarships, were available only to students in the public sector. The Private sector was also to a great extent excluded from the system of state budget funds for research.

10.1.3 Institutional autonomy

The level of institutional autonomy is perceived as one of the most important signs of the penetration of marketization policies. Deregulation of authority at the university level relates to many issues, such as creating or eliminating fields of study, setting the procedures for admission requirements, fixing curricula, and so on. Here, in the section analyzing the changes in the law on autonomy of higher education, we will follow the framework provided in the theoretical part, identified by Levy (1980) and The Carnegie Foundation (1982), which describes three important areas of university autonomy: academic, financial and appointive autonomy. In the following section we shall look at the regulations concerning these issues. Below we present the general directions of institutional autonomy, as provided in the act, in terms of overall management and internal structure of higher education institutions.

The general framework for institutional organization, structure, and governing bodies was set out in the Act of 1990. Most of the detailed arrangements were determined by statute. In principle, under the provisions of the Higher Education Act of 1990, the degree of higher education institutional autonomy differed according to the number of high ranked professors employed in the institution. Public higher education institutions that employed at least sixty tenured professors, with at least half of their faculties being empowered to confer the degree of habilitated doctor, were considered to have full autonomy. Other public institutions that did not meet those criteria were considered to have partial autonomy. According to the Act, the first category of public institutions had the right to set and to adopt their own statutes without Ministerial approval, whereas the second type of institutions must have their statutes approved by the Ministry. In addition, fully autonomous public institutions had more autonomy in some other aspects of institutional management, which will be analyzed later in this section. At the beginning of the transformation process, about one-third of public institutions belonged to the first category. While private higher education institutions always had to have their statutes approved by the Ministry, the Act enabled many organizational and staffing issues of private institutions to be determined in their statutes differently from the framework set out by the Act.

The statutes of the individual higher education institution was of great importance in terms of defining the internal structure of the institution and its day-to-day management. The statutes include all aspects of behaviour of higher education institution that were not directly defined in the state higher education regulations and other aspects devolved to the institution itself. On the other hand, the statutes had to be in accordance with higher education law. The internal structure of higher education institutions did not change much under the new Act, except for the procedures for electing particular governing bodies and the level of authority devolved to the institutional level.

Higher education institutions, under the new legislation, were granted substantial autonomy in terms of administrative issues and management. The so-called fully autonomous institutions, mostly universities and technical universities, had the freedom to pass their statutes without the approval of the Ministry. Other institutions, including private ones, must have their statute approved by the Ministry. The following major issues, among others, should be regulated and defined in the individual statutes of a higher education institution, according to the Ministry of National Education Decree of 13th June 1991 on conditions that must be fulfilled in the statutes of a higher education institution that does not have full autonomy:

- the main tasks of institution and major directions of future development;
- the types of study courses offered and their modes of delivery;

- internal structure of institution's management and the competences and authorities of particular management bodies within the institution, not regulated by the Higher Education Act;
- the way in which and conditions under which the institution's individual and collective bodies are elected;
- the types, conditions and procedures for establishing, cancellation, and transformation of institutions' organizational units;
- the number of vice-rectors, vice-deans, and vice-directors;
- the additional criteria and procedures for appointing high ranked academics for tenured positions, not regulated in the Higher Education Act;
- the additional qualifications for appointing academic staff;
- the main criteria and procedures for intermittent academic staff evaluation;
- the conditions for fixing obligatory teaching hours for academic staff, and the number of obligatory teaching hours for a particular category of academic staff, which must be fixed between the minimum and maximum obligatory teaching hours set down in the Higher Education Act;
- the maximum value of assets that are to be sold or purchased without the approval of the institution's senate.

Except for the list presented above, the institution's statutes include many other important aspects of institutions management and the institution's internal structure. Under the Higher Education Act, all resolutions fixed in the statute have to be in accordance with the Act, and additionally, the statutes of the institution that did not meet the criteria for gaining fully autonomous status had to be in line with the regulations included in the abovementioned decree. In practice, the decree did not settle the detailed conditions, terms, or procedures of various issues included in the statutes, and provided only a detailed schedule of what that must be regulated in the statutes.

It is important to note that devolution of authority from the state level to the institutional one was transferred mainly to elected, collegial or one-man bodies within the institutions. Their decision-making power will be discussed further in this section, according to the three types of institutional autonomy.

Academic autonomy

In terms of academic autonomy, the higher education institutions that fulfilled the criteria and were considered to have full autonomy were devolved much more academic autonomy compared to other institutions. Notwithstanding the fact that the majority of authority in academic issues was granted to all institutions, the fully-autonomous, according to the regulations set in the new Higher Education Act, had a right to:

- create or eliminate fields of study;
- create, transform or eliminate individual organizational units;

- fix curricula and study plans;
- set the studies' statute;
- set the principles and procedures for admissions and the standards and requirements for entrance exams.

What is noteworthy is the importance of the devolution of authorities to make the above types of decisions, which were transferred to fully autonomous institutions, especially in terms of developing study fields, fixing curricula, and setting the procedures for admission. These issues are considered as most important for the academic autonomy of an institution and determine the university's ability to chart and to define its own mission. Hence, the mission of a university is mainly conceptualized in the programs it offers, its research and dissemination activities, instructional diversity and the students' profile in terms of the admission process.

As the admission policies are of great importance for academic autonomy, let us look closer at those issues. In general, as mentioned before, the admission system was changed under the new regulations. Before 1990, both the procedures and requirements for admission were uniform and centrally established, although they were liberalized to some extent by amendments to the Act of 1982. Admission quotas were also set centrally by the Ministry for each discipline and for each higher education institution. After the changes, the *numerus clausus* has been abolished, except for medical academies. Both admission procedures and selection criteria were established by higher education institutions themselves, although the Ministry had a right to submit its objections for the procedures and admission requirements adopted by institutions possessing partial autonomy.

In practice, institutions set up their admissions quotas for particular study fields according to the capacity and condition of the institutions' premises, equipment availability, number of academics and state funding.

Institutions considered as partially autonomous must have their decisions in the areas discussed above approved by the Ministry, which had a right to disapprove and reject the institutions' proposals. Therefore, their academic autonomy was subjected to restrictions imposed by the Ministry and the Council. An effect of this sort of authority retained at the Ministry and Council levels was the long periods between the institution's decisions or requests and the Ministry's responses. Usually, the Ministry had one or two months to make a decision, but in reality it took longer, and institutions were not able to implement the changes and new regulations when they wished.

With regard to the degrees and diplomas awarded, the new Higher Education Law changed the basic structure of the study system. The degrees and diplomas system of higher education that had existed for many years in Poland consisted of

daily/full-time studies as well as evening/part-time and extramural ones. Up to 1990 studies led to different kinds of diplomas. So-called *magister* (master degree) diplomas for a field of study, *magister inżynier* (master of engineering) diplomas, and an equivalent medical diploma were awarded after completion of full-time studies lasting between four and six years, the latter in the case of medical studies. In the 1980s all higher education institutes were entitled to confer master's degrees. As we have noted, part-time study courses and extramural ones were for adults. Applicants were required to have had a specific record of a vocational career. A part-time student was usually awarded a diploma in vocational or engineering studies, while the theoretical part of the curriculum was reduced and the applied part, preparing a student to take up their professional career, was expanded (Jablecka, 1998). A master's diploma could be obtained following supplementary studies, which usually take two years. The Higher Education Act of 1990, while maintaining the studies leading to master's and engineer's diplomas, introduced a bachelor-level degree diploma (*licencjat*), equivalent to undergraduate studies. Each new public or non-public higher education institution was at first entitled to confer only bachelor's degrees.

In 1990, when the new system of undergraduate education leading to a bachelor diploma was implemented, neither formal regulations nor directives defining what profile of education it should provide were issued and no clear principles emerged either. Although the Act on Higher Education of 1990 imposed on the Central Council on Higher Education the responsibility to define and issue the minimum requirements for curricula for all kind of study fields – i.e. the course content of a particular study field – the first minimum requirements were established in 1996. Up to this year, the institutions were free to fix their own study programs at various levels of undergraduate and graduate education. Studies at bachelor level in some cases provided knowledge preparing a student to take up a job, sometimes they were of a general character, the latter prevailing in universities, the former in other types of public higher education institutions and in private institutions. A range of options were available with regard to particular configurations of studies. The same higher education institution and even its faculty, after meeting the requirements for bachelor and for master level courses, might run one or several modes of programs: leading directly to master's diploma; preparing first for bachelor's, then for master's; and parallel bachelor's and master's studies. Usually, one faculty provided all three modes of programs.

The second important change in the basic structure of the higher education system was allowing higher education institutions to enrol applicants in part-time study courses without a previous record of a vocational career. Therefore, all those who wished to attend part-time studies, regardless if they were employed or not, and after meeting the entrance requirements set up for an individual institution, could be enrolled on such courses.

In addition, public and private higher education institutions were able to organize short-cycle courses, usually lasting one or two semesters, in a specific field, like accountancy, management in public administration institutions, etc., for higher education graduates who wished to upgrade their qualifications.

In terms of authorities devolved to all higher education institutions concerning other academic matters, the higher education institutions, particularly the institution's senate, had a right to:

- set the number of students that are to be enrolled on the first year of study;
- set the general directions of the institution's development;
- set and approve the international cooperation agreements;
- create the secondary schools within the institutional structure;
- proclaim that the main mode of course delivery is not the full-time system;
- proclaim that some lectures can be attended only by students (as the lectures in Polish higher education institutions are by law open to all citizens).

To summarize, according to the new institutional arrangements, the degree of academic autonomy was differentiated according to the status of the higher education institution. Public higher education institutions with partial autonomy as well as private providers were subordinated to the decisions of Ministry and the Council in major academic areas, whereas fully autonomous institutions won the right to settle their own policies in almost all important academic issues. On the other hand, the new regulations assigned the functions of an advisory body to the Ministry and also of a decision-making body with real power to the Central Council on Higher Education, which was, as indicated, a representative body of the academic community, composed of freely elected (by the academic community itself) high ranking academics and students.

In terms of the powers that were retained at the Ministry level on academic issues, the Ministry still holds the power to intervene in institutional affairs if the regulations set down in the institutional statutes are not in conformity with the law, and, for this reason the Ministry can withhold and annul the institution's decisions when they are not in accordance with state law.

Appointive autonomy

In terms of appointive autonomy, the following issues may be identified: ceilings on the number of faculty and other positions; characteristics of employment contracts; promotion procedures and principles; and also the procedures and principles for electing the institution's governing bodies, as well as their competences in appointive matters. Before analyzing the degree of appointive autonomy devolved at the institutional level, it is important to describe and to emphasize the changes in the structure and hierarchy of academic posts developed under the new regulations in 1990.

There are two relevant highest ranked academic posts – those of full/ordinary and associate/extraordinary professor – and one academic title of professor, whereas, the two scientific degrees are habilitated doctor and doctor – PhD. Candidates for the PhD degree must hold a master's degree. The applicants, who may be either assistants employed at a higher education institution or at a qualified research institution, or students undergoing formal, postgraduate four-year doctoral studies, are expected to write a PhD dissertation, mostly in book form, and to defend it. The higher scientific degree – habilitation – is awarded following the publication of the degree dissertation and a special colloquium. The doctor's degree and that of habilitation are bestowed by scientific Faculty Councils which must have among them a certain number of professors in a relevant discipline, as determined by legislation. The academic title of professor is conferred by the President of the Republic of Poland on those who, following their habilitation degree, continued to achieve outstanding academic publications and teaching accomplishments, including successful management of a research team (Jablecka, 1998). Only the habilitation degree and the title of professor have to be confirmed and approved by the Central Commission for Academic Degrees and Titles, which is a freely elected body consisting of professors, while the degree of doctor is conferred at the institutional level.

We can distinguish three categories of academic staff: those fulfilling teaching and research responsibilities; research scholars; and those whose only responsibility is teaching. The first two may be employed in the posts of full professor, associate professor, assistant professor, and assistant. Most appointments to the post of assistant professor are PhD holders, whereas for assistants they are master's degree holders. Those academics who do only teaching are called lecturers or instructors. They hold doctor's degrees, but they did not successfully pass the habilitation promotion and are retained at the university because of their outstanding teaching accomplishments.

The most significant change in the hierarchy of academic posts was the abolition of the post of "docent". This post was a vestige of the system of employment before 1990 and introduced the non-academic merits into the structure of an academic career. The academics employed in the post of docent must hold a doctor's degree, and were situated between assistant professors and professors in the academic hierarchy. The nomination was based not on academic merits but on political issues. Thus the candidates usually had to possess the appropriate ideological and moral qualifications essential to educate students according to socialist rules of social cohabitation.

Under the new regulations only a small and decreasing number of persons were still employed in the post of "docent". According to the Act of 12 September 1990, academic members holding such a position prior to that date may still occupy it. However, no further nominations to that type of post have been made, and

therefore no other criteria except academic merit were important in an academic career. Since 1990, most academics with habilitation have been promoted to the post of associate professor.

The new Act on Academic Titles and Degrees of 12th September 1990 did not devolve much authority at the institutional level. The Ministry and the Central Commission for Academic Degrees and Titles retained most of their power to regulate and supervise those issues. According to the Act, the Ministry was responsible for setting the quota of employed professors, lowest and highest salaries for the faculty staff in various posts, and the teaching load for academics. In the case of staff with teaching and research duties, these lie between 120 and 210 hours per year; in the case of teaching staff from 240 to 360 hours. The specific requirements, terms and conditions concerning the teaching load related to different posts are determined by the Senate of every institution in its statutes. Therefore, the higher education institutions were free to decide about the level of salaries and the number of teaching hours, but they must fit within the quotas set down by the Ministry. These restrictions imposed on institutions strictly limited their authority. In addition, the Central Council on Higher Education determined the number of full professors within the particular department in public institutions funded from the Minister's budget. Other characteristics of employment contracts which relate to qualification requirements, tenure, performance measurement, terms of promotion, vacations, unpaid leave, additional financial benefits, etc., were also fixed in the Higher Education Act of 1990.

In terms of employment, academics occupying the posts of full professors or associate professors were tenured, as were others if they were reappointed for a second term. All academic staff were employed on an unlimited term basis. However, doctorate holders, employed in the post of assistant professors, must prepare a habilitation dissertation within nine years from the time they achieved the doctor's degree, and a doctorate has to be attained by assistants in eight years, otherwise they would be dismissed. However, the institution's statute could prolong these periods, which many institutions did. The posts of senior lecturer, lecturer, instructor, and reader are for academics having teaching duties only.

Academics who prepare their PhD dissertation have a right to ask for six months' paid leave to write their thesis, whereas those who pursued habilitation could request for one year's paid leave. Professors could apply once every seven-year period for paid leave for research purposes.

Any hiring of faculty staff or a promotion from one post to another must involve an open competition announced by the institution. Assistants and assistant professors are appointed by the Rector at the recommendation of the Dean. Appointment to the post of associate professor is made on the joint

recommendation of the Dean and the Faculty Council. The appointment of full professor is made by the Minister on the joint recommendation of Senate and of Faculty Council. Additional qualifications and requirements for a post could be set out in the institution's statutes.

The reasons for relieving academics of their post and the relevant procedures were strictly determined in the Act on Higher Education. Academics could be dismissed in few cases, usually related to mental and physical inability to conduct their teaching and research activities, to absence from lectures, and if the academic was sentenced to imprisonment. Academics could be also dismissed when they had reached the retirement age. Higher education institutions also had a right to terminate a contract in case faculty staff had received a negative evaluation twice. All academics must be evaluated once every four years. The evaluation procedures and principles were laid down in the institution's statutes.

Further restrictions imposed on institutions by the Act were the limits on additional teaching loads. Academics responsible for teaching and research could have their teaching loads increased by only 25 percent, whereas those responsible only for teaching could have their load increased by 50 percent. In a situation with a relatively small number of highly ranked professors and a rapid increase in student demand, these regulations greatly limited the ability of public institutions to enrol as many students as they wished, according to their admission policy and the financial resources available.

On the other hand, the policymakers implementing new higher education policy in 1990 tolerated the various employment contracts of many academics. Academics who take additional posts at other higher education institutions were obliged only to inform the Rector of their home institution, without requesting permission. As long as the additional duties did not interfere with their responsibilities at the institution where they were primarily employed, there were no legal reasons to relieve an academic from his/her post.

While public higher education institutions are bound by all rules established in the Acts in terms of characteristics of employment contract, private ones are restricted only to some of them and could employ teaching staff on terms different from those in the public sector. For example, private institutions have to comply only with the appointment qualification requirements and conditions of promotion. Other issues, including the characteristics of the employment contract, had to be set down in the institution's statutes.

State regulations take no position on the balance between research and teaching at higher education institutions, although the Act defined both as functions of higher education. Nor are they the subject of the Ministry of Higher Education's policy. The balance between research and teaching was decided at the level of

basic organizational units of the higher education institutions, i.e., their faculties. In effect, not much research is carried out in some units because of the significant teaching load of their academic staff and the insufficient state funding provided for statutory research.

Overall, higher education institutions, especially public ones, had little possibility to determine and diversify the content of employment agreements. The 1990 law gave public universities little flexibility in creating their own pay scales or incentive/reward systems. Universities thus had limited possibilities for attracting high-performing staff in strategically significant fields or recruiting young scientists in important areas of science. Further, professors had little financial motivation to improve their qualifications or improve their teaching. Of course, higher education institutions were free of political influence from the Ministry and ruling political parties, and had a right to determine the additional qualifications for recruiting staff according to their mission. Compared to the previous system, they were granted more autonomy in their personnel decisions; however, the regulations set out in the Act limited the freedom of universities' actions and gave them little flexibility to act according their own choices in pursuit of their mission.

Financial autonomy

As mentioned before, private institutions were excluded from the state financial subsidies for teaching. Therefore, the restrictions on financial autonomy at higher education institutions were imposed mostly on public higher education institutions, whereas the financial issues within the private sector were left unregulated, the decisions being devolved to the institutional level, except from some general regulations which will be discussed later.

First, we will look at the state funding mechanisms and second, we will analyze the regulations regarding the decision of providers about their financial resources.

The Act on Higher Education of 1990 and the Act on Committee for Scientific Research of 12th January 1991 made three important changes to the basis of funding for higher education. The first one included the separation of state funding of research and teaching. Secondly, the funding mechanisms for both teaching and research were changed; and third, government devolved to the institutional level authority on most financial issues, such as the right to accumulate and disburse funds from sources outside the state budget without the Ministry's permission.

The Act on Committee for Scientific Research of 12th January 1991 introduced the separation of the funding for research from that for teaching. The state budget for teaching activity and operational costs included allocations for academic salaries,

building and equipment maintenance, health services, and some financial assistance to students. Similarly, the state funds for statutory research were usually distributed to faculties for basic research.

According to the regulations, money from the teaching budget was allocated according to a special formula, which was divided into two parts. The first one takes into account the number of students enrolled at a higher education institution, whereas the second part includes the number of high ranked academics employed in the institution. The money distributed according to student numbers accounts for fifty percent of the formula, as does the funding provided on the basis of professor numbers.

The first part of the formula is weighted for particular forms of education, in terms of doctorate full time studies, doctorate part-time studies, full-time master and bachelor studies, and part-time master and bachelor studies, and secondly for the costs of teaching in groups of disciplines. The number of students included in the formula for a particular year was based on their actual number at the beginning of the academic year. However, the number of students enrolled on the first year of study is weighted by a national drop-out ratio for first year students, calculated in previous years. On average, for public higher education institutions this ratio amounts to about eighty to eight five percent. Furthermore, the formula takes into account the various weights for the different types and modes of study delivery. The weights applied to student numbers ranged from 0.3 for part-time undergraduate and graduate students, 1 for full-time undergraduate and graduate students, 2 for part-time doctorate students and 5 for full-time doctorate students. In addition, the number of part-time students could not exceed the number of full-time students, so, if a higher education institution enrolled more part-time students than full-time ones, it did not received any state money for the number of part-time students that exceeded the number of full-time. The additional restrictions imposed on public institutions by the new legislation set down that part-time students enrolled in the study fields without enrolment on a full-time basis were not taken into account in the formula.

In terms of the cost of teaching in groups of disciplines, the following weights were used; 1 for public policy, administration, pedagogy, journalism, economics, Polish language, history, foreign relationships, law, and theology; 1.5 for foreign languages, finance and banking, management and marketing, computer sciences in management, mathematics, psychology, sociology, and librarianship; 2 for archaeology, architecture, arts, geography, tourist, and sports; 2.5 for biology, chemistry, physics, computer sciences, agriculture, construction studies, graphics, forest studies, and in general the natural and scientific disciplines; and 3 for astronomy, robotics, biotechnology, electronics, mechanics, and all veterinary studies.

From the above we may conclude that the government encouraged public universities and colleges to expand the enrolment into full-time modes of delivery and to enrol students especially for full-time doctorate studies, in the face of insufficient number of academics and large student demand. In addition, being aware of the higher cost of study delivery in such disciplines as veterinary medicine, natural sciences, sports and arts, the government designed higher weights for those lines of studies.

For teaching staff three weights were used; 2 for full professor, 1.5 for habilitated doctor and 1 for doctor. Therefore, no state subsidies were granted for assistants, who were not employed at the higher education institution as doctoral students; on the other hand, if the same assistant was enrolled in full-time doctoral studies and also taught, than he was formally counted in the formula as a student with the weight of 5.

Following Jongbloed (2003) we may argue that the formula was very input-oriented and tied the state subsidies to the type of institutional enrolment and number of professors, and its structure and composition.

However, as the Ministry was phasing in the use of formula as the basis for the distribution of these funds, in order to prevent public higher education institutions from a rapid change in funding mechanisms and thus in the amount of money awarded to them, the Ministry decided not to implement the formula as a complete basis for distribution. Therefore, the Ministry decided to introduce to the formula for the distribution of funds a percentage of the total funds allocated to an institution on the basis of funds allocated in the previous year. At the beginning of the 1990s the amount of money distributed on the basis of the previous year's budget accounted for 60 percent of the total teaching budget. Nowadays, this ratio accounts for 20 percent, which means that subsidies allocated through the formula were very limited at the beginning of the transformation process, and allowed public higher education institutions to anticipate the amount of money they would receive in the following year and thus to plan their expenditures. However, as indicated above, the application of the formula is increasing as a basis for the allocation of funds, and probably in the following years, i.e. up to 2010, the funds for teaching will be allocated only on the basis of the formula.

Additionally, every year the Ministry determines the minimum and maximum percentage increase of the total subsidy for an institution compared to the previous year's budget. This increase takes account of the inflation rate, and the change in the money spent on higher education in the state budget. For instance, usually the institution's subsidy for a given year accounts for more than 110 percent of funds allocated in the previous year but no more than 120 percent. These restrictions were implemented in the formula due to the dramatic increase

in number of students enrolled at public higher education institutions, and the limited state resources spent on higher education.

The separation of funding for research activity from that for teaching activity, and the introduction of competitive tendering for research funds, was introduced in the January 1991, when the law established the State Committee for Scientific Research (KBN) was implemented. The Committee functions at the Ministerial level and its chair is nominated and recalled by Parliament upon a motion by the Prime Minister. The Committee is composed of the chairman, two vice-chairs, the secretary and the members. Five members are nominated by the Prime Minister from members of the Council of Ministers or heads of state offices. The rest of the members comprise of the chairs of the Basic Research Commissions, which exists within the structure of the Committee and are responsible for the particular group of disciplines, such as humanities, natural sciences, etc. Each Commission is composed of representatives of enterprises and local governments and members elected from the academic community. The Committee is responsible for developing strategic plans for research directions at the national level, allocation of state research funds among the research institutes and higher education institutions, and supervision of the distribution of those funds by tenders, and finally the Committee develops and proposes legislative acts on research issues. Therefore, the Committee was granted a great deal of authority and responsibility in research policy and research funding.

Funds for research are allocated from the budget of the Committee of Scientific Research for three main tasks; there are institutional research grants for higher education institutions, statutory grants for basic units (faculties) within these institutions, and grants for research projects. All research funds are allocated by competition and are subject to an ex-post evaluation or peer review of proposals. Institutional grants are distributed at the institutional level for maintenance of research equipment and infrastructure and for the development of research capabilities of junior staff. The statutory grants for faculties are intended for research conducted at the faculty level. The third source of research funding is provided to individual research units for particular research projects. The first two types of funds are allocated based on an algorithm that ranks the faculties by scoring them according to the following criteria:

- weighted number of publications in international and domestic journals;
- number of scientific books and student handbooks;
- number and type of degrees awarded to faculty's staff, and the number and types of degrees awarded by the faculty;
- number of patents and registered innovations;
- number of certified test laboratories;
- weighted number of registered research contracts with industry.

There are five categories of research quality, and only 20 percent of the best units can be ranked in the highest category, the rest falling in the following categories. The best research units receive the greatest amount of statutory research funding. Jongbloed (2004), in his work on the characterization of the funding models in Central European countries, finds the research system and the accompanying evaluation system in Poland to be relatively modern by international standards, and classifies it as an output-driven system which bases its decisions on the performance of individual research units within higher education institutions. Funds for research projects are based on the competitive tendering of individual research teams or units for a particular research activity. On average, KBN provides twice as much funding for institutional and statutory research than for competitive grants. The evaluation criteria are generally accepted by the academics and seem to work well. The major concerns are related to funding levels, which have been declining over recent years. It is worth noting that the average research budget in public higher education institutions accounts only for 16% of the total budget, while the public expenditure on research has decreased from 0.74% of GDP in 1991 to 0.35% in 2003.

The third radical change concerned the internal financial management of the higher education institutions. Institutions were granted authority in the majority of financial decisions, and were allowed to accumulate funds outside the state budget without the approval of the Ministry, which was previously necessary. As was already mentioned in the previous chapters, diversification of the sources of funding is one of the crucial elements of a market oriented policy, and was also a significant element of higher education reform. It has become evident that the Polish economy was unable to sustain the massive higher education system from government sources alone. Funds outside the state appropriations may include: appropriations from local governments, private donations and endowments, payments for research contracts with industrial partners, income from rent of institution's premises, incomes from investments in economic enterprises, and tuition fees charged to students, except the full-time ones. The Decree of the Ministry of National Education of 27 August 1991 further specified the tuition sources of revenue on public higher education institutions. Under this Decree, public universities and other institutions could charge tuition fees to part-time and evening-time students, to full-time students but only for repetition of regular diploma courses due to inadequate student performance, and on various short-cycle post-graduate courses.

The Decree of the Ministry of National Education of 27 August 1991 on the principles of financial management of higher education institutions designed and implemented the new regulations on financial issues. According to the decree, all higher education institutions were devolved substantial autonomy in their financial management. In general, the legislation set down that they were free to design and implement their own financial policies. They had a right to set the

level of salaries for academic and non-academic workers, but only within the range provided by the Ministry; set the remuneration for additional teaching hours; set the level of tuition fees; set the level of other fees charged to students; decide on new building and equipment investments; and enter into cooperation with companies in business. All the institution's financial surpluses from fees or contract research are retained locally and are not subjected to state controls, they can be carried forward at the end of the fiscal year and do not affect the amount of state appropriation for the next years. Universities and colleges may also have the right to carry over the state funds to the next years. Higher education institutions are permitted to enter the capital market. They can either invest their surpluses on the capital market or take out loans in order to invest in infrastructure or other activities.

Overall, higher education institutions received freedom in their financial management. Our approach to financial autonomy rests on the dimensions described by Jongbloed (2003), who distinguishes the following aspects of financial freedom: freedom to deploy financial resources; freedom to build up a portfolio of assets; freedom to engage in various income-generating activities; and finally the freedom to determine fee levels. Polish higher education institutions received freedom in all of these aspects, with only some restrictions imposed by the Ministry or Council, such as levels of remuneration. Public and private higher education institutions are exempted from income, sales and property taxes, except when a university or college is engaging in various business type activities. Income derived from this source is excluded from the tax exemption.

Summary – institutional autonomy

The Polish system of higher education, similarly to those in other post-communist countries, had been in a state of profound transformation at the beginning of 1990s. The Act on Higher Education of 1990 and other regulations provided higher education institutions and their internal units and faculties with a significant level of autonomy. In terms of the power retained at the state level, the Ministry regulated the teaching load and salaries of academic staff, established new higher education institutions, and intervened in institutional affairs if institutional statutes were not in conformity with legislation. The authorities granted to the Central Council on Higher Education included mostly such academic issues as the minimum program content and number of high ranked professors required to establish a study line. In addition, the legislation also regulated the content of the employment contracts with academics.

10.1.4 State financial support for higher education

Our theoretical assumptions suggest that steps toward more targeted subsidies for students and the eligibility of state student aid for students enrolled in the

private sector, increases the participation of additional low-income students in higher education at lower per-student cost to the state. Let us now look at the higher education policy in terms of financial support for institutions and students.

The traditional financial support from the state usually takes the form of direct payment to selected higher education institutions. Therefore, only this group of higher education institutions offers studies “free of charge”, while other unsubsidized institutions have to charge tuition fees.

New legislation adopted at the beginning of the transformation process did not change the mechanisms by which state funds were allocated to higher education. The funds for teaching were allocated directly to institutions, not to students, who could channel the funds to either public or private higher education institutions. However, as already described, the new regulations introduced the student numbers into the funding formula as one of the important bases for the allocation of funds.

In addition, private providers established under the new regulations, except for the Catholic University of Lublin and other church founded institutions, were excluded from the state subsidies, in terms of the direct payments to institutions. Therefore, the government allowed private providers to enter the higher education market and to become fully recognized higher education institutions with the right to award public degrees and diplomas, but did not incorporate the private sector into the state financing system for higher education.

In terms of the state financial support for students, students in the private sector were also excluded from the state system of merit-based and means-tested scholarships, which were available only for full-time students enrolled in public institutions. In general, the system of state support for students did not change under the new regulations. The Ministry of National Education Decree of 6 December 1991 provided regulations for the procedures and principles of state financial support for students.

The system comprises the following elements: means-tested scholarships, means-tested scholarships for disabled students, merit-based scholarships, maintenance allowance, and special Ministry scholarships for outstanding students. Except for the Ministry scholarship, which is granted by the Ministry itself, all scholarships and allowances are granted by the Student Scholarship Commissions, which exists within each faculty. The means-tested scholarship can be granted only for one semester, whereas others are granted for a single semester or the academic year. Merit-based scholarships are granted to the best students, while other scholarships and allowances are based on the student's or parents' income. The Ministry did not regulate either the minimum family income per student that

would make the student eligible for scholarship nor the level of scholarships nor the marks received by student that would be high enough for a merit-based scholarship. It is important to note that the student self-governments, which exist in each higher education institution, have a powerful say in the distribution of social and merit-based grants, as well as on the criteria, threshold and limits applied (Vossensteyn, 2003). It is the student local government authority that develops the regulations on the detailed procedures and principles of student financial support, and distributes these funds. The Ministry of National Education allocates the public budget for student support to the public higher education institutions according to the number of full-time students, in the form of block grants for all elements, and it is the student local government's decision how to divide the money, subject to the Rector's approval.

During the period analyzed, the percentage of students receiving any form of state support was decreasing substantially, as a result of the increase in the total student number which was not accompanied by an increase in state expenditures on student support (see table below). Because students in the private sector were excluded from the state scholarships, their share in the student number receiving scholarships was negligible. However, since 1994 their number increased thanks to private foundations which granted mostly merit-based scholarships for students in private institutions. In addition, private institutions themselves created internal systems of scholarships. Nevertheless, in the academic year 1997/98 only 1 984 students in the private sector received scholarships, amounting to only 0.9 % of students enrolled in private institutions, compared to 175 249 students in public institutions who received state support, making up 16.4 % of all students in the public sector. This huge disparity between sectors clearly indicates that students in private institutions were not treated on equal terms with students in public sector. A similar trend was observed in percentages of student living in dormitories, the costs of which were and still are subsidized by the state.

Another form of indirect student support is the discount on public transport fares, which usually amounts to 50 percent. All students have state-guaranteed health insurance.

Table 10.1: Students receiving scholarships.

	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
Students receiving scholarships	162 099	148 527	150 869	162 617	157 714	160 577	168 974	177 233
- % of total student number	40,5	34,6	30,6	27,9	23,3	20,3	18,4	16,3
- from private Sector	0	0	110	255	551	796	1 249	1 984
- means-tested Scholarships	72 450	72 100	71 170	70 372	60 564	57 423	57 412	56 659
Students living	122 500	125 600	126	131 000	134 900	137 400	138 100	139 300

	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
in dormitories			000					
- % of full-time Students	41,0	38,3	36,0	33,4	32,0	30,5	30,2	26,1
- from private Sector	0	0	0	428	729	896	941	1 273

Source: Own analysis based on National Yearbooks for Higher Education (1992 – 1998)

We may conclude that, despite the fact that students and their families bear a substantial part of the costs of higher education, especially in the private sector, the state financial support for students was not evenly distributed among students. The most significant contribution was made by part-time students at public institutions and all students in the private sector, but it is the full-time student who benefits from free education and all state student support. Vossensteyn (2003), in his work on tuition fees and student support in Central European countries, argues “As a result, the private burden of higher education is unevenly distributed and arguably leads to an unjust situation. Those who get into full-time higher education are lucky. Most of their educational costs are covered by public funds. But, as in most countries, it is students from the higher economic groups who tend to get these fully subsidized study places, because they on average will have higher scores in the entrance examinations....As a result, public money is used to provide tertiary education to students who often come from the higher socio-economic classes.”

10.1.5 Information issues

Institutional autonomy is always accompanied by accountability procedures. Higher education is a specific ‘experience good’, and the content and the quality of studies can be properly evaluated and verified by the students only after graduation and transition into the labour market. This leads to the argument that students need protection. To protect the students, government usually determines the minimum content of programs, to ensure that they meet specific standards, and audits the quality of the supply of new programs and those already provided by higher education institutions. The state guidelines for program content can be seen as a form of consumer protection, as are the requirements for a minimum number of professors and an adequate ratio of academics to students.

In general, it seems that under the new higher education law, as analyzed above, the Ministry and the Council hold sufficient power to protect the students and preserve the quality of study courses, by determining the number of high ranked academics and the minimum content for a curriculum in particular study fields, and by providing the program with guidelines for a particular subject. However, given the negative character of higher education at the beginning of the transformation process, in terms of the limited number of high ranked academics, a disastrous economic situation which entailed a decline in state funding for

higher education, with on the other hand the low popularity of state regulations within academia and the enormous growth in demand for higher education, the government laid its emphasis on the other elements of higher education policy – securing an increase in access to higher education, instead of protecting students, and ensuring accountability.

Accountability of higher education institutions to the state and to society at large can take many forms. The state can request the inclusion of representatives from civil society on the main university governing bodies. The higher education institutions may also be requested to draw up a strategic plan that would include the goals the institution wants to achieve and the ways of doing so. However, the most important elements of protecting the students and ensuring the appropriate quality of institutions are quality assessment procedures. Quality assurance or accreditation procedures are necessary for universities and colleges to demonstrate the good use of ‘taxpayers’ money. Quality assessment can be done by various accreditation committees, established by the state or by academic organizations, in order to have an institution’s degrees officially recognized and accredited.

In Poland at the beginning of the 1990s, the autonomy granted to higher education institutions was not accompanied by accountability procedures, especially in terms of quality assurance. According to legislation there are no representatives from the external environment – business, public institutions, local authorities or civil society – or major committees in public and private higher education institutions; even if they were created, such bodies would have no legal authority to influence the institution’s functioning. The government did not require from providers any strategic or developments plans. State financial auditing came down to an accountants’ audit of the financial statements. There were no accreditation committees or bodies that evaluated quality and gathered information on the performance of institutions. The only state agency that was responsible for quality assessment in higher education was the Central Council on Higher Education.

It was the Council’s responsibilities to set the conditions that institution must fulfil to proceed with granting professional titles, the conditions under which institution may operate a particular study field at bachelor or master level, the minimum requirements in terms of number of high ranked academics and the minimum curriculum content, as well as the academic–student ratio. However, the first guidelines for the curriculum and the content of particular study courses were issued in 1996 and only for few study fields, while the minimum staffing ratio requirements came in 2001. Secondly, due to its limited size, the actual responsibilities of the Council were restricted to permission for establishing new providers and new study fields. When the institution received such permission, the next evaluation procedure was within five or ten years, depending on the

permit granted. In the interim, the institutions were obliged to inform the Ministry and the Council about the difficulties experienced in meeting the requirements, but there was no legislation to penalize those institutions that did not comply with the rules.

In general, although the Council has assumed certain powers which have been withdrawn from the Ministry, the body has not taken on an evaluative role. At the end of 1993, the Council presented an evaluation system of higher education institutions, in which a Commission, composed of members proposed by the Ministry and the Council, would accord accreditation to institutions. However, the State Accreditation Commission for Higher Education was not established until 2001. Academics employed mostly in public universities expressed the opinion that there was a need for such a body, particularly because of the surge in the numbers of private institutions, which might endanger the quality of higher education diplomas and degrees awarded. They also supported the idea of self-assessment and self-regulation, besides accreditation by a state body (Sorensen, 1997).

Additional difficulties faced by public higher education institutions at the beginning of the transformation process were the decrease in state funding and the very low level of academic salaries. Higher education policy in Poland during the 1990s focused mainly on the ways to increase student places without much increase in state spending on higher education.

The negative financial situation in public institutions in particular has had a damaging influence on the heart of university – the academic profession – and the attractiveness of the academic workplace. The relatively low salaries in public institutions have provoked many academics to earn additional incomes outside academia. In Poland this situation occurred on a large scale, in particular among high ranking academics who were often employed in two or sometimes more higher education institutions, especially in the field of economics. The staff requirements for establishing a new private or public institution or a new program led to greater opportunities for professors to hold several different positions in multiple schools, a pattern that is followed by younger academics who are also trying to make a living (Osterczuk, 1996). In fact, the policymakers implementing new higher education policy in 1990, which allowed private institutions to enter the higher education market, tolerated the various employment contracts of many academics.

The 'permissiveness' in earning additional income has allowed Poland to increase overall student enrolment but has limited the number of academic staff and kept academics in relatively poorly paid higher education institutions.

Supporters of this approach argue that academics working in various posts have low marginal costs and high marginal revenues; because they are giving the same lectures in different institutions, they can spend relatively less time on preparation while they receive a second salary. In addition, the mobility of academics in general allows them to be more familiar with the new academic environment, as well as new methods of teaching or managing the institution, which can benefit their home university. Moreover, the most common career pattern for academics in Poland is the stationary model which means that the whole career (from junior assistant to full professor) is traversed within one university, so multiple employment posts can be treated as a surrogate for the more flexible and mobile academic careers essential for higher education in the United States and many other developed countries (Ratajczak, 2004).

The argument against this approach is that the current system fosters initiative and benefits at a personal level, but may bring adverse effects at the institutional level. The overworked academics have little time to bring the content of their lectures up to date, and spend less time on research. Overall, while financial resources have been restricted, the number of students has increased and there are no mechanisms of quality assurance – academic standards are under threat.

In addition, higher education institutions perceived the state's wish for more regulations regarding their academic, appointive and financial autonomy as a renewal of a state steering model from the socialist era. Requirements related to faculty qualifications, student admission requirements, centralized study programs, etc. all qualify as external quality assurance measures that were used under the Socialist regime. So not surprisingly, most academics verbally distanced themselves from the former quality assurance mechanisms. They resisted accepting the demand for accountability to government, public opinion, for subordination to public funding regulations, and exposure to market forces – like introducing competitive elements into funding arrangements. On the other hand, as mentioned before, the policymakers accepted the inadequate accountability procedures in order to allow public and private higher education institutions to meet the increased student demand without additional funding from the state budget.

To address the growing disquiet about quality of higher education, as early as 1994 the first accreditation initiative emerged in Poland, in terms of self-regulation. Twelve private business and management higher education institutions adopted a Business Schools' Agreement on Quality and Education (SEM Forum). This enabled the creation of a professional system of accreditation. Since the establishment of the SEM Forum, more private institutions have undergone the evaluation procedures. However, up to 1997 fewer than 10 private business and management providers had received accreditation, out of about 100 providers that offered study lines in these fields.

10.1.6 Freedom to choose provider and product

New legislation gave students the freedom to choose the higher education institution they wished to attend, as well as the possibility to apply to many higher education institutions. Prior to 1990 a student could apply to only one institution, and in case the entrance examinations were failed, he/she had to wait at least one academic year to try again. In addition, under new legislation there were no regional limitations on the access to higher education, such as reserved enrolment places for local students or other facilities for some student groups.

In opening up a sector of private higher education, the 1990 legislation strengthened student choice (Sorensen, 1997). Students in the new system not only had a choice between public or private education, they could also decide whether to pursue the traditional master degree, or opt for the shorter, more vocationally oriented bachelor degree, and whether to attend full-time study programs, or decide to combine work and education and apply for part-time programs.

Still, on the other hand, due to a limited supply of study places in free full-time education and due to the introduction of tuition fees, the student choice was also limited in a way. On average less than fifty percent of applicants were enrolled in free full-time study courses, those who had not matriculated had to apply for fee-paid, part-time courses at public institutions or could choose the private sector, where all studies were paid for. In addition, the limitation on the eligibility of state financial support for students, allowing it only to full-time students at public institutions, made the freedom of choice even more limited. However, it must be noted that despite the limitation of choices according to the student's financial circumstances, the high enrolments in the fee-bearing part-time courses both at public and private institutions indicate that in general the student's choice was increased under the new legislation.

In terms of the students' freedom to develop personalized study programs and to specify their own curriculum, the legislation devolved the authority to the institutional level. It was up to the higher education institution to decide whether to offer additional courses within the study line, beyond those required by the minimum program requirements, which on the other hand, as noted before, were issued only in 1996 by the Central Council on Higher Education.

However, in practice, students were deprived of almost any choice to develop personalized study programs. Following Jablecka (1998) "The Act on Higher Education of 1990 and other regulations provided higher education institutions and their internal units and faculties with a significant level of autonomy. Such independence, taken for granted in a democratic society and market economy may be, however, an obstacle to the process of transformation and produce

resistance to changes on the part of the academic community; in fact, changes in curricula and organization of studies did not take place everywhere, the most radical and apparent reforms occurred in economics and management faculties where state institutions faced competition from the non-state sector of higher education. ... Legal regulations froze the faculty structure of studies providing faculty councils with responsibility for curricula; in such situations the creation of interdisciplinary studies, cutting across faculty structures, has been very difficult". Most of the courses were organized along formal, rigid lines. The problem was embedded in the structure of the academic faculty as well as the management of higher education institutions. Few Central European countries, including Poland, have experienced radical management and staff reforms; usually the same people who ruled higher education institutions before 1989 performed the same function after the collapse of communism. Similarly, the academic staff were educated under the previous system and used to the formal study lines imposed by the Ministry. Additionally, Tomusk (2001, p. 69) argues that "As a result of various developments – economic difficulties which make people to worry about their positions, and does not allow to allocate enough resources for the faculty training, political insecurity and lack of the realistic reform agenda, one can recognize declivity of the faculty qualification level, aging and increasingly low motivation instead of numerous young and enthusiastic professors".

Therefore, high teaching loads, insufficient time for course preparation, and multiple lecturing jobs for most faculty, have led to few changes in the curricula and content of the study courses. Students had little choice in defining their own study line and to choose those courses they would like.

On the other hand, the new legislation provided the possibility for students to do so and to develop their own study line within a so-called 'Individual Organizational Track' (ITS). However, there are several conditions that a student has to meet in order to be awarded an ITS. In general, ITS is available for those students who achieve outstanding academic accomplishments and receive various academic awards for best students. The second group of students who usually apply for ITS are disabled students or those who fall ill. ITS status is granted by the dean with the Rector's approval, and in reality there are not many students with ITS status.

10.1.7 Summary – institutional arrangements in the years 1990 - 1997

According to Jablecka (1998) in her work on changes in Polish higher education in the 1990s, the system of governance in higher education, in place since 1990, might be characterized with reference to Clark's coordination models (Clark, 1983) as dominated by the academic oligarchy and some market mechanisms, but with only certain limited coordination on the part of the state. The power of the

Minister of Higher Education has therefore been considerably limited compared to the situation before 1990. The implementation of higher education policy is restricted mostly to administering available financial resources. The legislation also devolved authority to the Central Council on Higher Education, in particular in academic issues. However, as noted, due to its limited size their actual responsibilities were restricted to issuing opinions on the establishment of new higher education providers.

Overall, following our framework analyzing the introduction of market elements to the higher education market we may argue that, of the five general market elements identified, such as barriers to entry, institutional autonomy, state funding mechanisms, information about performance of higher education institutions and accountability procedures, and the student's freedom to choose the provider and product, three of them were partially fulfilled in higher education institutional arrangements at the beginning of the 1990s.

First of all, new legislation allowed private providers to enter the higher education market and set the same entrance criteria for new private and public institutions, as well as for the establishment and development of new lines of study. But on the other hand, recognized and accredited private higher education providers did not qualify for government subsidies, which were available only to public institutions.

Second, higher education institutions were granted a substantial degree of autonomy compared to the previous system, in fact, fully autonomous public institutions enjoyed almost unrestricted autonomy, with only some limited control from the state. Most authority devolved from the Ministry level, where the policy was framed on the basis of Party policy, directly to the freely elected rectors and other collegial and individual bodies within the institutions. The interviews with academics conducted by Sorensen (1997) in her work on the changes in Polish higher education in the 1990s clearly indicated that academics agreed that they had more autonomy, especially in areas such as program development, admission procedures, and relations with foreign institutions. The freedom to elect their own rectors and internal hierarchy was also seen as significant for higher education institutions. Usually the capacity of the Ministry to exert control through its funding power was acknowledged. Another area where authority was retained at the state level was in granting academic titles, with the power of the Committee on Academic Titles and Degrees to award the habilitation degree and confirm and approve the doctoral degree awarded by faculties. However, it must be noted that the committee is subordinate only to the Prime Minister and is no longer an arm of the Socialist Party, as it was in the pre-1989 period when it reported to the chairman of the Council of Ministers, who in turn was directly responsible to the Central Committee of the Socialist party (Sorensen, 1997). Moreover, the student freedom to choose the provider was

significantly increased, as well as the type and mode of program delivery, but with some restrictions in terms of limitation on study places free of tuition fees.

In contrast, other elements of marketization policy were hardly met in the higher education policy. State financial support for higher education was in the form of direct payment to the selected public higher education institutions. And only this privileged group of institutions could offer studies “free of charge”, as private, unsubsidized institutions have to charge tuition fees. Moreover, students in the private sector were also excluded from the state system of merit-based and means-tested scholarships, which were available only for full-time students enrolled in public institutions. Therefore, those who contributed the most to higher education did not receive any state support, whereas those enrolled in free full-time study courses received all state financial help. In addition, because of such an uneven distribution of state student support and due to a limited number of study places in free full-time education the student choice of provider was in fact limited. Similarly, the choice of product content, which gives the student the possibility to determine his/her own study line, was restricted because of the formal, rigid study lines offered by higher education institutions.

The last market-type element analyzed – the availability of information about the performance of higher education institutions and the accountability procedures – was absent in the new institutional arrangements. The government did not require that higher education institutions conduct their own internal evaluation; academic programs did not have to undergo the accreditation process conducted by state or professional accreditation committees. Similarly, no performance indicators were in use in terms of evaluation of teaching. For instance, the legislation did not require student opinions to be canvassed on lecturers in the procedures for the evaluation of academic staff. There were no bodies that would gather and disseminate information about the quality and performance of higher education institutions, or as about the marketing activities of institutions, whether they reflected reality or not.

There were several reasons for the absence of accountability procedures in higher education at the beginning of the 1990s. Let us analyze the reasons why the new legislation moved away or did not regulate the accountability procedures and principles for higher education.

After the “iron curtain” was removed, government and academic staff had insisted on a high degree of institutional autonomy. Autonomy that was a liberalization of academic structures was a part of wider liberalization movements in political and economic structures. In the early 1990s, autonomy was initially seen largely in terms of a complete absence of state power. Peter Scott, who at that time was a participant in three seminars involving American college presidents and European rectors both from Eastern and Western Europe,

observed: “The Central and Eastern European participants insisted on a ringing restatement of this idea [of the liberal university] in purest, even absolutist, terms. The need, as the Eastern European saw it, was to re-establish free universities – like parliaments and free courts.... In many debates during the Dialogue, its Central and Eastern European members seized the high moral ground, while their western European and American colleagues were prepared to settle for the life of the ‘market and state accountability’ (Scott 1993).

The reasons for this orientation are easy to understand. An important reason was the trend that may be called the ‘lure of the west’. Central European countries undertaking the reform of higher education often emphasized the importance of Western European and American models in inspiring and in shaping the reconstruction of higher education. The reasons are that during the communist period, the West was perceived as a better world, and all the opponents of the communist regime focused their hopes on the West. The West provided examples of free institutions, including, of course, universities. So it was equally natural that these institutions would provide templates for the reform of totalitarian structures of higher education inherited from the communist period. The Western model was necessary for the functioning of business schools, because they did not exist before 1989. The Higher Education Institutions also wanted to re-link Central and Eastern European education with the Western system. However, this implementation of West and its liberal ideology has encountered certain difficulties. Scott (2000) points out the following reasons for that:

First, there were several models of higher education in Western countries and many different types of institutions, and the models of Western higher education were highly volatile, with many significant reforms occurring during the 1990s.

Second, when higher education institutions went deeper into institutional reform, it became clear that not everything that was ‘imported’ was so clear and simple. The subordination of Western higher education to political authority, in terms of administrative structure, funding regimes, quality assurance, accountability to public opinion, exposure to market forces, on the whole, the growing engagement with society – these characteristics were unnoticed at first. “In Western systems, the employment of intermediary bodies to evaluate the efficiency and quality of work at higher education institutions is one of the features which correlates highly with the easing of state control” argues Sorensen (1997). Moreover, the tendency to place representatives of industry or society at large in intermediary evaluative bodies is seen to be a part of the drive to the market in Western systems.

Third was the scale and complexity of the restructuring of higher education systems in Central and Eastern Europe (Aaviksoo, 1997). Higher education was reconstructed on a scale and at a speed never experienced in Western countries.

Adjustment, which in Western societies required a whole generation, had to be accomplished within two or three years. For the post-socialist countries the reconstruction task was phenomenal. Not only the legal framework had to be entirely rewritten but also the fundamental mission of higher education institutions needed to be reconsidered. In summary, the starting position for restructuring operation was different than that experienced in the West.

Fourth and finally, the total regulation and monitoring of teaching and research activity of higher education for more than forty years under the socialist regime had engendered in the academic community a supreme distrust of external control. Distrust as such was not totally absent in the West, but the context of the abolition of state control there has not been the same in Poland. Again, it must be noted that the implementation of new higher education policy, which brought greater autonomy to institutions, was undertaken at a time of massive political, economic and social transformation, driven by a desire to reverse the perceived evils of the past regime, while at the same time it had to provide the means to achieve this goal.

Therefore, the restructuring of academic structures in Poland undertaken in the immediate aftermath of the collapse of communism was inspired by examples from the West and has taken a form of 'liberal absolutism'. The reforms resulted in a system where the government has legal authority to intervene in a number of aspects of university management but the extent to which government actually exercised influence in these aspects was limited.

To summarize, despite allowing private providers to enter the market and devolving authority at the institutional level, we can conclude that Poland was still a far cry from having a competitive higher education market, because of the absence of many crucial conditions for a free market, as summarized above. In the case of the private sector, higher education policy affecting private providers was best characterized as a *laissez-faire* posture according to Zumeta's typology. This means that the state to a large extent chose to leave the private sector to its own devices. It implied that there were no direct state appropriations for recognized private higher education institutions, no tax incentives or deductions for students in the private sector, and no state financial support for students in the private sector. The private sector was not much incorporated in state-wide higher education planning, and the state collected and provided only limited information about the performance of private as well as public providers.

10.2 Changes in the years 1997 – 2004

In this sub-chapter we analyze the changes in the higher education institutional framework during the second stage of reforms, that is from 1997 to 2004. The

analysis will answer our research question: to what degree does the higher education framework meet the conditions identified in our study as the most important for having a competitive higher education market during the second phase of transformation process?

10.2.1 The higher education law

The change in the legal framework after 1997 was provided by the following legislation:

- The Vocational Higher Education Schools Act of 26 June 1997.
- The Act on State Accreditation Commission of 20 July 2001.

The most important change in the higher education institutional framework was the new vocational higher education Act that passed through parliament in 1997. The Act regulates the establishment and the functioning of private and public vocational higher education institutions. The essential points of the new Act decreased the requirements in order to open the vocational higher education institution, in terms of the lower number of high ranked academics required.

Second most important change in higher education institutional arrangements was the foundation of the State Accreditation Commission (PKA), a independent body whose main purpose is to evaluate the quality of study programs for both public and private providers.

Of the five dimensions of marketization policy identified in the theoretical part of this study and later analyzed in Polish higher education institutions, those two acts covered the issues that related to the barriers to entry and the information about the higher education institutions. As other dimensions of institutional arrangements remained unchanged and were regulated by the Acts from the beginning of the 1990s, this section will focus only on those two issues.

10.2.2 Barriers to entry

To increase the number of public higher education institutions – especially those located in small cities – and to expand the free tuition student places in full-time study programs, the government passed the Vocational Higher Education Schools Act in 1997. Under the new regulations it was much easier to open a new public higher education institution, as well as a private one. The standards for the bachelor's level programs were less demanding than for higher education institutions operating under the 1990 Higher Education Act – for example, only two professors, and in some cases only one, are necessary for one study program. New public institutions established after 1997 are registered as vocational higher education schools and can offer only bachelors and engineering degree programs,

and they cannot apply for master's level courses. Those graduating from these schools may continue their studies in university-type institutions and subsequently obtain the title of master.

New private institutions, established after 1997, are registered as well as new public institutions as vocational higher education schools and can offer only bachelor's degree programs. However, in contrast to public vocational higher education institutions, private ones can offer master's degrees, although in order to do so they must first change their status and operate under the 1990 Higher Education Act. For this reason, the newest private higher education institutions have the status of vocational institutions, while the private higher education institutions that had been registered before the 1997 Act are governed by the earlier 1990 Higher Education Act. However, those privates established before 1997 that offered only bachelor degree programs had three years to acquire the rights to also offer postgraduate courses and confer master diplomas in at least one field of study. If they failed their status was automatically changed into that of vocational higher education schools, and they were governed by the 1997 Act.

The new 1997 Vocational Higher Education Act provided two most important changes compared to the 1990 Act, with regard to number of high ranked academics required to open the study program and the organization of studies.

First, the organization of study was changed with regard to study lines and specialities. Higher education institutions ruled by the 1990 Act enrolled students for study lines, such as management and marketing, economics, pedagogy, etc. Later on during the studies, students could choose various specializations within one study line. It was the higher education institutions themselves that decided what specializations would be made available and provided to students. However, the name of the specialization could be the same as any of study lines. For instance, institutions could not offer one management and marketing study line specializations called economics, finance and banking, and international trade relations, as such study lines already existed. Instead, they could offer specializations in management in service, marketing in media, etc. According to the 1997 act, new vocational schools enrol students either into specializations or study lines. The Ministry provided a list of available specializations that can be offered by vocational schools. Therefore, the graduates enrolled into specialities receive the bachelor degree in a particular speciality, in contrast to institutions ruled by the 1990 Act, whose graduates receive the bachelor or master degree in the study line. Yet, if a vocational higher education institution decided to provide the study lines instead of specialities, then its graduates received their degree in the study line. Of course, all vocational school graduates can continue their education in postgraduate courses leading to a master degree in a particular study line.

Second, the Act decreased the minimum number of professors that have to be full-time employed in order to acquire permission to open a new vocational higher education institution. The minimum number of professors varied according to the number of specializations or study lines offered by a particular school. The regulations were complex, depending on the number of study lines and specializations provided in a school.

As such, if the vocational school offered one study line, then it was necessary to employ four professors, two of whom must be in full-time employment. In addition, eight PhD holders must have full-time appointment. On the other hand, if the school developed more study lines then it had to appoint three professors, two of them full-time, and only six PhD holders for each study line. As the vocational school offered only one specialization, it has to employ three professors, two of them full-time, and six PhDs. The lowest number of high ranked academics had to be employed in the institutions that offer more specializations. These providers were obliged to employ two professors, only one being full-time, and four PhD holders for each specialization, which is significantly fewer than under the regulations of 1990, as institutions ruled by 1990 Act in order to offer a bachelor degree program had to employ four full-time professors.

The new regulations also stated that academics working full-time in private higher education institutions cannot be included in the minimum staff requirements in state vocational higher education institutions, but those working full-time in other public higher education institution can be included.

The new vocational higher education institutions were established by the Act of parliament and were funded from the Ministry using the same formula that took into account the number of students and academics, as in other public higher education institutions. However, the local governments were allowed to donate funds to those schools as well as to make endowments in the form of plant and buildings. Nevertheless, it is important to emphasize that because of the relatively small number of high ranked academics employed in state vocational schools, as the academic staff minima were low, and the relatively small number of students enrolled, these state vocational schools received much less state funding than institutions ruled by the 1990 Act. Therefore, we may argue that the new Act made it much easier to establish a new public higher education institution, partly because of the lower number of high ranked academics required, which in turn entailed less state money provided to the institution.

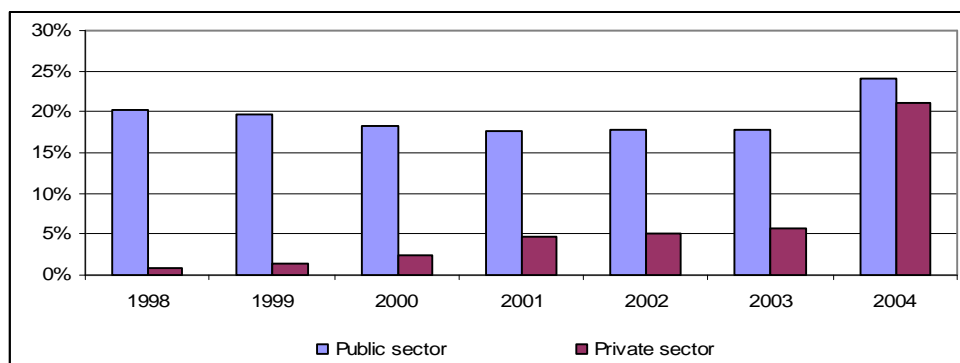
The next important aspect of state policy in terms of barriers to entry refers to the eligibility of students enrolled in private higher education institutions to receive state aid. As was stated, students from the private sector were excluded from state financial support during the first period analyzed. However, the situation

has changed in favour of students enrolled in private higher education institutions as in 2001 full-time students and in 2004 part-time students enrolled in the private sector were made eligible for state financial support.

In the academic year 2001/02, students from the lowest category of family income per capita, enrolled in full-time study programs in private institutions, became eligible for state means-tested and merit-based scholarships. Further, beginning with the academic year 2004/05, all students attending public and private higher education institutions are entitled to receive state means-tested and merit-based scholarships, which meant the program of state scholarships was extended to part-time students in both the private and public sectors.

Means-tested scholarships are provided by the Ministry of Education. Students from all types of delivery and study programs are eligible for these scholarships. The same fund disburses additional premiums to the scholarship to cover additional payments for disability, and partial reimbursement of accommodation costs. The basic criterion here is monthly income per capita in the family. By the academic year 2004/2005 it was the higher education institutions that set the maximum level of family income per capita below which students were eligible for means-based scholarships. From this year the government set the same level for all higher education institutions.

Figure 10.1: Percentages of students receiving some form of scholarships in public and private sector



Source: Own analysis based on National Yearbooks for Higher Education (1998 – 2005)

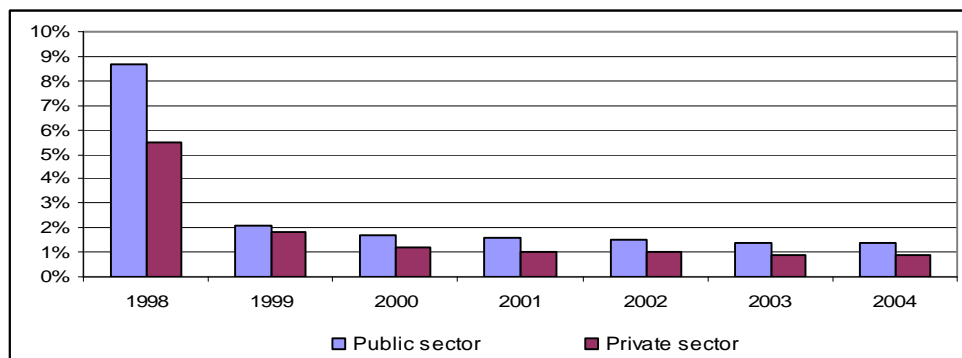
Analogously to previous years, the share of students in public institutions receiving some form of scholarship declined up to the year 2004. However, in 2004 when the part-time students became eligible for state support on the same basis as full-time ones the share of students receiving some form of state support increased significantly to 24 percent. As most students in the private sector were enrolled on a part-time basis, the new law that made them eligible for state

support in 2004 increased the share of students receiving scholarships from 6 to almost 22 percent.

In 1998, the Act on Student Loans expanded the system of state aid by making students from both public and private higher education, attending both full-time as well as part-time studies, eligible for state subsidized loans. In this Preferential Credit Program, students with a low family income are eligible for a government-subsidized credit from commercial banks. Students can borrow about 120 Euro for ten months of each year during their studies, but not for more than six years. After graduating they have to pay back the loan, but the interest is paid by the state. Moreover, students start to pay back the credit only after they find a job. However, all students must provide collateral, which is very difficult for poor students. For this reason the Preferential Credit Program is not working as planned. While the program seemed to be operating satisfactorily in the academic year 1998/99, it is not strange that the percentage of students that take up a loan has declined further to an almost negligible number (see figures below).

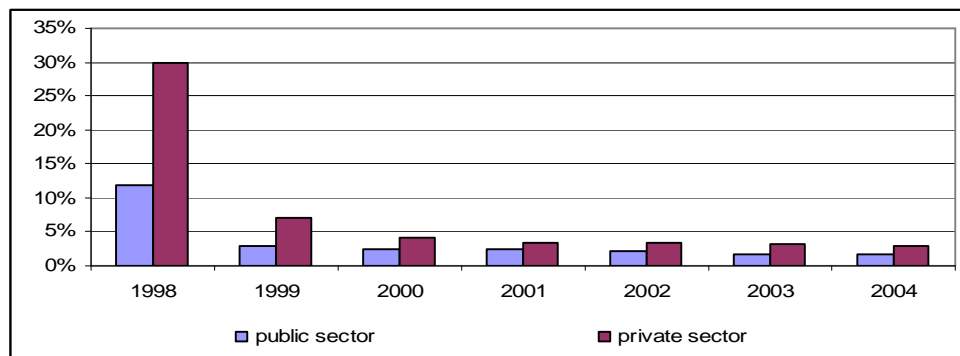
Looking at the figure below, we can see that a much higher share of students in the private sector took up subsidized loans than those in the public sector. As the basic criterion is monthly income per capita in the student's family, this indicates that there were more students enrolled in the private sector from lower socio-economic classes and poorer families than in public institutions. To summarize, by making students in the private sector eligible for state scholarships on the same terms as those in the public sector, as well as for state subsidized credits, the next important dimension of marketization policy was fulfilled in the Polish higher education institutional framework.

Figure 10.2: Credits granted in the years 1998 – 2004 as a percentage of the total number of students



Source: Own analysis based on National Yearbooks for Higher Education (1998 – 2005)

Figure 10.3: Percentages of students taking up loans in public and private sector



Source: Own analysis based on National Yearbooks for Higher Education (1998 – 2005)

10.2.3 Information issues

As has already been emphasized, at the beginning of the 1990s the changes in the higher education institutional arrangements were not accompanied by adequate accountability procedures, especially in terms of quality assurance, as there was no accreditation body whose main goal was to evaluate the quality of education delivered in higher education institutions.

Moreover, in common with other countries that have experienced the rapid mass extension of higher education, Poland had suffered from some unfavourable outcomes, in particular in terms of quality dilution. Among policymakers and academics (World Bank, 2004) there was a general perception that insufficient state funds for public higher education institutions, deteriorating infrastructure and insufficient investment in equipment and laboratories, together with a rapid increase in student numbers and a small number of high ranked academics have had negative implications for the provision of education in state higher education institutions. The same claims were made for private higher education, with their student expansion and insufficient number of academic teachers.

There were cases where private institutions (as well as public ones), after meeting the state requirements for registering, did not employ the minimum number of professors, shortened their curricula or made it possible for some students to obtain a degree in a shorter period than required by the state.

For these reasons, questions related to quality control highlighted the need for new accreditation bodies in order to eliminate inappropriate performance among private and public higher education institutions. Therefore, in 2001, the State Accreditation Commission (PKA) was founded, a fully independent body that took over the responsibility from the General Council for Higher Education, and

whose main purpose is to evaluate the quality of study programs for both public and private providers. Since then, the Commission has had the statutory responsibility to ensure the quality of study programs offered in all higher education institutions. To do this, the body systematically evaluates quality and verifies compliance with requirements for degree programs. In addition, the Commission has a decisive voice in approving new bachelor and master degree courses, as well as the opening of new higher education institution. Thus, accreditation in Poland is now compulsory as, once selected for evaluation by PKA, no higher education institution can refuse.

The term of office of the State Accreditation Commission is three years, commencing on 1 January. The Committee's organization and procedures, as well as the detailed remits of its bodies, are defined in the Statute passed on 11 January 2002. The Commission consists of ten sections for different disciplines, such as economics, humanities, agriculture, etc. The members of the sections are freely elected from the high ranked academics employed in both public and private higher education institutions.

Higher education institutions are informed in advance that they are to be inspected for particular degree course and are requested to prepare a self-evaluation report for that particular course. Three members of the Commission then visit the institution and faculty. The visit lasts three days, and within that time the members try to talk to the greatest possible numbers of the institution's employees and students. The Commission also inspects the academics' employment contracts and verifies the content of bachelor and master degree theses. The PKA team drafts a preliminary report, which is first made available to the higher education institution, which has a right to respond. This response is further sent to the appropriate section, which in turn on the basis of available documents, the preliminary draft and institution's response, prepares the proposal of ratings applied for the degree course, which is voted on by the Presidium of the Commission. The Presidium is composed of the President, the Secretary and 10 section chairs. Section chairs are elected from among the section members.

The following ratings are applied by the State Accreditation Commission when evaluating the quality of teaching: (1) outstanding – next evaluation is conducted after 5 years unless there are valid reasons to conduct a re-evaluation at an earlier date; (2) positive – next evaluation is conducted after 5 years unless there are valid reasons to conduct a re-evaluation at an earlier date; (3) conditional approval – in this case, the Presidium resolution includes relevant recommendations and deadlines for implementing those recommendations and possibility of conducting another visit. Usually the faculty has one year to implement the recommendations, and the degree course is evaluated again. If all recommendations are implemented the PKA awards the positive grade, in other

case the negative one; and (4) negative – revoking or suspending the licence to offer a specified degree program at a level specified by the Minister for Higher Education. In reality, if higher education institutions receive a negative rating, a Minister of Education can dissolve the unsatisfactory degree course, transfer students to another institution and prohibit further enrolment of students into that course.

By the end of 2004, the Commission had evaluated over 800 degree courses in almost all higher education institutions, of which about 210 were conducted in private higher education institutions and about 600 in public ones. Twenty institutions earned an outstanding rating, only one of which was private – Kozminski Academy of Entrepreneurship in Warsaw. A negative grade was given to 39, 14 of which are absolute and the courses were terminated, while the rest are still defending themselves. Among those 39 negatively evaluated courses 20 were in private institutions and 19 in public ones, and 7 were closed in both in privates and publics. A conditional grade had been given to 167 courses, after which a positive grade in the re-evaluation had been given to 91; the rest will be evaluated again in order to decide whether to give a negative rating and close the program or to give a positive grading. Among those 167 conditionally evaluated courses, 54 were in privates and 112 in publics. The rest, numbering 580 evaluated courses, received a positive grading.

It is important to note that information about the courses evaluated is made available on the Commission's website; moreover, it is also duty of higher education institutions to inform their students and candidates about the outcomes of evaluation process. For these reasons, the information about the quality of study programs is easily accessible by students, academics and other interested stakeholders in higher education.

Thus, it is safe to conclude that the Polish government has taken serious steps towards the establishment of a comprehensive quality accreditation system. Since the evaluation of study programs is compulsory, no higher education institution can evade the quality requirements without the fear of sanctions. As we have agreed that increased institutional autonomy presupposes, to some extent, the existence of some accountability procedures in market-type higher education policy, this means that since the establishment of the State Accreditation Commission in 2001, the Polish higher education institutional framework has meet the next important condition for a competitive higher education market.

10.3 Summary – institutional arrangements in the years 1990 - 2004

This chapter provided the answer to our research question, in terms of meeting the conditions for a competitive higher education system in Poland after the

changes in 1989. It is important to note that this question is not a yes or no question. Here, the extent is most important. Let us summarize the extent of introduction of market type elements into the Polish higher education system.

Following our framework of the analysis of the introduction of market elements into the higher education market, one can conclude that during the second phase of the transformation process, two important principles have been to some extent further fulfilled of the five general market elements identified: adequate information about performance of higher education institutions and accountability procedures, and eligibility for state scholarships of students in the private sector and part-time students in public higher education institutions.

In general, we may safely argue that some steps have been achieved since the beginning of the 1990s to move the Polish higher education institutional arrangements towards a more competitive system, with the same rules for private and public higher education institutions. In the course of the transformation process there has been a gradual shift in the priorities for reform. At the outset the main task for policymakers and to a great extent for academics was to focus on devolving greater autonomy to the institutional level after decades of strict government control, and – even more important – to satisfy the rapid increase in student demand for higher education. To that end, the government eliminated the barriers to entry for new private providers and devolved great authority to institutions, especially to elected bodies within the institutions. However, by the late 1990s, the rapid increase in the number of new private higher education institutions and students in the private sector, as well as the rapid increase in part-time enrolment in public higher education institutions, had lead to a greater preoccupation with quality and equity issues. In order to ensure the proper quality of the education provided, the State Accreditation Commission was established, the main purpose of which was to evaluate the quality of teaching in all higher education institutions and disseminate information about the outcomes of the evaluation process to students and other higher education stakeholders. In terms of equity, the government decided to make fee-paying students both in private and public sector eligible for state means- and merit-based scholarships.

It must be noted, however, that despite these changes during the period analyzed, i.e., from 1990 to 2004, there was no truly competitive higher education market in Poland with the same government regulations for private and public higher education institutions and students enrolled in those courses. The most important missing element of marketization policy identified in our theoretical considerations, was the absence of state subsidies for recognized and accredited private higher education institutions. Because of that, public institutions still had an advantage in terms of free-tuition, full-time study courses, while in private

institutions all students had to pay fees. On the other hand, the eligibility of students in the private sector for state scholarships was a step towards the market-type system of higher education in Poland.

To summarize, one can state that during the period analyzed, the extent to which the conditions for a competitive higher education system have been met in Poland has gradually increased; from eliminating barriers to entry for private higher education providers, and devolving autonomy at the institutional level, by increasing the information available to students, and finally to eligibility of students in the private sector for state financial support.

11 Changes in the supply and demand conditions for higher education: industry analysis in the years 1990 – 2004

As the conceptual approach of the study focuses on the links and interactions between external conditions, institutional arrangements, and the performance of higher education institutions, in this section we analyze the changes in the external conditions affecting Polish higher education. First we shall look at the new external environment for higher education at the beginning of the 1990s, i.e., during the first period analyzed. Later on, the analysis goes on to cover the changes from 1997 to 2004. Following the list provided in the theoretical chapter (see section 3.6.1), the analysis covers the following issues: overall economic situation, demography, threat of substitutes, academics' power, and degree of rivalry.

11.1 Changes in the economic environment

The crucial external demand condition for higher education is the economic, social and cultural environment. The economic environment is very important for the development of higher education, as to a large extent it determines the capacity and the absorptive power of the markets for higher education graduates. It is thus the economic conditions that influence the demand for higher education, such as employment options and conditions for graduates, the amount of state funding provided to higher education, tax exemptions, family incomes and expenses, availability of credits, the structure of the industry and the employment markets. All these conditions directly or indirectly have an impact on the development of higher education, affecting such issues as the amount of state money received by the institutions, the level of tuition fees charged, the study courses offered and their modes and types of delivery.

11.1.1 Changes in the economic environment in the years 1990 – 1997

Since the turning point in 1989, Poland has undergone great political, social and economic changes. However, during the first period of transformation the Polish economy was still in an awful state, with inflation approaching 600 percent and soaring unemployment; radical reform was selected as the only solution to save it. In January 1990, state-controlled prices were lifted and from then on were largely shaped by market forces. The market reform plan assumed that prices would rise on average by 50%. In fact, they rose at the time by 78% and some

goods and services even by as much as 600%. But this was a first step towards prices as they operate in developed capitalist economies. Furthermore, demand and supply forces were again activated. There was also a revolution in the liberalization of international trade. The Polish currency, the zloty, became convertible to other currencies and internal convertibility was also established, providing another platform for dynamic economic growth. New markets in countries that had been treated not so long before as ideological as well as economic enemies were opened up to Polish companies. The so-called Balcerowicz Plan (after its author, who was Finance Minister in the early 1990s) liberalized domestic prices and led to rising imports, a tightening of enterprises' pay structures and financial policy in relation to enterprises, the introduction of interest rates above the rate of inflation, the stabilization of the zloty against the dollar and the introduction of zloty exchangeability. The Polish economy stabilized and opened up to the world. But liberalization and stabilization would not have brought any long-term effects, nor an efficient market system, if it were not for structural reforms. Banking and lending policies were reformed, while newly reshaped ownership relations, independent enterprises and strengthened domestic competition all had massive impacts. Capital and labour markets also started to operate in Poland. Simultaneously, the introduction of democratic structures, the shift from a command economy to the free market, and wide-ranging systemic reforms allowed Poland to start to catch up with the developed countries in terms of standard of living, consumer goods availability, new technologies etc.

Employment and education

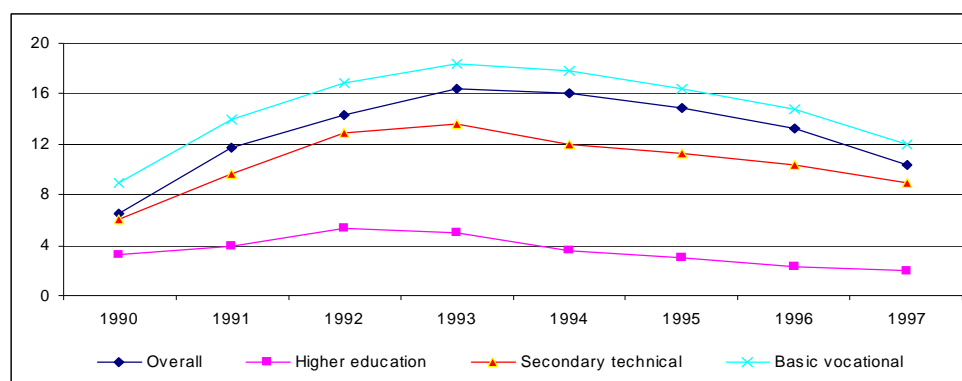
Yet the profound structural reforms brought significant changes within the employment market and paved the way for higher education to become one of the most, if not the most important condition affecting employment. As already described, prior to 1989 the economic environment did not encourage young people to continue their education and acquire higher education degrees. Socialist ideology tended to overvalue social groups like workers and peasants and undervalue the intellectuals. The salary structure was deformed compared to the developed countries, where higher education graduates usually earned more than employees without higher education. In Poland and in most former socialist countries the relative salary scale was upside down, with qualified workers earning less than unqualified ones. In addition, there was no official unemployment in the socialist economies. The state was responsible for finding employment for all its citizens, regardless of their skills and qualifications, so there were no differences in unemployment rates as between graduates and non-graduates; the levels of salaries among various types of jobs were similar as well.

The introduction of capitalist ideology into the economy changed and reversed that situation. Following the collapse of socialist rules, a process of building a market economy began which resulted in far-reaching transformations both in the

socio-economic and socio-vocational structure. First of all, the level of educational attainment was considered important in this setting as it seemed to determine the level of unemployment (see figure 11.1). The latter was at 6.5 percent in the end of 1990, rose to 14.3 percent in 1992, only to grow further to 16.4 percent in 1993. Since that year the overall unemployment rate fell to 10.3 in 1997. However, among those with university level education it stayed markedly lower at 5 percent or even lower. Prior to 1990, unemployment officially did not exist, so there were no official statistical data reflecting it.

In general, we may see the huge disparity between the unemployment rates of higher education graduates and their peers who did not graduate and finished their education at lower levels. The worst situation was among graduates of basic vocational schools, with unemployment reaching almost 19 percent in 1993, falling to 12 percent in 1997. In addition, the differences between the higher education graduates' income and income received by employees without a higher education degree also increased during the first years of the transformation period.

Figure 11.1: Unemployment rates at various educational levels (in %)



Source: Own analysis based on Statistical Yearbook of the Republic of Poland (1990 – 1997)

During the socialist period, primary school and vocational secondary school graduates received higher incomes than employees with higher education. At the beginning of the transformation process, the relation between the education and the salaries reversed compared to the socialist era. Research conducted in 1999 (Kudrycka, Radziukiewicz; 1999) revealed large disparities between employees with higher education degrees and other educational groups. Table 11.1 provides data about the average and median levels of income for families with different educational achievements. There is an evident relationship between the average income and educational achievements, which keep growing with higher levels of education. In all years included in the research, the average income per capita in

families in which the working members received higher education was more than double that in families with primary education and, more importantly, accounted for more than 150 % of average income per capita in families with secondary school education. In 1997 the difference between the highest and lowest educational group was greatest, reaching 2.34. The differences in average income per capita between the families with secondary school graduates and those who finished their education in vocational secondary school without the maturity exam ranged from 1.29 in 1994 to 1.31 in 1997.

The other research on the disparities within the salary structure in Poland also clearly indicated that during this period there was a significant increase in the differentiation of salaries, and that the level of education played the most important role. According to the research conducted by Jacukowicz (2000) in the 1990s among employees with the highest salaries – in the highest quintal group – higher education graduates accounted for more than 40 percent, whereas the number of primary school graduates did not exceed 3 percent. By contrast, among the employees with lowest salaries there was an insignificant share of higher education graduates. Following Jacukowicz (2000), in the 1990s we were witnessing the incremental increase in a differentiation of income depending on the educational achievements, while in 1992 the additional year of education was reflected in an average 6 percent higher future salary, whereas in 1998 the ratio increased to 8 percent.

In general, the research confirms the assumptions that, in a market economy, education, in particular higher education, affords greater opportunities to find a well-paid job. It is worth noting that the most significant difference in the average and median income was observed between the higher education graduates and secondary school graduates. Therefore, one can state that the salary premium of higher education, or education at all, was significant in the new economic environment.

Table 11.1: Per capita income distribution structure in families according to the educational achievements (Polish zlotys)

Educational achievements	1994		1995		1996		1997	
	average	median	average	median	average	median	average	median
Higher education	413	333	532	431	720	567	927	701
Secondary with maturity exam	277	232	356	305	474	386	582	483
Vocational without maturity exam	214	186	275	241	358	306	426	369
Primary	194	172	255	226	325	285	395	344
Average income	274	-	354	-	396	-	582	-

Source: I. Kudrycka, M. Radziukiewicz, (1999) Wykształcenie jako czynnik różnicujący dochody,

Similar conclusions were drawn in the research on the value of human capital on the employment market in Poland after the 1990, conducted by the Ministry of Economics Affairs and Employment in 2005. They discovered that the employees with higher education degrees were much less exposed to the risk of being laid off than employees with lower educational achievements, and on the other hand, in case of unemployment higher education graduates had more chances of finding a job. Moreover, the differences between the various educational levels were the strongest and most visible between the higher education graduates and secondary education graduates, which means that investment in higher education provides the highest marginal value and the highest rate of return, which in general reflects the relatively better situation of higher education graduates on employment market. What is more, the same research also indicates that the employees with higher education degrees are the only group in which average salaries are much higher than the average salaries for the whole economy. Based on the Ministry of Economics Affairs and Employment statistics we may argue that in the 1990s higher education graduates were commonly employed as specialists, managers, directors, teachers, and in public administration. In other occupations their number did not exceed 20 percent. The last research finding which is of interest shows a very interesting relationship between income and education; the first obvious relationship relates to the fact that higher education graduates earn much more than employees without higher education when the former are employed in posts that require higher qualifications and skills; but even more thought-provoking and in favour of higher education is the fact that when higher education graduates take posts that do not require advanced qualifications they still earn more than employees without higher education who take the same posts.

Why, in a few years' time, did the employment and income prospects change so favourably for higher education graduates? There are several reasons: the change in the structure of the Polish economy reflected first of all in the increase of service and trade sectors with a high demand for skilled and qualified employees, while employment in the production and agriculture sectors were downsizing, highest levels of unemployment occurring in the former. Some industries almost totally declined or shrunk in the first years of the transformation process, including textile, mining, and metallurgy industries, where the majority of employees were not very well educated. Secondly, in most branches of the economy new technologies were incrementally but gradually implemented, which increased the demand for highly qualified specialists and technicians. An important and significant reason for the better position of higher education graduates was also the emergence of private sector and foreign investments. According to the data from the Main Statistical Office and Ministry of Economic Affairs and Employment, the higher education graduates' salaries in the foreign companies were the highest among all groups, and the great majority of people employed there had higher education degrees.

To summarize, during the first stage of the transformation process – i.e. from 1990 to 1997, which is the period analyzed in the first part of the empirical chapter – we can distinguish two economic periods in Poland. The first one, from 1990 to 1993, was characterized as a stagnation period with a decrease in gross domestic product, increasing unemployment rates, soaring inflation and a general decrease in the average available income of household budgets. The second period, from 1994 to 1997, was characterized by significant growth of the economy. The GDP increase accounted for 5 to 6 percent per annum, unemployment fell to 11 percent, and the average household income grew. In both periods the employment situation of higher education graduates was more favourable than other groups. Apart from the changes in the economic structure, which increased the demand for highly qualified employees, the characteristics of higher education graduates fit better into the rapidly changing environment. Graduates are more mobile and flexible and thus can more easily upgrade their qualifications when needed. People with lower education achievements have less fewer possible choices of occupations, whereas those with higher education have more diversified choice. As the Ministry report indicates, fewer educated people often work in the unofficial sector, because the minimum salary level guaranteed by legislation seems to be too high, which often forces employers to offer poorly qualified employees unofficial jobs for lower salaries than the minimum salary required by the state. All these factors led in the 1990s to a situation in which higher education became the precondition for having a relatively stable, well paid job.

Although there are no precise data on the unemployment rates of graduates in particular study fields in the 1990s, we may assume, based on the reports and statistical data cited above, that in the first years of transformation the capacity and the absorptive power of the new economy was remarkable and in fact unusual, because of the lack of higher education specialists in almost all branches of the economy. However, the most valued graduates were those from all kinds of study lines which provided the specialists for service and trade sectors, such as management and marketing, economy, finance and banking, accountancy, foreign relations, and tourism, since those branches recorded the highest rate of growth in terms of the number of new companies and employment. Compared to the developed economies, the structure of the Polish economy in the 1990s was still lagging in terms of the structure of GDP and employment, but in 1998 the trade and services sectors exceeded 50 percent of GDP, while the industrial sector accounted for about 40 percent, with the agricultural sector making up 10 percent. Within the services sector, marketed services have grown especially rapidly, particularly business services and real estate, which accounted for 11% of GDP in 1998 (GUS, 1999). In this respect, Poland has adapted quickly to the pattern of activity found in developed market economies. The employment structure did not look so optimistic, with more than 30 percent employed in the agricultural sector, compared to 5-6 percent in the European Union in 1998.

Economic situation and its impact on higher education budgets

Economic development also has an impact on the state financial subsidies allocated to higher education as well as on the available household budgets, which in turn determine the families' level of investments in higher education. Thus, for both public and private higher education sectors the economic situation to some extent determines the level of revenues.

As already indicated, the overall economic situation in Poland worsened in the first few years after the introduction of new policy. The series of reforms, which included closing down the unprofitable public companies and introducing market mechanisms into the public sector, cuts in social and administrative spending, and the state's withdrawal from many branches of the economy, resulted in a drop in state revenue and the national GDP, as well as in average real wages and salaries. In 1990 the average disposable income fell by more than 15 percent compared to the previous year, and was still decreasing in the following two years. Since 1993 the average disposable income has begun to rise, but the level of 1989 was not achieved until 1997. Similar trends included the drop in the real wages and salaries, with a reduction of more than 25 percent in 1990.

However, in a few years' time, the package of reforms gave rise to positive structural changes in economy. This included, most importantly, the rapid rise of private business, the inflow of foreign investments in various forms, the restructuring of foreign trade, the bulk of which is now with Western economies, in contrast to the predominant importance of Eastern Europe under socialism, the emergence of a modern banking system, and the restructuring and privatization of state-owned enterprises, although the process encountered some difficulties and is still far from complete today. The achievements of the transformation were quite remarkable. Poland experienced the smallest output decline among post-socialist countries (although GDP fell by 11 and 7 percent in 1990 and 1991, respectively) and was the first to return to economic growth, as GDP rose by an average of 5 – 7 percent in the years 1994 to 1997 (see table 11.2). Similarly, the available household budgets and average salaries rose relatively rapidly in those years.

In the 1990s there was a sharp decline in household consumption, yet, even as early as 1993, overall private consumption started to grow to achieve 4.1 percent growth, exceeding the 1989 level in 1994. The situation in public finances has also improved with a positive balance of payments. In general, one can state that Poland in the years 1994 to 1997 has experienced a period of economic prosperity, reflected in the increase in the general standard of living.

Table 11.2: Key Polish economic statistics in 1990 – 1997

	1990	1991	1992	1993	1994	1995	1996	1997
Inflation rate	585,8	70,3	43	35,3	32,2	27,8	19,9	14,9
GDP growth (in real prices)	-11,6	-7	2,6	3,8	5,2	7	6	6,8
GDP compared to 1989; 1989 = 100	88,4	82,2	84,3	87,6	92,1	98,6	104,5	111,6
Public sector balance; (% of GDP)	3,2	-2,3	-5,3	-2,8	-2,8	-2,6	-3,1	-2,9
Public sector revenues; (% of GDP)	45,4	42,9	44,7	47,1	44,4	43,6	43,0	42,3
Public sector expenditures; (% of GDP)	42,1	45,3	50,0	49,9	47,2	46,1	46,1	45,2
Balance of payments; % of GDP	n.a.	-3,4	-1,8	-3,3	0,7	4,2	-1,0	-3,0

Source: Own analysis based on Statistical Yearbook of the Republic of Poland (1990 – 1997)

When analyzing the economic situation of the families, it is important to note the increasing differences in the standard of living among various social and economic groups and within regions. The most significant drop in the households' budgets was recorded within agricultural families and those families whose working members were employed in the production sectors, except the mining and energy industries, where average salaries were higher than in the economy as a whole. Those employed in the service industries, particularly in the finance and transportation branches as well as in public administration, went through the transformation process more smoothly with levels of income and consumption above the average for the whole economy. As described in the previous section, significant variations in income levels were also recorded according to educational levels, with substantially higher salaries for higher education graduates, and the lowest for primary school graduates.

The first table below shows the changes in the average available income per capita since 1989, whereas the second one analyzes the differences in average income between the various economic groups, in relation to the average income for whole economy.

Table 11.3: Changes in the average available income per capita in years 1990 to 1997

	1990	1991	1992	1993	1994	1995	1996	1997
Compared to previous year in %	-15,4	-2,2	-1,2	1,2	4,6	6,8	5,1	6,9
Compared to 1989 in %	-15,4	-17,3	-18,3	-17,4	-13,6	-7,7	-2,9	3,8

Source: Statistical Yearbook of the Republic of Poland (1990 – 1997)

According to research conducted in 1995 by the Polish opinion poll company (OBOP, 1995), on the economic situation of Polish families in the years 1992 – 1995, the overall picture was relatively positive, in terms of the increase in the number of families which perceived their financial situation as favourable and foresaw possibilities of further improvement. The variations in the perceptions of their own economic situation were in accordance with the situation in the labour market. The groups that perceived themselves as being in a most favourable position were owners of private companies, employees in service and trade sectors, especially in the private sector, and public administration employees. By contrast, the unemployed, manual workers and farmers perceived their situation as negative.

Table 11.4: Average income in various industries, in relation to the average income for economy

Branch of industry;	1991	1992	1993	1994	1995	1996	1997
Agriculture	-18,1	-17,3	-17,5	-17,7	-10,1	-9,1	-8,4
Mining	63	64,2	74,8	99	90,1	83,2	80,1
production industries (except mining)	-8,3	-7,8	-7,3	-5,7	-4,7	-4,9	-4,6
Transportation	4,3	4,8	5,9	6,3	5,6	6,4	6,5
finance and banking	44,1	49,7	49,6	46	42,1	46,8	49,1
other services industries	12,1	12,2	9,3	7,9	5,7	7,6	8,7
public administration and military	27,6	27,4	26	21,5	23,2	24,9	27,7
Education	-10,9	-10,8	-10,3	-12,8	-9,7	-7,5	-7,3

Source: Statistical Yearbook of the Republic of Poland (1990 – 1997)

Private expenditures on higher education

However, when analyzing the structure of expenditures of the average Polish family we can see that the average standard of living of Polish families was still lagging behind that of Western developed economies. The structure of expenditures compared to the developed economies was characterized by a significant share of expenditure on food and house maintenance. The biggest share of expenditure went on food (almost 40 %), and for house maintenance (more than 20 % of total expenditure). Expenditures on culture and recreation did not exceed 6 – 7 %, whereas education received 2.5 %. Surprisingly, the

percentages of expenditures on education was decreasing during the 1990s, reaching its lowest level in 1997 with only 1.9 % of total expenditure. On the other hand, it must be noted that in relative terms the expenditures on education were increasing year on year, but at a lower pace than those on food and housing.

When analyzing the differences within the social groups we can see that the highest levels of expenditures on education were recorded among non-manual employees, the self-employed and the unemployed which, in the case of the last group, indicates the growing awareness within society of the importance of education on the labour market. The lowest percentage expenditure on education was recorded within the farmers' families.

Private expenditure data refer to expenditures funded by private sources, i.e., households and other private entities. "Households" means students and their families. "Other private entities" include private business firms and nonprofit organizations, including religious and charitable organizations, and business and labour associations. Private expenditure comprises school fees; materials such as textbooks and teaching equipment; transport to school; meals; boarding fees; and expenditure by employers on initial vocational training.

Table 11.5: Percentages of per-capita expenditure on various goods and services

Expenditure on (total):	1991	1992	1993	1994	1995	1996	1997
Food	38,8	39,3	39,2	39,9	38,8	37,8	35,7
House maintenance	18,8	19,0	19,1	20,3	21,2	20,9	21,8
Transport	8,2	8,9	10,1	9,2	9,8	8,8	8,2
Culture and recreation	6,8	6,6	6,4	5,3	5,6	5,9	6,2
Education (total)	2,4	2,5	2,2	1,8	1,9	1,9	2,0
- manual labour position	2,1	2,1	2,0	2,4	2,5	2,3	2,4
- non-manual labour position	3,0	2,9	2,5	2,5	2,6	2,5	2,6
- farmers	1,8	1,7	1,2	1,6	1,6	1,6	1,8
- self-employed	2,3	2,3	2,4	2,4	2,7	2,8	2,6
- unemployed	1,9	1,9	1,9	2,4	2,7	2,5	3,0

Source: Statistical Yearbook of the Republic of Poland (1990 – 1997)

Significant variations in the economic situation have also been revealed within the regions, as some of them have concentrations of uncompetitive industries. Regions that relied on heavy industry, agriculture, or which had concentrations of uncompetitive light industry, were expected to suffer particularly severely during the transition to a market economy. The textile industry in Łódź, a city often referred to as "the Polish Manchester", was one early casualty with bankruptcy of more than fifty percent of total textile companies in the first years of 1990s. Similarly, the north-east, north-west and eastern parts of Poland, which were dominated by state farms, have suffered from the demise of agricultural

subsidies, and these areas continue to experience the highest levels of unemployment. It was also widely expected that Upper Silesia, with its high concentration of heavy industry based on coal and steel, would become an economic disaster zone. Surprisingly, Upper Silesia went through the first years of the transformation process without social upheaval, partly because of the relatively slow pace of restructuring in heavy industry, and partly because of the extremely rapid growth of the private sector.

The most successful business locations tend to be the large cities in the west of the country, although Warsaw, for obvious reasons, has been a boom city during most of the post-communist era with the highest levels of available family income, salaries and investments, and the lowest rates of unemployment.

In general, in the 1990s Poland encountered growing disparities in average income across the various regions, with Warsaw and its surroundings and Upper Silesia with the highest levels of income, and the eastern parts with the lowest levels. Statistical data confirms that the highest levels of available family income, salaries and the lowest unemployment rates were recorded during the 1990s in metropolitan areas, especially in Warsaw, Poznań, Katowice, Kraków and Wrocław. The sole exception of a large city with high unemployment rates and relatively low salaries was Łódź, due to the bankruptcy of many textile companies. In addition, it is worth emphasizing that Poland, in terms of family income, employment rates, investments, expenditures, and overall economic growth, is divided in general into two parts: the more developed south, western and central regions with such metropolitan areas as Poznań, Wrocław, Katowice, Kraków and Szczecin; and the less developed eastern and northern regions, with higher unemployment rates and lower family and per capita income, with the sole exception of Warsaw, which is located in mid-eastern part of Poland.

Based on the theoretical assumptions (see chapter 3.6.2), one can state that the general economic development determines the structure and growth of each industry, as well as the expenditures on higher education, with the relation observed across the developed countries that higher living standards, in terms of high available income and low unemployment, increase the expenditures on education overall (although this is not a casual relationship). Therefore, we may expect that in regions with the highest levels of income, the expenditures on higher education should be the highest. Statistical data confirm our expectations, especially for Warsaw, where the private expenditures on education were much higher than in other regions. On average, in the early and mid-1990s, private expenditure on higher education accounted for more than 140 % of the average for whole country. The reasons for that might be twofold: first, as expected, the highest income level determines the higher expenditure on education; and secondly, the various costs associated with higher education, such as tuition fees and admission fees, might be higher than the rest of the country.

To summarize, as expected, there are differences in private expenditure on higher education between regions. The data shows that private expenditure on education were highest in metropolitan areas, and the in southern, central and western regions of Poland.

State expenditure on higher education

The higher education policy in Poland during the 1990s focused mainly on ways to increase student places without much increase in state spending on higher education. As in the 1990s, Polish higher education underwent a quantitative revolution, in terms of rapid and unprecedented growth in student numbers, while real state financial expenditures on public higher education kept falling for almost the entire decade. The level of state expenditure on higher education in the 1990s was relatively low compared to developed economies. Statistical data provided in the table below allow us to claim that public higher education institutions facing the huge growth in student enrolment received similar or lower levels of state subsidies for teaching activities compared to the years before the student boom. Following Kaiser and Wach (2004) sufficient evidence that the public higher education institutions were insufficiently financed from the state budget became obvious after their analysis of state expenditure per student, which showed a dramatic decline over the 1990s. In 1998 public universities and colleges received only 54 % of state subsidies per student compared to 1989, and less than 1/3 than the 1990 level. In addition, the share of state expenditure provided for higher education in the state budget was decreasing, despite the GDP growth since 1994.

The data provided in the table below clearly indicates the disparities between the increase in student numbers and the need of higher education for higher state subsidies and the money received from the state. The analysis of the impact of insufficient state funds provided to public higher education will be presented further on in this study. Here we can say that the real decline in state resources had various, mostly negative effects on the performance of higher education institutions, in terms of, among other things, low levels of academic salaries, insufficient increase in numbers of highly ranked academics due to the low attractiveness of academic work, limitation in expenditures on new investments in buildings, classes, laboratories, libraries, and sport centres, and on the other hand, the stringent financial situation forced institutions to enrol as many students as they were able, mostly in part-time, tuition-paid study courses, in order to charge tuition fees and have an additional source of income.

Table 11.6: State expenditure on public higher education and research in the years 1990 - 1997

	1990	1991	1992	1993	1994	1995	1996	1997
state subsidies on HE as % of GDP	1,11	0,82	0,88	0,82	0,78	0,75	0,83	0,86
change in state subsidies on HE in real prices compared to previous year in %	38,2	-31,3	10,1	-3,3	0,2	2,8	17,3	10,6
state subsidies on HE compared to 1989; 1989 = 100 (in 1989, 0,71 % GDP for HE)	138	94	104	101	101	104	122	135
state subsidy per one student compared to 1989, 1989 = 100	129	86	82	69	60	56	59	59
state subsidies on HE as % of state budget	2,9	2,6	2,5	2,4	2,3	2,3	2,7	2,9
state subsidies on research as % of GDP	0,81	0,75	0,64	0,57	0,55	0,47	0,48	0,46
state subsidies on research as % of state budget	2,7	2,5	1,9	1,8	1,7	1,6	1,7	1,7

Source: Statistical Yearbook of the Republic of Poland (1990 - 1998) and National Yearbook for Higher Education (1990 - 1997)

It is also worth indicating the substantial decrease in the state subsidies provided for research, which are in large part provided to higher education institutions – as an average of about 60 % of budgetary funds each year were channelled to institutional and statutory research funds in higher education institutions. State funds provided for research had been almost halved within just a few years.

To summarize, notwithstanding the expanded responsibilities faced by higher education in the modern economy, and the rapid increase in student numbers, the share of higher education funding in terms of GDP and the state budget kept falling, leaving public higher education institutions with many financial problems. The negative financial situation in public institutions in particular has had a damaging influence on the 'heart' of university – the academic profession – and the attractiveness of academic work, and as a result a worsening quality of education, due to an insufficient number of highly ranked academics and high academic/student ratios.

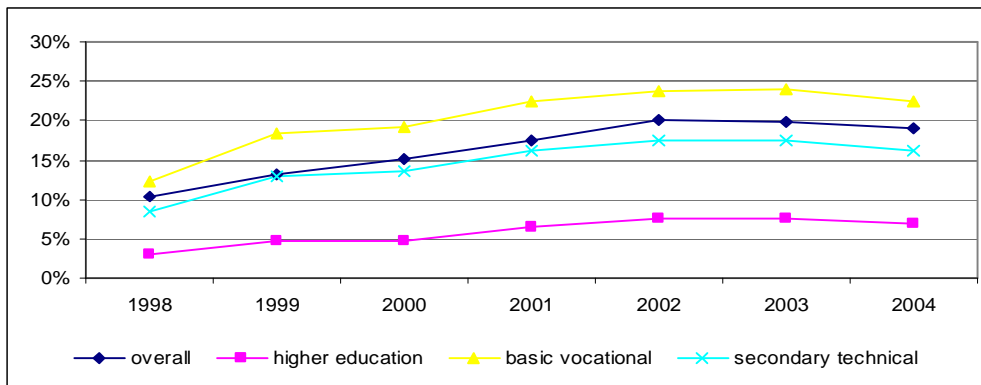
11.1.2 Changes in the economic environment in the years 1997 – 2004

During the years 1997 – 2004, which is the second period analyzed, we can distinguish two economic periods in Poland, analogous to the years 1990 - 1997. The first period from 1997 to 2003, after the years of prosperity in the mid-1990s, was characterized as a period of stagnation, with insignificant growth in gross domestic product, skyrocketing unemployment rates (up to 20 percent), and a decline in inflation rates (from 10 to 0.8 percent in 2003). The second ongoing

period, which started in 2004, is characterized by an increase in economic growth and a drop in the unemployment rate. The GDP increase amounted to 4 to 5 percent per year in 2004 and 2005, the unemployment fall from 20 percent in 2003 to 17 percent in 2005, while the average household income grew. However, as before, the employment situation of higher education graduates was more favourable than other groups. The figure below illustrates that even in periods of high unemployment, higher education graduates did much better on the labour market than other groups. In terms of employment outcomes, the graduates of basic vocational schools are doing worst, with more than 20 percent unemployment rates. With the expansion of the knowledge-related economy during the 1990s in Poland, in parallel with other developing economies, the proportion of jobs for poorly qualified workers declined significantly.

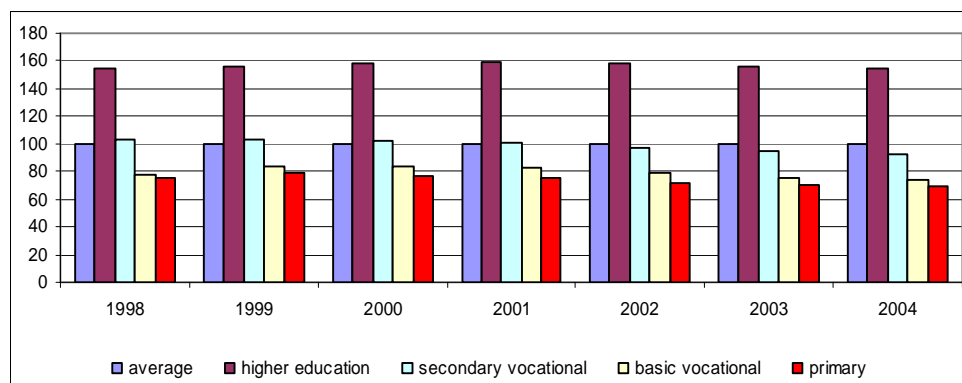
The figure below shows further evidence to illustrate the increasing importance of educational qualifications in the Polish labour market during the period analyzed. The data shows that the relative wage difference between the end of 1996 and 2004 increased as between the poorly and well educated employed population. The evidence also suggests a small improvement in the relative wages of highly educated people over the period and a decrease in the wages of primary and basic vocational school graduates.

Figure 11.2: Unemployment rates among graduates



Source: Own analysis based on Statistical Yearbook of the Republic of Poland (1998 – 2004)

Figure 11.3: Earning according to educational attainment relative to average earnings



Source: Own analysis based on Statistical Yearbook of the Republic of Poland (1998– 2004)

In general, the data provided in the figures above suggests that the wage premium increased further during 1997 and 2004. In addition, it is important to note that the relative wage position of higher education graduates was stable over the period, while all other groups declined.

As suggested in the theoretical part, the general economic situation and in particular the labour market has a significant influence on higher education. When the unemployment rates for higher education graduates are lower than average for the economy and their income is higher, then more young people decide to continue their education and enrol in universities and colleges. Therefore, we may argue that during the second period analyzed, analogously to the first one, the economic situation was very much in favour of higher education and encouraged people to upgrade their qualifications by attending higher education courses.

In addition we also expected that the overall economic development to some extent determines public and private spending on higher education. As such, most of the period between 1997 and 2004 was characterized by economic stagnation; only during the 2003 and 2004 did the economy began to rise. However, the data on spending on higher education did not confirm our expectations about this relationship. Similarly to the first period of transformation, private spending on higher education remained stable over the period, amounting to 2 percent of total private expenditure, irrespective of economic growth. In terms of state expenditures on public higher education institutions, there was a moderate but visible increase from 0.77 percent of GDP in 1997 to almost 1 percent in 2004. Analogously, the share of expenditures on higher education grew from 3.1 percent of the state budget to almost 4 percent.

The state expenditures per student in public higher education institutions have remained stable over the period, but in 2004 they increased significantly, amounting to 60 percent of the 1989 level. It is important to note that, despite the increasing student numbers over the years 1997 and 2004, public expenditure on higher education stayed at the same level on a per student basis, whereas they had declined significantly during the first years of the transformation process.

On the other hand, with reference to OECD benchmarks, the expected range of expenditure on higher education as a percentage of GDP would be about 1.2 percent (World Bank, 2004), whereas the average public expenditure on higher education in the European Union amounts to about 1.1 percent. In addition, the average state expenditure per student in OECD countries accounted for 7,203 USD in 2004, and are lowest in Poland, Greece, Mexico and Turkey, at less than 4,000 USD, compared to Australia, Belgium, the Netherlands, Denmark, Ireland, Sweden, United Kingdom and United States with more than 8,000 USD. In fact, Poland had the lowest per-student outlays in all the OECD countries for which data are available (OECD, 2004). Even when differences in GDP have been taken into account, per-student spending on higher education was less than half of the OECD average and considerably below the Czech Republic and Hungary.

Table 11.7: State expenditures on public higher education and research in the years 1998 - 2004

	1998	1999	2000	2001	2002	2003	2004
state subsidies for HE as % of GDP	0,77	0,82	0,78	0,89	0,88	0,87	0,99
state subsidies per one student, 1989 = 100	54	56	49	52	54	53	60
change in state subsidies on HE in real prices compared to previous year in %	1,1	6,6	-2,1	8,7	1,6	1,3	19,6
state subsidies on HE as % of state budget	3,1	3,7	3,5	3,7	3,7	3,8	3,9
state subsidies on research as % of GDP	0,44	0,42	0,43	0,36	0,35	0,34	0,33
state subsidies on research as % of state budget	1,7	2	1,9	1,8	1,4	1,4	1,4
GDP growth (in real prices) in %	4,8	4,1	2,4	1,1	1,4	3,6	5,1

Source: Statistical Yearbook of the Republic of Poland (1998 - 2004) and National Yearbook for Higher Education (1998 - 2004)

To summarize, although state expenditure increased during the period analyzed, their level still is much below the average in developed economies, which, as argued before, has a negative impact on higher education.

11.2 Student power / demographic statistics

The degree of the students' power to affect the behaviour of higher education institutions depends on several aspects, the most important being: the number of students' unions and organizations and their bargaining power; the demand for

higher education in relation to the capacity (available places); the variability in student body in terms of age, gender, etc.; the size and structure of the secondary school system; as well as the level of contributions made by students towards the cost of their education.

11.2.1 Student organizations in the years 1990 - 2004

According to the Higher Education Act of 12th September 1990, we may distinguish the following types of students' organizations and unions: at the institutional level – student self-government, which is obligatory and is established in each higher education institution, and students' interests organizations in various study fields; at the national level students have the right to establish a national body which is a nation-wide representation of students' self-governments of higher education institutions, as well as various student associations.

The Act of 1990 granted substantial authority to student self-governments in higher education institutions, mostly in the management of state financial student support, in terms of setting the principles and procedures of student financial support, and the authority to distribute such funds. Usually, the responsibility of student self-governments also includes the organization of cultural events for students and the allocation of places in student hostels, especially if there is a scarcity of such, usually low-cost places. The operating and running costs of student self-government are covered by the higher education institution. Student self-government is established under its statutes, which must be approved by the rector. The statute regulates the election procedures for the self-government, its structure, responsibilities and the details of its operation and functioning. The members of the self-governments are freely elected by the students, usually for a period of one year. Student self-governments can also express their opinions on Rector and Senate decisions on issues that affect students; however, the self-government has neither advisory power nor the authority to approve those decisions. Usually a few members of the student self-government are also members of the institution's senate and thus can influence the performance of institution to some extent.

The Higher Education Act required all higher education institutions to establish and provide funds for student self-government, though the governments had some responsibilities and real power only in public institutions. As private institutions were excluded from state financial support for students, the self-governments in private institutions were deprived of their main functions and usually looked after the students' cultural life. Overall, according to the available data, student self-governments are active at over 300 Polish public and private universities. In general, they co-decide about the distribution of grants for students and student organizations within the university. They activate student

cultural life and take part in elections of authorities of university departments and institutes. Since 2001, when students in the private sector were included in the state system of financial support, the responsibilities of student self-government have been the same in public both and private institutions.

At the national level, students can establish a national organization, which is the representation of all student self-governments from all higher education institutions. Such an organization is entitled to express its opinions on all government acts affecting higher education, in particular legislation on student rights and responsibilities. The organization is financed by the government. However, up to 1995 there was no such student body representing all student self-governments that was recognized by the Ministry of National Education. The first student organization that tended to represent the student self-government at the national level was the National Association of Student Self-governments established in 1990. However, the association had a very undemocratic nature, being composed mostly of older students from the largest public universities who were usually members of political parties. In reality, they were not interested in acting on the students' behalf on student issues, but rather in their own careers and in having a 'good time' during the conventions. In addition, the majority of individual student self-governments did not recognize the association as their official representing body, nor did the Ministry perceived it as such body. Therefore, the association did not have any right to express its opinions on legislation affecting higher education and students.

In 1995 the association was redefined. The new organization successfully gathered all student self-governments and become the officially recognized representative of students at the national level. The new organization adopted the name 'The Student's Parliament of the Republic of Poland'. In November 2005 the Ministry decided to officially approve the new organization and provided funding for its operation. The members of the Parliament are freely elected from among all students, regardless of whether they study in public or private institutions. Its main responsibility are as follows: to serve the national interest in the field of higher education; to represent the students' community before the institutions of Poland; to defend students' rights and interests; to encourage collaboration between self-governments and other students' organizations; and to support the development of culture, science, sport and tourism in the community of students. The Students' Parliament comprises the following bodies: Convention, Student Council, Executive Board, Board of Control, the President of Students' Parliament, and various Committees. The Convention of the Students' Parliament is the legislative body and is superior to other statutory bodies. The standing committees of the Students' Parliament are: Legal Committee; Social and Economic Committee; Foreign Affairs Committee; and Culture Committee. The Parliament may also establish other committees for particular issues.

In reality, the Parliament is the foremost organization that acts on behalf of students to protect their rights. The Parliament frequently functions as a self-government parliament, a student association, and activates student culture. Following its members, the Parliament encourages international student exchanges, facilitates the acquisition of non-budget financial means for self-governments and student organizations; supports all activities aimed at increasing the number of students; investment of the university and increasing the level of education; reforms of programs and courses of studies; represents the student community in the Main Board of Universities and organs of the Polish State; co-decides about the position of the student community in youth movements and state policy towards youth; and foremost gives opinions on all legislation concerning students.

It is worth noting that student power, as articulated in students' organizations and authorities and student numbers, were insignificant at the beginning of transformation process. First of all, there was no officially recognized student body at the national level, despite the fact that the Act on Higher Education precisely defined students' right to have such a representative body. Therefore, no student organization could express opinions on higher education legislation and protect the students' rights. Secondly, at the beginning of the 1990s students were relatively unaware of their rights. Most students began their studies before 1990 and were used to functioning under the provisions and norms of the old system, in which students were relatively excluded from expressing their own opinions on legislation affecting students and on the functioning of higher education institutions. The situation changed gradually, starting in the mid-1990s and still continuing, as the role of students' organizations increased. However, the authority of students' organizations is retained mostly at the institutional level.

Since in this section we are analyzing the situation during the first years of changes, we can say that students did not have much influence on higher education in those years. However, in next period the situation remained unchanged, with a low level of student influence on higher education, in terms of the authority of students' organizations. In short, the authorities granted to students' unions or organizations have remained the same since the Act of 1990 up to the time of writing.

Apart from the Parliament, there were a few other student associations acting at the national level. However, most of them were small with no legislative power. The associations were usually established by students from similar higher education institutions, such as large public universities, technical universities or private institutions. The only student organization that attempted to be perceived as representative of a wider population of students was the Independent Association of Students, which was established in 1981 as a first independent

student organization. In 1982 the association was officially proscribed and up to 1989 operated unofficially. Since 1989 it was recognized again as a student organization. In general, the association was more politically involved and acted for a free and democratic country. When the transformation process began the association changed its mission and performed a similar role to the Student Parliament, but with less legislative power.

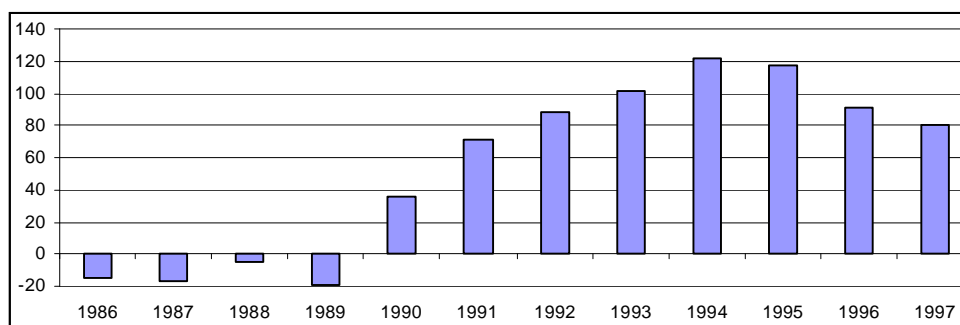
11.2.2 Demographic statistics in the years 1990 – 1997

The next important basic demand conditions for higher education are the demographic statistics, especially for age cohorts between 19 and 24 years old, the size and the structure of the secondary school system and student demand for higher education; the number of students, the rate of growth of demand, and the change in the student body. All these demand external conditions that to a large extent affect the performance of entire higher education system as well as the individual higher education institutions. Universities have to adapt: to changes in the population; to changes in the educational aspirations; to the new student demands, in terms among other things of programs offered, program content, modes and types of course delivery.

The demographic changes in the 1990s were expressed in a significant increase in the numbers of young people, especially within the population age-range between 18 and 24 years, which fits the relevant age cohorts for university education. The demography surge that came to the higher education institutions was the effect of the unprecedented baby boom after World War II. The period from the end of World War II to the end of the 1950s has come to be known as the baby boom in Poland and in several other countries affected by the War. The number of births began to rise significantly again as the first of the baby boomers started families of their own. The echo of the baby boom occurred from the mid-1970s to the mid-1980s. The echo of the baby boom reached its peak in 1982, since when the number of births has started to decrease. It is worth noting that during the period of the baby boom echo the fertility rate amounted to approximately 2.5 in the mid- and late 1970s. The relatively favourable economic situation in the 1970s promoted and fostered the increase in birth rate. In addition, during the Communists years, the government believed that population size represented the country's strength and encouraged families to have more children. However, since the mid-1980s fertility in Poland has been dropping steadily but gradually, mostly as a result of economic crises.

Therefore, at the beginning of the 1990s the children of the baby boom echo reached university age. As figure 11.4 indicates, the number of university relevant age cohorts has been rising steadily. Furthermore, the structure of the Polish population was in favour of young people.

Figure 11.4: Changes in population between 19 and 24 years old compared to the previous year (thousands)



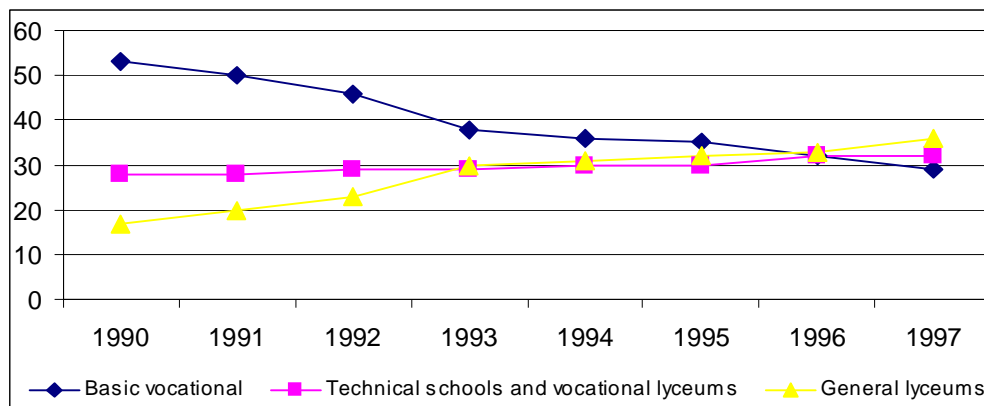
Source: Statistical Yearbook of the Republic of Poland (1986 – 1997)

The next important aspect of the population is the size and structure of the secondary school system. The size by itself is not of greatest importance because this is determined by the demography and the size of relevant age cohorts as it is secondary school attendance is compulsory, but the structure of the system affects to a large extent the size of higher education numbers. As already described in previous sections, the secondary or post-primary school system in Poland in 1990 comprised four types of post-primary education schools: 4-year general lyceums; 5-year technical secondary schools; 4-year vocational lyceum; and 3-year basic vocational schools.

Except for the 3-year basic vocational schools, the others ended with the matura examination, which is the minimum precondition for entrance to higher education. In practice, only the general lyceums and technical secondary schools afforded the option to continue education at a higher level. The graduates of 4-year vocational lyceums and 3-year basic vocational schools had fewer chances to be enrolled to higher education than their peers from other secondary schools. Those from 3-year vocational schools did not possess the matura certificates and were excluded by law from higher education. Although the graduates from 4-year vocational lyceums also had an option to take the maturity exams, they were not usually well enough prepared for such studies. The main objective of these schools was to provide vocational education in accordance with the requirement standards designed for a given group of occupations, and not to prepare their graduates for continuing education. Those graduates who had not taken the matriculation examination were awarded the certificate of completion of education in the vocational lyceum, which confirmed that its holder had acquired relevant vocational qualifications and completed the secondary education. However, this certificate did not entitle its holder to apply for admission to higher education.

Until the early 1990s, 3-year basic vocational schools enrolled about 60 percent of primary school leavers, whereas only about 20 percent were enrolled in general lyceums, the graduates of which most often continued their education at higher level, with 20 percent in technical secondary schools and 4-year vocational lyceums. Due to economic changes, which will be analyzed in the following section, and as a result of the efforts undertaken to restructure the post-primary education sector, which consisted of closing down basic vocational schools, the proportion of enrolments changed and reversed. From the figure below (figure 11.5), one can state that in only a few years time, the structure of the secondary school system in Poland had been completely changed, with more than 40 percent of primary school graduates enrolled in general lyceums. In addition, more general lyceum graduates are continuing their education and applying to higher education: about 75 percent in 1997 compared to 62 percent in 1990.

Figure 11.5: Enrolment structure at secondary school level



Source: Own analysis based on National Yearbook for Higher Education (1990 – 1997)

Therefore, the changes within the structure of secondary education were reflected in the increase of demand for higher education among secondary school graduates. The ratio between the number of relevant age cohorts (in case of higher education level, 19 to 24 years old), and the number of students of that age is the best indicator of the accessibility of higher education. We may indicate two types of ratio: gross and net. The first one indicates the ratio between the number of student population and the number of population of relevant age cohorts for higher education. The second demonstrates the ratio between the number of student population between 19 and 24 years old and the number of population of relevant age cohorts for higher education, which is also 19 to 24 years old. In 1990 the net ratio accounted only for 9.8 percent and the gross for 12.9 percent, while the ratios for developed countries usually exceeded 30 and more at that time.

However, both ratios started to grow dramatically during the 1990s and reached the average for developed countries in few years' time (see table 11.8).

Table 11.8: Gross and net ratios of accessibility of higher education in Poland in the years 1990 – 1998

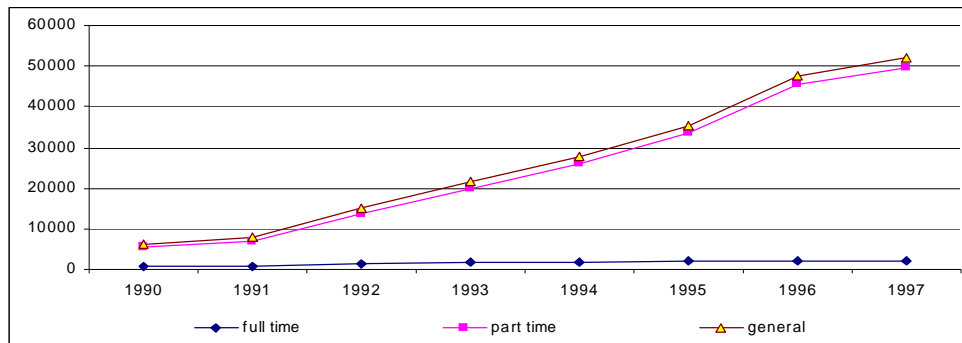
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
Gross ratio	12,9	13,4	15,4	17,6	19,8	22,3	25,4	29,2
Net ratio	9,8	10,4	12,3	14,0	15,6	17,2	19,3	22,2

Source: National Yearbook for Higher Education (1990 – 1998)

Along with the growth in total demand for higher education came also a greater diversity, especially in terms of the age structure of students enrolled in higher education and their academic preparation. These factors challenged the capacity of longstanding university policies and procedures and made higher education institutions adapt to a changed student body and changed student expectations. As analyzed in the previous section, the majority of the population did not have higher education diplomas, as in 1989 only 6.6 % of Polish citizens graduated from higher education. However, economic transformations after 1990, the progress of privatization, the restructuring of the economy, and the resulting changes in the labour market and vocational structure encouraged educational aspirations, which became more focused and more sensitive to demand on the part of the market. For these reasons the demand for higher education also increased within the mature 'third-age' potential students, who were usually already employed. These working-experienced mature students came to university with high expectations of academic standards and services, and most of them expected to be able to apply the fruits of their studies to their immediate professional benefit. Therefore, they expected from academics appropriate professional knowledge and qualifications. As most of these students had their own families and work, they usually applied for part-time and more vocationally oriented study programs, in order to combine work and their family life with studies to contribute to their professional careers. The figure below indicates the number of students of age 25 and above who were enrolled in higher education.

Therefore, the following changes – such as demographic ones in terms of increase in the population between 19 and 24 years old; within the structure of secondary education reflected in growing popularity of general lyceums among primary school graduates; increase in the number of secondary school graduates continuing their education as indicated by the net ratio, as well as the growing number of mature 'third age' students – have been demonstrated to have given rise to an unpredictable surge in student numbers in 1990s. Their number grew from about 400 thousand in academic year 1990/91 to almost 1,100 thousand in 1997/98, which amounted to an almost 300 percent increase in just seven years.

Figure 11.6: First-year enrolled students of age 25 and above



Source: Own analysis based on National Yearbook for Higher Education (1990 – 1997)

To summarize, demographic, social and cultural conditions play significant roles in the functioning of higher education institutions. For the managers of higher education institutions the most important factors, from the conditions analyzed above, are: the age structure of the population, especially the number of university education relevant age cohorts; and the cultural and economical value and significance of higher education, which influence the demand for higher education. In general, students are the most important 'basic demand conditions' for higher education, as they play the following roles among others for higher education: determine the demand for higher education and for various fields of study and types and modes of studies delivery; decide about the location of new higher education providers; pay tuition fees or contribute to the institution's state subsidies which are allocated on the basis of student numbers; create an image of an institution among their friends and families; and finally they are 'outputs' of higher education, after graduation being employed and contributing to the institution's prestige and reputation.

As we can see, the situation for higher education institutions at the beginning of the transformation process from the student's side, articulated in the increase in the numbers of population of relevant age cohorts and in the demand for higher education, provided great opportunities for the development of the higher education sector, both public and private.

11.2.3 Demographic statistics in the years 1997 – 2004

The demographic structure of the population in Poland changed dramatically over the period between 1997 and 2004. Statistical data shows that birth numbers systematically decreased over the whole transition period. In the year 2004, 355,000 live births were reported in Poland, which is a 38 percent decrease

compared with 1989. The decreasing birth number causes birth rates to drop systematically. The most common demographic determinants affecting the number of births include: changes in fertility level and changes in the structure of reproductive age of women. At the end of the eighties and in the beginning of the nineties the 20-24 age group was the one with the highest fertility level, followed by those aged 25-29, while age group 30-34 took the third position. This situation occurred in both urban and rural areas. In the nineties a decrease in fertility was observed in all groups, but the dynamics of decrease was differentiated depending on age. The most dramatic decrease of fertility occurred among those aged 20-24 (by 45%), then among those aged 15-19, next came age group 25-29. The country's fertility rate is below replacement and has decreased from 2 births per woman in 1990 to 1.3 births in 2004.

In Poland the transition to the new market economy established a new relation between the state and an individual, family, and household. The range and scale of responsibilities imposed on an individual family increased in many aspects of life. Structural changes of the labour market, bleak prospects for future careers caused by structural unemployment in many regions and among many social groups, also influenced family and fertility decisions. As presented, the education achievement varied chances on the labour market and diversified opportunities to cope with the growing alternative costs of parenthood. Economic causes include escalation of direct costs of children, which was connected with a general decline in real incomes. People perceive their financial status as too poor to afford children. A boost in education standards invokes postponement and a lower level of fertility. We may assume that structural changes on the labour market and the increased demand for highly qualified professionals tended to keep fertility low, since the labour market will stabilize and unemployment rates drop.

As a result of these changes, the size of the school age population (2 – 24) has started to decline since the beginning of the 1990s, decreasing by 13 percent from 1989 to 2004. These changes reached higher education in 2000, when for the first time since the political transformation of 1989 the number of higher education population age cohorts decreased compared to the previous year. Although, their number increased slightly in the next years, those changes in the age structure had significant implications for the higher education system, signifying the end of the educational boom and a decrease in student demand.

The figure below shows the numbers of population between 19 and 24 years old over the period analyzed and in the following years up to 2013. We can see that since the academic year 1999/2000 the number of higher education relevant age cohorts has been stable and since 2004/2005 it is decreasing substantially and continuously. The number will decrease by 17 percent from 2005 to 2010.

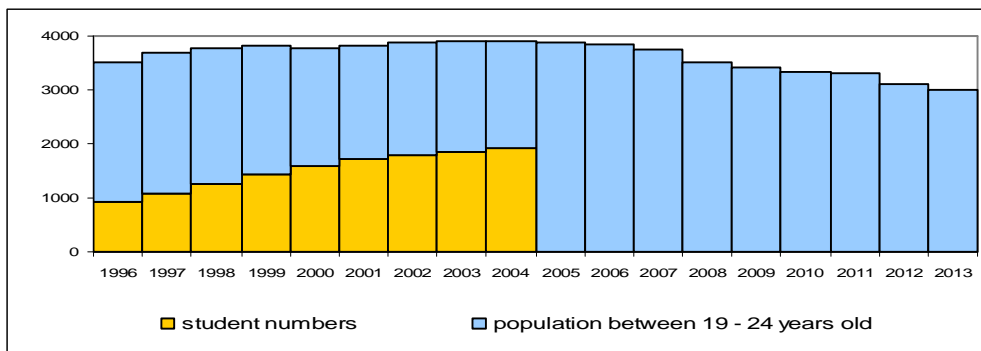
However, it is important to emphasize that the ratio between the number of higher education relevant age cohorts, 19 to 24 years old, and the number of students at that age, which indicates both the accessibility of higher education and the demand for higher education, continued to grow over the period (see table 11.9). As such, the net ratio increased from 9.8 percent in 1990 to 22.2 percent in 1997, and further to 36.8 percent in 2004. While this ratio for developed countries usually exceeds 30 and on average accounts for 40 percent, we may say that Poland, in terms of accessibility to higher education, has caught up with the developed economies in a relatively short period. More importantly, according to Ministry of Education predictions, the ratio will continue to grow in the following years and will amount to 50 percent in 2010. Therefore, for this reason, despite the decrease in the population between 19 and 24 years old, the first year higher education enrolment will remain stable until the year 2010.

Table 11.9: The gross and net ratios of accessibility to higher education in Poland in the years 1997 - 2004

	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Gross ratio	29,2	33,5	36,9	40,7	43,6	45,6	46,4	47,8
Net ratio	22,2	25,4	28,0	30,6	32,7	34,5	35,3	36,8

Source: National Yearbook for Higher Education (1997 - 2005)

Figure 11.7: Population between 19 and 24 years old and student numbers

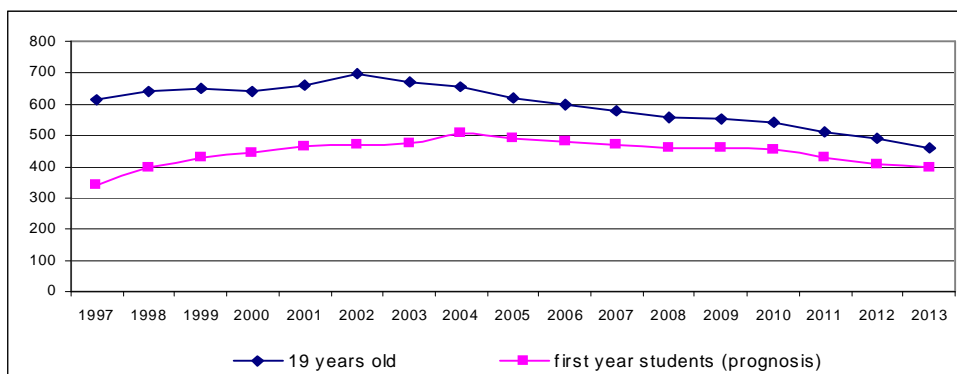


Source: Statistical Yearbook of the Republic of Poland (1996 - 2005), National Yearbook for Higher Education (1996 - 2005)

In addition, the age structure of first-year enrolment is very heterogeneous. Secondary school graduates (19 years old) constituted on average only about 40 percent of first year enrolment in both public and private higher education institutions in Poland during the period analyzed, while the mature, so called 'third-age' students made up almost 10 percent of freshly enrolled students (see figure 11.9).

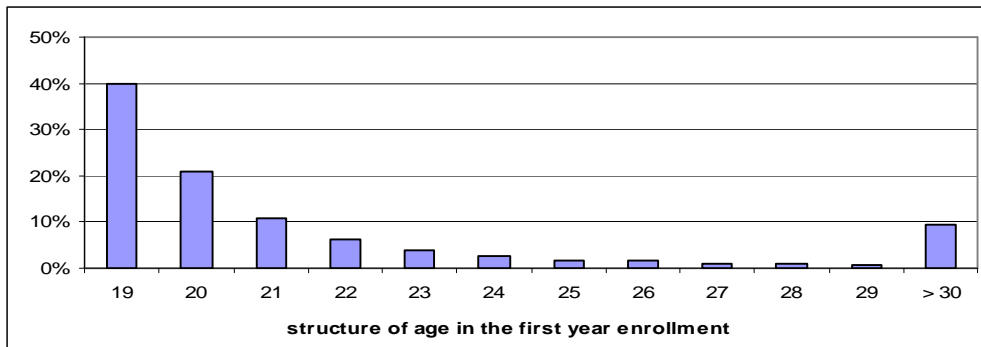
To summarize, due to the increasing ratio of the number of higher education relevant age cohorts and the number of students at that age, and the diversified structure of age of first-year enrolled students, the demographic decline that came slowly to higher education nevertheless had a relatively modest impact on higher education enrolment between 1997 and 2004. Yet, as we shall analyze later in this chapter, this end of the demographic boom increased competition between higher education providers, and attenuated the enrolment growth per single higher education institution. 2003 could be treated as a final year of a rapid and extensive transformation in the Polish higher education. Due to the approaching demographic low and the increased number of higher education institutions, for the first time the number of available places was greater than the number of candidates (Pawłowski, 2002). As a result, the years at the beginning of the 2000s could be described as a period of relative stability, before higher education institutions will suffer from reduced enrolments due to the demographic low, which will result in a 20 percent decline in entry numbers (see figure 11.8).

Figure 11.8: Number of 19 year old population and first year enrolment (thousands)



Source: Own analysis based on National Yearbook for Higher Education (1997 - 2005)

Figure 11.9: Structure of age of first year enrolled students in the academic year 2003/2004



Source: Own analysis based on National Yearbook for Higher Education (2003)

11.3 Threat of substitutes

According to the economic parlance, there are no direct substitute products for higher education (see chapter 3.6.4), because no other institutions are eligible to award the state degrees and titles, such as bachelor or master. On the other hand, we may indicate at least two types of indirect competition for higher education, which may draw away potential students from applying for higher education. These quasi-substitute products are employment of secondary school graduates and various vocational courses offered by non-higher education institutions.

11.3.1 Youth labour market

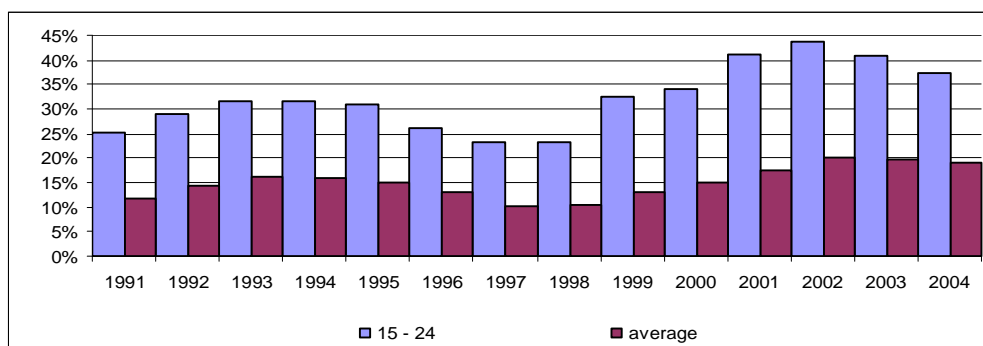
In this section we will first analyze the developments in the youth labour market during the transition period and take a closer look at the background and determinants of youth unemployment. The term youth refers in principle to the population group between 15-24 years old and whenever possible, further distinction will be made between teenagers (15-19), and young adults (20-24). The groups of school leavers and new entrants to the labour market will also receive specific attention, although they do not always consist 100 per cent of young people.

The unemployment problem occurred in Poland simultaneously with the economic transformation. The first data on unemployment rates were recorded in 1990. During the next few years the recorded unemployment grew, reaching its peak in 2000 at 20 %. The transition period witnessed a rapid deterioration of the labour market position of young people, reflected in high unemployment, particularly among teenagers. The strong decline of employment has made entering the very tight labour market extremely difficult for young people,

worsening their situation in comparison with most of the rest of the labour force. Demographic developments have further aggravated this situation as the number of young entrants to the labour market increased in the 1990s.

Unemployment affected especially young, inexperienced people, who after graduation entered the employment market usually without the practical skills needed to look for a job. Analyzing the table below, we can see that the unemployment rates among young people were much higher than the total average rates. In particular, primary school graduates, who entered the employment market at the age of 15, had significant difficulties in finding a job. In 2002, the unemployment rate for the group between 15 and 24 years old reached its peak at 44 %.

Figure 11.10: Unemployment rates for population between 15 and 24 years old and average in economy



Source: Statistical Yearbook of the Republic of Poland (1990 – 2004)

During the periods, i.e., between 1990 and 2004, unemployment among young people accounted for more than 30 % of all recorded unemployed. According to the data presented by the Polish Official Statistics (2005), the majority of unemployed under 24 years old had vocational education without matura certificates – about 50 %. The second largest group consisted of graduates of 4-year basic vocational school – more than 30 %. Primary school graduates accounted for about 10 %, and general lyceums for less than 10 %. However, the great majority of these graduates continued their education at secondary and higher levels respectively, and was not included in the labour market.

Compared to the data for the EU, one can state that unemployment among young people without higher education degrees was much higher in Poland over the period. Nevertheless, the young people in the EU also had more difficulties on the employment market than their older peers.

To summarize, during the whole period analyzed, the youth unemployment rate has persistently been higher than the rate of total unemployment and teenage unemployment rates in particular have reached very high levels. Apart from persisting high unemployment, the economic activity rate of young people has also been declining. In searching for their first job, young people found with increasing frequency that they were in a vicious circle, arising from two intertwined factors: their lack of work experience does not allow them to take on a job; and their failure to find employment does not provide them with any experience. The lower a young person's educational background, the harder it was to find a job. Graduates of vocational schools were in the worst situation, whereas those with a higher educational background were in the best position.

The level of youth unemployment is influenced by several factors. In general, the main factors explaining youth unemployment are the same as those that explain general unemployment. The fact that youth unemployment exploded shortly after the start of transition and grew far beyond average unemployment indicates that entrance into a depressed labour market is simply difficult, especially in the first years of transition, when employment declined strongly and employers were not thinking of hiring new people but rather about whom to dismiss. The generally depressed nature of the labour market has in this way had particularly negative effects on the chances of the young population. It also shows that education, especially at the vocational level, has not been properly adjusted to the new demand for skills and many young people acquired skills that were not required by employers. However, there are a number of factors that particularly influence youth unemployment. First of all, demographic developments have caused the youth population to increase and as a result the number of young entrants to the labour market has been growing. On the other hand, youth economic activity has been declining, partially because of the discouraging effect of the general labour market situation but more importantly because of increasing participation in education.

High unemployment had a significant impact on the choices made by young people; whether to continue their education or to enter the labour market. Education, in particular higher education, deserves special attention when discussing labour market developments in transition countries and especially when looking at youth unemployment. The change of political and economic system, rapid restructuring of the economy and the subsequent changes in the quantity and quality of labour demand have a strong effect on the success on the labour market of the population groups with different types of education. Unemployment rates for higher education graduates, which did not exceed 6 % in the period analyzed, compared to almost 30 % for people under 24 years old, were much in favour of higher education, and inclined young people to upgrade their educational qualifications, in particular at higher education level, in order to increase their professional opportunities.

Changing labour market demands for qualified workers in Poland since the early 1990s had major policy implications for the higher education system. Our analyses in this and previous sections of the unemployment rates across various educational groups and across different age groups clearly illustrate that, even in the period of high unemployment, graduates with a higher education degree did better on the labour market than other educational groups. The analyses also suggest that the relative wage difference between the poorly and well educated employed population increased during the 1990s.

11.3.2 Post-secondary schools

The second indirect substitutive products for higher education are the vocational courses offered by non-higher education institutions. Non-university level education in Poland is provided by post-secondary schools, divided into *szkoła policealna*, where applicants are required to hold only the secondary school leaving certificate, and *szkoła pomaturalna*, where the requirement for admission is the matura certificate. Post-secondary schools admit first of all graduates of general secondary schools, offering courses designed as a follow up to the curriculum of the general secondary school and technical lyceum. Post-secondary schools, because of the type of qualifications they offer, are included as a part of secondary education in the Polish classification.

The post-secondary schools train students in a variety of vocational fields, and prepare students for work in blue-collar and equivalent occupations or in occupations and specialities that require secondary vocational qualifications. The timetable comprises vocational subjects, practical training activities and practical placement. The vocational training in this type of school lasts between 1 and 2.5 years, depending on the field of studies, but for the majority of occupations it is two years. Students in these schools are trained as nurses, accountants, administrative personnel, computer specialists, librarians. The graduates obtain the certificate of completion of education in post-secondary school, and can then take a vocational examination and obtain the vocational title diploma.

In general, post-secondary schools are opened for those graduates of secondary education who are neither applying for higher education, nor entering the labour market. The completion of these schools enables them to acquire or extend their vocational qualifications. Post-secondary school can be public or private. Both types of schools issue the same state recognized diplomas. Similarly to the higher education institutions, post-secondary schools are enrolling students on full-time and part-time courses. In public schools full time courses are free of charge, whereas part-time courses and all courses provided by private schools have to be paid for. In contrast to the higher education system, private post-secondary schools included in the Polish secondary education system receive state financial support, which is granted on the basis of student numbers. Tuition fees paid in

post-secondary schools are lower than in higher education institutions, and amounted on average to about 50 to 60 % of those charged in higher education. About 70 % of all post-secondary schools are private.

In Poland during the years 1990 and 2004, the size of the post-secondary school system was stable and started to grow steadily but gradually since the academic year 1992/93. The table below presents the basic data on the size and structure of post-secondary school system in Poland in 1990s. The table below also provides information on the number and percentage of general secondary school graduates enrolled in post-secondary schools and post-secondary schools graduate who applied for higher education.

Table 11.10: Basic facts on the structure and size of post-secondary education system in Poland.

	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97
Student numbers (total)	108 285	100 860	95 850	110 861	131 519	161 010	182 727
- full-time courses	75 186	70 892	68 635	77 458	84 456	96 159	101 237
- part-time courses	33 151	29 968	27 215	33 403	47 063	64 851	81 490
- graduates	41 915	46 517	41 092	40 113	45 829	59 213	70 491
Number of schools	893	911	934	1 097	1 225	1 432	1 608
% of secondary school graduates enrolled to post-secondary schools	28	27	25	25	23	23	20
% of post-secondary school graduates enrolled to higher education	12	12	12	13	11	13	12

	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Student numbers (total)	190 768	202 826	205 538	200 114	211 004	236 484	238 201
- full-time courses	97 424	92 424	85 093	78 792	79 196	91 497	92 102
- part-time courses	93 344	110 402	120 445	121 322	131 808	144 987	146 099
- graduates	77 440	83 284	86 372	78 401	75 071	76 405	77 506
Number of schools	1 831	2 080	2 328	2 567	2 625	2 857	2 879
% of secondary school graduates enrolled to post-secondary schools	19	18	17	16	17	17	17
% of post-secondary school graduates enrolled to higher education	13	13	14	14	14	15	14

Source: Own analysis based on National Yearbooks for Higher Education (1990 – 2004) and National Yearbook for Education (2003)

According to the data provided by Polish Official Statistics, the majority of general lyceum graduates who failed the matura examination applied to post-

secondary schools; only some of them entered the labour market. Only between 5 and 10 % of those graduates who passed the matura examination enrolled in post-secondary schools instead of going on to higher education. However, some of them continued their education after graduation from post-secondary schools – on average about 13 % of total graduates of post-secondary schools.

To summarize, the post-secondary education system in Poland was well developed and contributed significantly to the overall tertiary education system. In terms of enrolment numbers, it accounted on average for about 10 % of the post-secondary system, and provided an important indirect substitute offer, also for those general secondary school graduates who passed the maturity examination and were eligible to apply to higher education.

It must be added that most of the private higher education institutions evolved from post-secondary schools. First, their founders opened the post-secondary schools and after a few years of successful operation applied for permission to establish a higher education institution. Usually, after the establishment of a higher education provider, the post-secondary school was still functioning in cooperation with the higher education provider, in terms of sharing the infrastructure and academic faculty. It was common that the graduates of such a post-secondary school in possession of the matura certificate paid lower entrance fees or tuition fees when enrolling for study.

In terms of location and courses offered by post-secondary schools, they resembled higher education institutions. They are concentrated in metropolitan areas and large cities. They offered mostly courses in administration, economics, computer sciences, and beautician and hairdressers courses for women.

11.4 Degree of rivalry

In this section we analyze the degree of rivalry in the higher education market, which is articulated in the number of institutions, and the average student number per single higher education provider (see section 3.6.6).

Competition is a process in which the individual entities on the market, in order to satisfy their needs, try to provide the best offer for the potential consumers, in terms of price, quality, availability and other features of their products. According to economists, competition is the key to the increase in efficiency, development of new products and services, and quality increase or price decrease. In the area of higher education, colleges and universities compete with other colleges and universities and students with other students. The increase in competition on the higher education market, in terms of lowering barriers to entry and higher density of higher education institutions, and when institutional

arrangements promote the competition between providers for resources, will have an impact on the performance of higher education institutions. Some universities and colleges, which base their differentiation to some extent on location and price, will decrease tuition fees and expand enrolment, particularly for the high demand programs. Other providers, which compete for students on a basis of quality and program offerings, will further enhance their study offer and increase the quality.

During socialist times, the universities did not compete with each other, for several reasons. First, the scarcity of student places, which implied that the student demand exceeded the supply, allowed public universities and colleges to apply strict entry requirements for candidates and choose only the best qualified students. Second, the central authorities were responsible for planning, coordinating, supervising and controlling the activities in all higher education institutions. Yet the government regulated the admissions to each institution and each faculty, approved and eliminated academic programs, specified the content of academic teaching and research programs, and set the enrolment quotas for each study line. Such institutional arrangements did not spur competition between institutions, as they could not decide themselves about their operation and directions of development. Third, private providers could not enter the market. What is more, especially in the 1980s, the government was not interested in establishing new public higher education institutions because of the stringent financial situation of the national economy. In summary, these circumstances could not threaten the stability of existing institutions.

11.4.1 Degree of rivalry in the years 1990 – 1997

In 1990 the new Act on Higher Education allowed private institutions to operate on the market and devolved substantial authority at the institutional level. The Act laid the foundations for competition on the higher education market between the higher education institutions.

The table below presents data on the numbers of new higher education institutions on the market and the numbers of students per single higher education institution over the years.

At first, looking at the number of higher education institutions and in particular at the expansion of private providers, we may assume that the intensity of degree of rivalry on higher education market increased. However, when we compare the rate of increase of student number with the change in number of institutions, it becomes clear that during this period, despite the immense growth in number of institutions, the degree of rivalry was in fact decreasing. As the data in the table indicates, student number per higher education institution was increasing during the whole period analyzed, except in 1996. Student numbers per single private

higher education institution quadrupled, from 400 to 1,600 students in 1997, while the number of students per single public higher education institution increased by 110 percent, from 4,220 to 8,820 students in 1997.

Table 11.11: New higher education institutions and student numbers*.

	Year of establishment						
	1991	1992	1993	1994	1995	1996	1997
- private providers	1	10	16	19	24	34	25
- public providers	0	0	1	0	0	0	1
- total number of institutions	110	120	138	154	179	213	245
- total number of students	428 200	495 700	584 000	682 200	794 500	927 500	1 091 800
- students per one HEI	3 892	4 130	4 231	4 428	4 438	4 354	4 456
- students per one private HEI	400	410	535	695	1 010	1 195	1 600
- students per one public HEI	4 220	4 850	5 540	6 380	7 120	8 000	8 820

Source: Own analysis based on National Yearbook for Higher Education (1991 – 1998)

* Excluding church funded institutions

In general, there were several other reasons why we may argue that the intensity of rivalry for the higher education market has decreased. Following our theoretical considerations, the reasons are as follows:

The small number of about the same size and offerings of higher education institutions decreased rivalry because fewer providers competed for the same student segments. At the beginning of the transformation process, at will be elaborated in the next sections, private providers offered mostly vocationally oriented courses, whereas public ones developed particularly master degree programs.

Rapid market growth in terms of student numbers meant that institutions did not have to fight intensively for market share. In a growing market, they were able to improve revenues and increase student enrolment simply because of the expanding market.

Low initial fixed costs did not result in an economy of scale effect, which increases rivalry. On the new market providers may have lower fixed costs because they often rent the teaching space and have short contracts with academics, and can flexibly decrease these costs if necessary. On the mature market, providers more often own their buildings and equipment and employ

permanent staff, which increases their fixed costs. When total costs are mostly fixed costs, institutions must enrol more students to attain the lowest unit costs. High students' switching costs from one university to another decreased rivalry. During the period analyzed, institutions did not introduce the European Credit Transfer System (ECTS), or any other system that provided a simple, transparent way of measuring and comparing study programs and learning achievements, and transferring them from one institution to another. That made it difficult for students to switch between institutions.

High product differentiation among institutions is associated with lower levels of rivalry. Therefore, the more similar providers that were located in one region the higher the competition between them. Again, in the 1990s the differentiation between private and public providers, in terms of study offer, location, and perceived quality of institutions, was relatively large and contributed to lower levels of rivalry.

11.4.2 Degree of rivalry in the years 1997 – 2004

During the second period the situation in terms of degree of rivalry changed. As Kaiser and Wach (2004) argue, the second legal change that boosted the development of both private and public higher education institutions in Poland was the passing of the new Vocational Higher Education Schools Act in 1997, which, as described before, decreased the barriers to entry to the higher education market. As such, in terms of the private sector, the emergence of new established private providers was continued. On average, over the years 1997 and 2004, more than 22 new private providers were funded each year, and their number had more than doubled since 1997. As a result, over the period almost 160 new privates were established. They are ruled by the 1997 Act and are registered as vocational higher education schools and offer mostly bachelor degree courses.

In contrast to the beginning of the 1990s, in the period 1997 to 2004, the number of public higher education institutions had grown considerably. The latest type of public higher education institutions are vocational higher education schools, which were first established in 1998 and are ruled by the 1997 Act. By 2004 there were 28 state higher education vocational schools, and their number is expected to grow further.

Due to the extensive increase in the number of private and public higher education institutions and the approaching demographic low, the degree of rivalry on the higher education market increased substantially compared to the first years of the transformation process. The table below provides the basic data on the number of new providers on the higher education market and the number of students per single higher education institution over the period.

Table 11.12: New higher education institutions and student numbers over the years 1997 - 2004*.

	Year of establishment						
	1998	1999	2000	2001	2002	2003	2004
- private providers	13	16	21	26	31	22	27
- public providers	8	5	2	7	2	1	4
- total number of institutions	267	287	310	341	377	400	427
- total number of students	1 268 500	1 425 800	1 578 200	1 711 300	1 800 500	1 858 700	1 926 100
- students per one HEI	4 751	4 968	5 091	5 018	4 775	4 646	4 510
- students per one private HEI	2 140	2 460	2 490	2 320	2 105	1 990	1 925
- students per one public HEI	8 839	9 072	9 787	10 025	10 418	10 412	10 666

Source: Own analysis based on National Yearbook for Higher Education (1998 – 2004)

* Excluding church funded institutions

Looking at the table above, we can see that the average number of students per single higher education institution reached its peak in 2000, and declined by 12 percent between the years 2000 and 2004. On the other hand, the average number of students in public institutions grew during the period, increasing by 20 percent during the years 1998 and 2004, while the average number for private providers decreased by 10 percent. As such, the demographic low and increase in the degree of rivalry have affected especially private higher education institutions.

11.5 Supplier/academic power

In this section we analyze the impact that academics have on higher education institutions. We do not describe the hierarchy nor the structure of employment system in Polish higher education, as those issues were already presented in the section about appointive autonomy.

The power of academics depends on a few characteristics of a higher education system, such as: the number of academic unions and their bargaining power, employment contracts, alternative careers outside academia, and the number of academics, in particular highly ranked ones, such as full and associate professors (see chapter 3.6.5).

In terms of employment contracts, we may distinguish three elements that to a large extent determine the possible bargaining power of academics: salary scales,

tenure and permission for the academic to occupy more than one post. Let us look at how these issues were resolved under the new regulations.

The employment conditions of academic staff are determined by the government, in consultation with the sector and labour unions, and articulated in the various Acts on higher education and academic personnel. The Acts regulate issues such as: pay scales and working hours for each scientific position, as well as function allowances for administrative positions such as rector, dean or director; a proper appointment qualification requirement and conditions of promotion; performance measurement; and tenure and retirement conditions. While public higher education institutions are bound by all rules established in the Acts, privates are confined to only some of them. For example, private institutions have to comply only with the appointment qualification requirements and conditions of promotion. However, in reality they have adopted the majority of the content of employment agreements from public institutions, except for the salary structure and appointment of administrative positions. They sometimes – but not often – award tenure for habilitated doctors and full professors, who have obligatory tenure in public institutions.

Overall, higher education institutions, especially public ones, have little possibility to determine and diversify the content of employment agreements. The law gave public universities little flexibility in creating their own pay scales or incentive/reward systems. Universities thus had limited possibilities to attract high-performing staff in strategically significant fields or recruit young scientists in important areas of science. Similarly, full and associate professors are tenured, as well as others, if they are reappointed for a second term. Under the new regulations, academics could also hold several posts.

In addition, salary levels of academics, alongside with the real decrease in the state funds provided for higher education, were relatively low when compared to the developed economies. On average, during the 1990s, the salary of a PhD candidate appointed to the post of assistant amounted to about 60 % of the average salary in the national economy. The income of PhD holders appointed as assistant professors was higher, but still below the average in economy. Only associate and full professors' salaries were above the average, amounting to more than 150 % of average. Nevertheless, in comparison to Western countries their salaries were relatively low. It is important to note that during the present decade, the relative academic incomes are growing, but still they lag behind the income levels in developed economies.

As analyzed in the study, relatively low salaries in public institutions have provoked many academics to earn additional incomes outside their home university or college, and to hold multiple teaching posts.

In addition, all these factors, such as low salaries and little flexibility in determining academic employment contracts, had led to the situation in which academic work was not an attractive career for young higher education graduates, who prefer to work in other sectors of the economy where highly qualified work was better paid and offered more opportunities for future promotion. During the 1980s higher education in Poland suffered from emigration, whereas during the 1990s its main headache was the internal brain drain (Osterczuk, 1996). Higher education policy in Poland during the 1990s was focused mainly on ways to increase the student places without much increase in the state spending on higher education. Therefore, during the 1990s, the debate about the attractiveness of academic work – which includes such issues as reforming the structure of academic staff, new staff roles and career patterns, differentiation in remuneration, recruitment of younger graduates to an academic career, working conditions and career perspectives – was not engaged in by policymakers.

The data on the number of academics employed in higher education are presented in the table below. When we compare the slow increase in the number of academics with the huge expansion of student enrolment, it is clear that Poland has been experiencing qualified staff problems. The number of high ranked professors is significantly low in relation to student enrolments. While student numbers increased five-fold between 1990 and 2004, the number of academics in full-time employment has increased from some 60,140 in 1990 to 92,750 in 2004. More worrying is that the increase in the number of scientific staff is not only too slow, it does not even ensure the normal replacement or maintenance of the same number of academics in the coming years. It takes a considerable amount of time to earn a PhD, and then to obtain a habilitation (necessary to become a full professor). It usually took more than eight years to obtain a doctoral degree after obtaining a master's degree.

It is important to describe the system of PhD studies in Poland, which is different from most of other European countries. First, students are enrolled in PhD programs, either full- or part-time, which last usually four or five years. At the end of the program, they should enter the defence procedures, which means that the majority of their work on PhD thesis is done, and the student is prepared to defend his or her dissertation in a short time, mostly in two or three years. The problem of PhD programs is that only about 20 % of PhD students enter the defence procedures and are finally awarded the PhD degree. Between 1990 and 2004, the majority of academics who defended their PhD dissertation were between the ages of 31 and 40. A positive trend is observed in the number of PhD students, which rose from some 2,690 students in 1990 to more than 33,000 in 2004, but, as stated above, fewer than 20% of doctoral studies are completed with the award of the degree. In 2004, universities granted 5,722 doctoral degrees, compared to 2,356 in 1990.

Table 11.13: Academic staff in the 1990s

Year	Total number	State HEIs	Non-state HEIs	Professors full & associate	Assistant Professors	Lecturers senior & junior	Language teachers & instructors
1990	60 143	60 143	-	5 474	43 028	9 599	2 042
1991	60 376	60 356	20	7 569	41 575	9 330	1 902
1992	60 493	60 299	194	10 418	39 156	9 324	1 295
1993	62 075	61 633	442	10 824	39 555	10 282	1 414
1994	63 745	62 640	1 105	11 148	40 489	10 674	1 434
1995	66 900	65 169	1 731	11 490	40 838	11 027	1 445
1996	67 507	65 191	2 316	12 390	41 357	12 118	1 642
1997	70 224	66 679	3 545	13 007	41 993	13 412	1 812
1998	72 471	67 126	5 345	13 766	42 390	14 595	1 720
1999	75 194	67 564	7 630	15 109	44 234	14 261	1 590
2000	80 208	70 865	9 343	16 400	47 496	14 660	1 652
2001	82 401	73 409	8 992	17 764	48 215	14 612	1 810
2002	85 338	75 375	9 963	18 858	49 159	15 775	1 546
2003	88 158	77 039	11 119	19 951	50 161	16 582	1 464
2004	92 758	79 843	12 915	21 247	52 516	17 486	1 509

Source: Own analysis based on National Yearbook for Higher Education (1990 – 2004)

The distribution of academics across regions was analogous to students numbers in the same regions. During the period analyzed the great majority of faculty staff were employed in Warsaw, comprising about 15 to 18 % of all academics. The uneven distribution must have had an impact on the location of the newly emergent private providers, as their only source of academics in the first years of the 1990s was public institutions.

When analyzing the data in table 12.13, we can see the significant increase in full and associate professors in the years 1990 – 1993. Yet the increase was generated and caused by the abolition of the “docent” post. In the previous system docents were situated between assistant professors and professors in the academic hierarchy. Since 1990, most docents with habilitation have been promoted to the post of associate professor.

Between 1990 and 2004, the majority of academics who defended their habilitation dissertation were between the ages of 41 – 45 and 46 – 50. The average age at which an individual obtained a habilitation was about 48 years, and they became full professors on average at age 55. Moreover, the high ranked group of academic teachers is getting older (Kaiser & Wach, 2003). Projections indicate that in the coming years, the number of professors reaching the retirement age will exceed the number of habilitated doctors that will be appointed to full professorships.

Table 11.14: Enrolment in PhD programs

Year	Total	Full-time	Part-time	PhD students entering defence procedures	PhD degrees awarded
1990	2 695	1 926	769	869	2 324
1991	2 711	1 989	722	911	1 500
1992	2 900	2 054	846	924	1 800
1993	4 428	3 069	1 390	972	2 000
1994	7 133	4 697	2 436	1 464	2 280
1995	10 482	6 779	3 703	1 946	2 300
1996	13 351	8 355	4 996	2 740	2 218
1997	16 419	10 819	5 601	3 691	2 356
1998	19 735	14 538	5 197	5 061	3 172
1999	22 239	16 261	5 978	5 341	3 724
2000	25 622	18 882	6 740	6 107	4 400
2001	28 345	21 455	6 890	7 016	4 400
2002	31 072	23 451	7 621	7 237	5 450
2003	32 054	23 626	8 428	7 953	5 090
2004	33 040	23 027	8 949	8 869	5 722

Source: Own analysis based on National Yearbook for Higher Education (1990 – 2004)

In sum, the position of academics within the higher education system was relatively strong during the transformation process. Most of them were tenured. They were allowed to hold multiple teaching posts in other higher education institutions. Their relatively small number together with the state procedures for developing new study lines which included the employment of four or eight high ranked academics for bachelor or master degree programs, respectively, have lead to the situation where institutions, especially private ones, were battling for their employment. The level of professorial salaries in the private sector was much higher, amounting to about 130 % of salaries received in the public sector. In addition, academics, particularly in such fields as, among others, economics, management, finance and banking, political sciences, and computer sciences, were offered prospective posts outside academia, especially in the private service sector.

In addition, the power of academics was enhanced due to the high profitability of the private higher education industry (see next chapter) and relatively low barriers to entry into the higher education market. This implied that there was – and still remains, although to a lesser extent – a threat of credible forward integration by professors, who can establish their own higher education provider. The influence of academics on higher education institutions is usually higher when they are gathered in some unions or associations, which can express their opinions on the policies affecting academics, and on the management issues within higher education institutions. The interests of academic staff are represented by the two national trade unions, membership of which is open to the staff of institutions regardless of their level. The unions – *Związek Nauczycielstwa*

Polskiego (The Polish Teachers' Union) and the teaching profession branch of "Solidarity" – do not always take identical positions on the issues faced by the teaching staff. Moreover, staff from different types of institutions, such as private or public ones, research or teaching oriented, etc., and with different academic degrees usually have different or even contradictory interests and opinions on higher education issues. The activities of two unions were therefore limited.

11.6 Summary – industry analysis for higher education in the years 1990 - 2004

In general, according to the industry analysis provided in the previous sections, we may argue that the external environment for higher education changed dramatically compared to previous years, i.e., before 1990, and brought higher education favourable conditions, creating new opportunities and challenges for the Polish higher education sector. Below we summarize the major changes in basic and supply conditions during the two periods analyzed.

During the first period, the size of the university age population had been growing considerably. Changing labour markets demands for skilled and highly qualified employees since 1990 had major implications for the development of higher education. Figure 12.1 illustrates that even in a period of soaring unemployment, higher education graduates did much better in the labour market than those with secondary or vocational education. Higher education became a precondition to having a well paid, interesting job. The data presented in table 12.1 show that the relative wage difference between the poorly and well educated employed population increased substantially in the period analyzed.

The degree of rivalry between higher education providers, despite the immense growth of private higher education institutions, was relatively low and in fact had been decreasing, when analyzing the average number of students per single institution in the years 1990 and 1997.

Despite the increase in student enrolment in post-secondary courses offered by non-higher education institutions, they still accounted for less than 20 % of higher education enrolment and the difference between the enrolments has been increasing substantially. In addition, the labour market for secondary school graduates, which is often recognized as an important indirect substitute offer for higher education, was insignificant, as the unemployment rates for those graduates amounted to 40 %.

We can distinguish two major negative impacts on higher education: low state subsidies for public higher education and low levels of faculty salaries, and small number of high ranked academics. These facts had pushed many academics into holding two or three teaching posts in different higher education institutions,

which may lead to deterioration in the quality of Polish higher education. In addition, during the period analyzed, the academic career did not appear very attractive to higher education graduates, which resulted in a slow rate of increase in the number of academics. Nevertheless, we may predict, based on our industry analysis, that during the first period analyzed, the forces that to a large extent determine the size of higher education brought advantageous conditions for higher education and its development.

The situation changed during the second period, i.e., between 1997 and 2004, in two related aspects in particular. As the demographic low approached higher education, the number of university age cohorts stabilized and from 2003 it began to decline. As a result, together with the increased number of higher education institutions, the degree of rivalry increased; the average number of students per single higher education institution declined.

To summarize, one can say that during the years 1997 and 2004, in particular in 2000s, the external conditions for higher education had deteriorated compared to the 1990s, in terms of the demographic low and the higher degree of rivalry on the higher education market.

12 Strategic responses of private higher education institutions

In the following two chapters (chapters 12 and 13) we analyze the developments and changes in the Polish higher education system in terms of the performance of higher education institutions. In chapter 13 we focus on the private sector, whereas chapter 14 looks at the public sector.

We give answers to hypotheses relating to the strategic responses of higher education institutions depending on the external conditions and institutional arrangements during the first and second part of the transformation process, viz., between the years 1990 and 1997 and 1997 and 2004.

As presented in the methodological chapter, the analysis covers the following issues:

- the number of private higher education institutions, with regard to their year of establishment, location, study courses offered, students number, structure of enrolment, academics employed, admission policies and the level of tuition fees charged;
- the number of public higher education institutions, with regard to their location, number of students enrolled, structure of enrolment, academics employed, admission policies, programs offered and the level of tuition fees;
- the number of students enrolled in higher education, with regard to study fields, type of institution, institution's location, mode and type of courses attended, and student age and students' socio-economic background;
- the number of academics, with regard to their scientific degrees and type of institution in which they are employed.

In each chapter we look at the performance of higher education institutions in the first and second parts of the transformation process. Moreover, in each chapter we provide an analysis at the system level as well as the institutional one (by looking at selected higher education institutions).

12.1 Distribution of private higher education providers across regions

12.1.1 *Distribution in the years 1990 – 1997*

According to our theory and empirical analysis of private higher education around the world, we have argued that in a context of substantial student

demand for higher education, public budget constraints that entail capped enrolment growth in free-of-charge state universities through the establishment of strict entrance exams and quotas, and limited government regulations in terms of low barriers to entry, private higher education institutions will likely appear at a rapid rate. In addition, we expect that this expansion will not be uniformly distributed across all regions. Private higher education will not be likely to emerge in less developed regions, nor in smaller cities. Therefore, a significant proportion of private providers will be situated in and around large urban areas and academic centres.

A rapid expansion of the private higher education sector began in 1991, when the new state regulations allowed private institutions to enter the higher education market and introduced relatively low legal barriers to entry. Since that time the number of private providers has been growing continuously and considerably. The first – and at that time the only – private higher education institution established in 1991 was the Private Academy of Business and Administration in Warsaw. Yet, in 1992 ten more private providers had emerged, among them four in Warsaw (Academy of Insurance and Banking, Warsaw Academy of Management, Academy of Management and Marketing and European Academy of Arts). The first private institutions established outside the capital city were the Academy of Foreign Languages and Banking in Częstochowa, Academy of Management and Banking in Poznań, and Mazurian Academy in Olecko – a small town, where previously there had been no higher education institutions.

In the next year, 1993, 16 new private institutions entered the higher education market. Similarly, half of them (8) were established in Warsaw, such institutions including Warsaw Business Academy, Łazarski Academy of Commerce and Law and Koźminski Academy of Entrepreneurship and Management. Of the other 8 institutions, 7 were established outside the metropolitan areas, in cities that were not previously academic centres, and usually without any higher education institutions. These private providers were Academy of Management and Banking in Płock, Academy of Commerce in Kielce, Academy of Finance and Management in Białystok, Academy of Humanities and Pedagogy in Łowicz, Academy of Business – National Louis University in Nowy Sącz, and Academy of Public Service in Suwałki.

Within the next few years the number of private institutions increased, reaching its peak in 1996 with 33 new private institutions. Table 12.1 gives data on the number of new private higher education institutions, while table 12.2 presents data on the number of private higher education institutions across the cities and the sixteen voivodeships, in which institutions were operating in 1997 (see also figure 12.1). In 1997, private higher education institutions were situated in 53 cities, and in all voivodeships. Large metropolitan areas usually contained more private providers. The capital of Poland, Warsaw, became the most popular

location where founders decided to establish private institutions, with 34 providers. Despite the fact that providers were located in all regions in Poland, a great part of them – 80 private institutions – were situated in only four voivodeships. Although these four voivodeships were most densely populated, nevertheless together they amounted to only less than 25 % of all the population and territory, whereas 80 institutions accounted for 62 % of the total number of private providers. On the other hand, we can find four voivodeships with only 6 private providers. Although these regions accounted only for 16 % of total population and 23 % of total Polish territory, their private providers made up only 4.6 % of the private sector.

Table 12.1: Newly established private higher education providers

	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
Number of private HEIs	1	11	27	46	70	103	128
New private HEIs	1	10	16	19	24	33	25

Source: Own analysis based on National Yearbook for Higher Education (1990 – 1998)

Table 12.2: Distribution of higher education institutions across the voivodeships in 1997

No.	Number of HEIS	Voivodeship	Number of HEIs in main cities
1.	40	mazowieckie	Warsaw - 34
2.	18	śląskie	Bielsko-Biała – 5, Katowice – 4, Częstochowa - 3
3.	12	łódzkie	Łódź – 9
4.	10	wielkopolskie	Poznań – 8
5.	7	podlaskie	Białystok – 5
6.	7	dolnośląskie	Wrocław – 5
7.	6	małopolskie	Kraków – 3, Tarnów - 2
8.	5	świętokrzyskie	Kielce – 3
9.	5	zachodnio-pomorskie	Szczecin – 4
10.	4	podkarpackie	Rzeszów – 2
11.	4	pomorskie	Gdynia – 2
12.	4	warmińsko-mazurskie	Olsztyn – 3
13.	3	lubelskie	Puławy – 1
14.	1	kujawsko-pomorskie	Włocławek – 1
15.	1	opolskie	Opole – 1
16.	1	lubuskie	Gorzów Wlkp. – 1
Total	128		

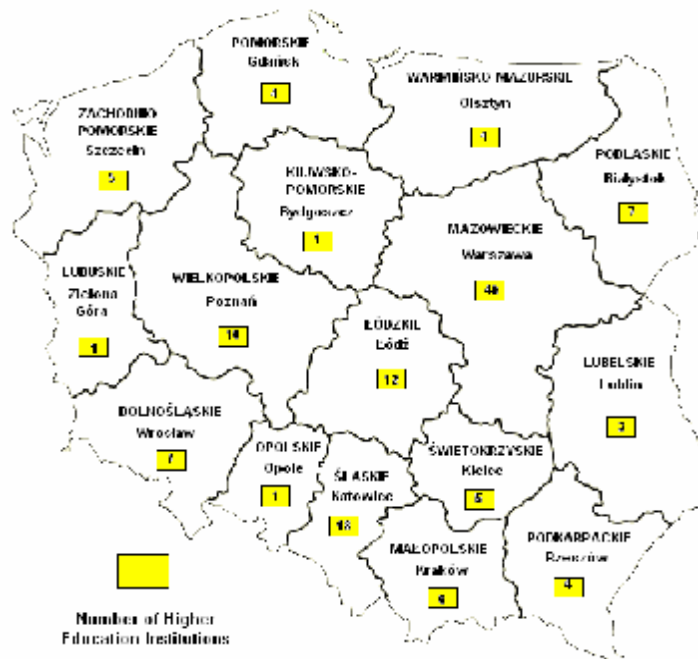
Source: Own analysis based on National Yearbook for Higher Education 1997

To summarize, private providers in the first years of the 1990s were established mostly in metropolitan areas and larger cities, although some of them were located in smaller non-academic centres, which created opportunities for regional students to acquire higher education qualifications and degrees without the

necessity of moving to larger cities. Nevertheless, we can argue that private providers were not evenly distributed across the country.

The distribution of private higher education providers was in conformity with the disparities in average economic growth across the various regions. Warsaw and Upper Silesia – slaskie voivodeship – experienced the highest levels of economic development and of available family income, and the lowest levels of unemployment. Comparably, as Poland, in terms of overall economic growth was divided into two parts, the distribution of private providers to a large extent reflected this division. By contrast, in the most advantaged regions, such as mazowieckie, slaskie, and wielkopolskie voivodeships, 73 private providers were established, making up almost 60 % of all privates. In the eastern and northern regions, such as podkarpackie, lubelskie, podlaskie, warmińsko-mazurskie, pomorskie and zachodnio-pomorskie voivodeships, with the lowest levels of economic development, only 27 private higher education institutions were established up to 1997. The sole exception was Białystok, where five private providers functioned in 1997.

Figure 12.1: Distribution of higher education institutions across the voivodeships in 1997



Source: Own analysis based on National Yearbook for Higher Education 1997

As our theory (see chapter 3.6.2.) suggests, economic development to a great extent determines the structure and growth of each industry. Therefore, as we expected, the regions with the highest level of economic growth foster the development of private higher education institutions. In addition, in analyzing the distribution of private providers, it is important to indicate that in the four leading regions the structure of the economy differed significantly from other regions. North-eastern, north-western and eastern parts of Poland were dominated by state farms, which suffered especially during the first years of the transformation process, whereas in the leading regions, service industries and the private sector provided a substantial fraction of employment positions.

To summarize, one can say that the empirical analysis of the distribution of private providers across regions supports our theoretical considerations about the influence of economic development on the growth of the private higher education sector. As such, the majority of private institutions were established in large metropolitan areas with the highest economic development.

Moving forward, according to our theory one of the most important drivers for development of private higher education institutions in a particular region or town is the level of demand excess above what incumbent public institutions could accommodate. Following Geiger (1986), the amount of higher education provided by public institutions is the most important determinant of the size and character of private higher education. Therefore we might assume that the regions with highest levels of demand for higher education will be particularly rapidly settled by private higher education institutions. According to our theoretical considerations, in one of our hypotheses we drew conclusions about the relation between the locations of private higher education institutions and the demand. However, as there are no data on the level of student demand excess across the regions, since we do not have data on the percentage distribution of candidates accepted in public higher education institutions across the regions, we will look at the indirect indicators of demand on higher education, such as the population density and the numbers of higher education relevant age cohorts in the various regions.

In 1997, the distribution across the regions with regard to the population density confirms our assumptions. In the regions with the lowest density level, which in turn overlap with those with lowest economic development – lubelskie, lubuskie, podlaskie, zachodnio-pomorskie and warmińsko-mazurskie regions – only a small fraction of private providers were established. These regions account for 35 % of Polish territory and only 19 % of the population: the number of private providers established in these regions was 21, which amounted to 16 % of the total number of privates. On the other hand, in the four densest regions – śląskie, małopolskie, mazowieckie and łódzkie, the territory of which accounts for 26 % of

Polish territory and 41 % of the population – the number of private providers was 76, which accounted for 60 % of all privates.

In terms of the distribution of population of higher education relevant age cohorts, the regions with the smallest numbers were lubuskie, opolskie, podlaskie, świętokrzyskie and warmińsko-mazurskie. These regions make up 26 % of Polish territory, while the share of higher education relevant age cohorts in the 1990s accounted for only 15 %. In these regions only 18 private providers were founded. Yet, in the four regions with the highest numbers of higher education relevant age cohorts – śląskie, małopolskie, mazowieckie and wielkopolskie regions – the number of private providers amounted to 74, although these regions make up only 29 % of Polish territory.

Therefore, we may argue that the density of regions and the numbers of higher education relevant age cohorts to a large extent influenced the distribution of private providers.

Nevertheless, one can state that, despite the fact that most of the new private providers were established in large metropolitan areas with access to academics (the existence of public higher education institutions that act as a reservoir of academics to be employed by privates) and with high student demand, several private institutions were founded in small towns in the regions without higher education institutions. These providers significantly increased higher education options for students from lower socio-economic backgrounds or from rural areas, who would probably not be able to study at far-away public institutions because of the high costs associated with living in larger cities. Private institutions have also expanded the possibilities for study for those students who would not be admitted to free-of-charge study places in public institutions, due to strict entry requirements and huge competition between applicants. Usually students from families with a tradition of higher education had and still have much better access to full-time free-of-charge study courses. The issue of equitable access to higher education and admission procedures adopted in the private sector is discussed in the following sections.

What is more, the existence and functioning of a higher education institution in a small town has become a good development stimulator and unemployment inhibitor. Following Pawłowski (2004) “all local governments aspire to possess a higher education institution, since it accelerates local development, improves workers’ qualifications, draws in investors and raises the wealth of the local population”. Research conducted during 2000 in Nowy Sącz, a small town in małopolskie region, with one private higher education institution established in 1992, showed that 1,500 full-time students left over 4.5 million Euro in the pockets of local inhabitants, which was a considerable sum in a region where the monthly salary was about 500 Euros. A higher education institution surrounds itself with

multiple new jobs in services, and every 40 – 50 students that undertake their education in a given institution create one external job and two jobs within the school (Chlipała, Remi, 2001).

To summarize, the distribution of private providers across regions during the years 1990 and 1997 was uneven, with the majority concentrated in or around large metropolitan areas and academic centres.

12.1.2 Distribution in the years 1997 - 2004

The passage of the Vocational Higher Education Schools Act in 1997 was a second change in the institutional arrangements that boosted the development of private higher education. As already described, new private higher education institutions established under the 1997 Act are registered as vocational higher education schools and can offer only bachelor degree courses. In order to award master degrees, they have to change their status and operate under the 1990 Act. The new regulations, by decreasing the requirements for opening a new higher education institution in terms of high ranked academics required, were designed to encourage the founders of private providers to locate their schools in small towns and those regions with small numbers of higher education providers.

Due to these changes, during the years 1999 and 2004 private higher education in Poland experienced a second period of explosive development. The table below provides data on the new private higher education institutions during the period. The expansion reached its peak in 2002 with 31 new private providers on the market. On average almost 23 new institutions were founded in each year, compared to 18 in the years 1991 and 1997.

Table 12.3: Number of new private higher education institutions by year of establishment

	Year of establishment						
	1998	1999	2000	2001	2002	2003	2004
New private providers	13	16	21	26	31	22	27

Source: Own analysis based on National Yearbook for Higher Education (1998 – 2004)

The dynamism of the private sector did not falter, even during the stagnation period and economic crisis in the years 1997, 2002. In the context of a substantial growth in demand for higher education at the end of the 1990s and the beginning of the 2000s, public budget constraints and limited government regulations, in terms of accreditation procedures up to 2002, private institutions continued to appear at a rapid rate.

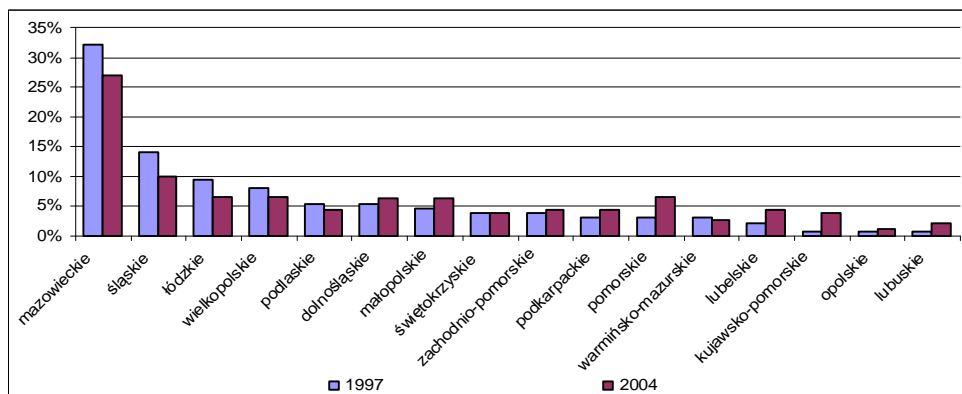
This expansion, in contrast with the first period, was more uniformly distributed over the regions. Private higher education over the years 1990 and 1997 did not seem to take root in the less developed regions, with the great majority being

established in large metropolitan areas and in those regions with highest economic growth. In the 2000s, private higher education institutions have also proliferated in the regions with lower levels of per capita income. This changed pattern in the distribution of private providers also holds as between large urban areas and smaller cities, with an increased proportion of private providers established in small cities. As a consequence, in 2004 private higher education was more evenly distributed across the country compared to 1997.

The largest number of private providers was established in mazowieckie region, especially in Warsaw. Yet the proportion of private providers in mazowieckie region to the total number of privates decreased by 5 percent, from 32 to 27 percent in 2004. Analogously, the next two most developed regions, śląskie and wielkopolskie, also experienced a decrease in the share of private providers.

On the other side of the market, such regions as lubuskie, kujawsko-pomorskie, lubelskie and warmińsko-mazurskie, which have the lowest income per capita, increased their share of private higher education. The poorest regions were also those with lowest population density and higher education age cohorts. The sole exception is the opolskie region with only three private higher education institutions in 2004. It is also worth indicating that disparities in terms of economic growth between the regions remained on a similar level as during the beginning of the 1990s.

Figure 12.2: Distribution of private higher education institutions by regions (in percentages)



Source: Own analysis based on National Yearbook for Higher Education (1997, 2004)

Therefore, we may argue that the new Vocational Higher Education Schools Act brought positive effects, in terms of more even distribution of private higher education providers. Funders of private institutions were now less tied to the distribution of high ranked academic staff, who were mostly employed in large academic centres.

Table 12.4: Distribution of private higher education institutions by regions in 2004

No.	HEIs		Voivodeship	Main city	No.	HEIs		Voivodeship	Main city
	I	II				I	II		
1.	78	2	mazowieckie	Warsaw – 62	9.	12	4	zachodnio-pomorskie	Szczecin – 11
2.	29	10	śląskie	Katowice – 10	10.	12	4	podkarpackie	Rzeszów – 2
3.	19	7	łódzkie	Łódź – 14	11.	12	4	lubelskie	Lublin – 6
4.	19	7	wielkopolskie	Poznań – 18	12.	11	4	kujawsko-pomorskie	Bydgoszcz – 4
5.	19	7	pomorskie	Gdańsk – 8	13.	11	4	świętokrzyskie	Kielce – 9
6.	18	6	dolnośląskie	Wrocław – 13	14.	8	3	warmińsko-mazurskie	Olsztyn – 3
7.	18	6	małopolskie	Kraków – 11	15.	6	2	lubuskie	Gorzów Wlkp. - 2
8.	12	4	podlaskie	Białystok – 7	16.	3	1	opolskie	Opole – 2

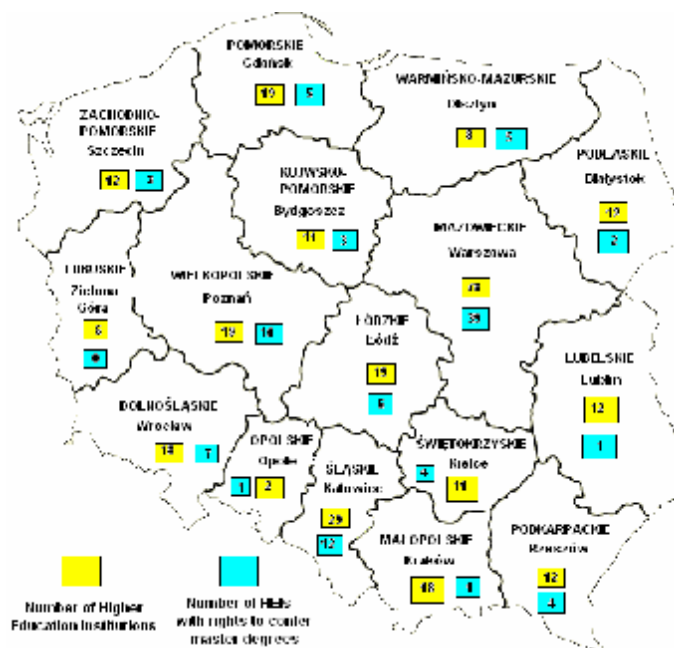
Source: Own analysis based on National Yearbook for Higher Education (2004)

I – in numbers

II – in percentages (round)

On the other hand, as formulated in the hypothesis, we also expected that new private institutions established in a relatively mature and saturated market will more often locate in small non-academic cities, without a higher education tradition, in order to attract new groups of students. As the higher education market in the late 1990s, and later on, became a highly saturated one with many higher education institutions and attenuated student demand growth, a greater number of the funders of new private providers decided to follow the expected pattern and established institutions in small, non-academic centres.

Figure 12.3: Distribution of private higher education institutions by regions in 2004



Nevertheless, despite the more even distribution, the majority of new providers were in fact established in large metropolitan areas, in regions with highest levels of economic development and population density.

12.2 Study offer in private sector

This section looks for an answer for the part of the hypotheses about the development of the private sector with regard to study offer. We shall look at the following issues: number of programs offered, distribution of students by disciplines, modes of delivery and types of programs – whether the institution had the right to confer bachelor or master degree programs.

12.2.1 Study offer in the years 1990 – 1997

According to our theoretical models (see chapter 6.4), we expected that private higher education providers on the new markets, with increasing student demand, low degree of rivalry and lack of state financial support would mostly adopt a strategy of ‘aggressive growth and market expansion with low or average prices’. This strategy, when adopted by universities and colleges, implies that providers select a number of high demand / low-cost study programs, usually vocationally oriented, that are offered to prospective students in specific segments of the student market for moderate or lower prices as competitors. According to monopolistic competition – which, as we have shown, best addresses the unique characteristics of the higher education market – the product differentiation for universities and colleges adopting this kind of strategy will be based on location and price. The providers try first of all to attract the students groups that are under served by public institutions, and will focus their attention on regional students. Only few private providers, usually located in large academic centres, will adopt the high quality and high price strategy and develop a broad study offer, award master degrees, and introduce stricter entry requirements.

In short, we have assumed that the majority of private providers will offer reduced undergraduate programs in the service professions, such as business, finance, management and humanities. According to Levy’s classification, these establishments would be called ‘demand absorbing’ institutions, catering to the lower and middle class (Levy, 1986). Let us look at the issue of study offer in the private sector in Poland.

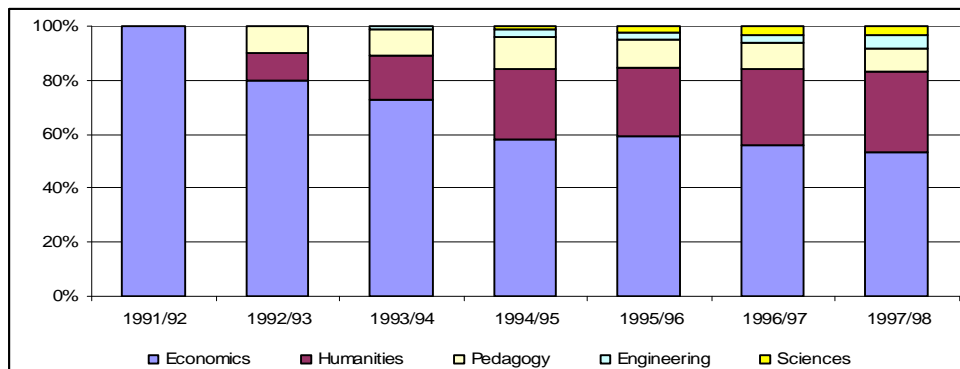
The first private higher education institutions that entered the market in 1991 and 1992 offered study courses in five study fields. The great majority of them offered study lines in marketing and management. The Academy of Foreign Languages and Banking in Czestochowa established study programs in economics and English philology, the Mazurian Academy in Olecko in pedagogy, and the

Academy of Arts in Warsaw offered study courses in painting. During the following years, the distribution of study programs among new private entrants was analogous, in terms of a supremacy of study courses in business and management fields. Therefore, in 1997, the majority of the degrees offered through the burgeoning private sector were in such fields as business and management, administration, pedagogy and political science.

The table below provides data about the distribution of study programs in the private sector in 1997. The most common study line provided in 60 private institutions was marketing and management, followed by pedagogy, administration and economics, each offered in 20 institutions. Finance and banking and political sciences were offered in 17 and 13 providers, respectively. In general, private institutions offered study courses in high demand and so-called 'low cost' study fields.

The distribution of student numbers across disciplines was proportional to the dispersal of study programs (see figure 12.4). According to the data presented in the figure below, students enrolled in disciplines in the field of economics were in a significant majority during the period analyzed. However, their share of the total number of students has been decreasing gradually, and in the academic year 1997/98 it represented 53 % of students. Students in humanities related subjects, such as administration and political science, comprised 30 % of total enrolment.

Figure 12.4: Distribution of students across disciplines



Source: National Yearbook for Higher Education (1991 - 1998)

Table 12.5: Distribution of study fields offered in private sector in 1997

No.	Study fields	No. of HEIs	No.	Study fields	No. of HEIs
1.	Management and marketing	60	9.	Philology	6
2.	Economics	20	10.	Environment protection	6
3.	Administration	20	11.	International trade relations	5
4.	Pedagogy	20	12.	Sociology	5
5.	Finance and banking	17	13.	Sports, Environment protection	3
6.	Political sciences	14	14.	Painting, Graphics, Mathematics	2
7.	Computer sciences	12	15.	Psychology, Law	1
8.	Tourism and recreation	8	16.	History, Biology, Agriculture	1

Source: Own analysis based on Guide-book for secondary school graduates (1997)

In 1997, the majority of higher education institutions offered only one (77) or two (28) study lines. Within the two groups most institutions developed programs in economics, while only a few offered courses in pedagogy and political science. 17 private providers delivered courses in three study lines and only 6 institutions provided more than three study lines. Among them were the following schools: Mazurian Academy in Olecko with management and marketing, pedagogy, philology and environment protection; Academy of Management and Banking in Płock which offered marketing and management, pedagogy, political sciences, sports and computer sciences; Academy of Humanities and Economics in Łódź with four lines – management and marketing, pedagogy, philology and computer sciences; Academy of Humanities in Pułtusk with six courses in pedagogy, history, administration, philology, political sciences and environment protection study lines; Academy of Humanities and Economics in Włocławek where students could study at four faculties – administration, pedagogy, economics and history; and Academy of Humanities and Natural Sciences in Sandomierz with philology, biology, agriculture, administration, history, mathematics and computer sciences.

It is worth emphasizing that the multi-providers were usually established in small towns without any higher education traditions. On the other hand, all of them were located close to Warsaw, except the Academy of Humanities and Economics in Łódź, and their founders as well as academics originated from Warsaw. This may explain their relatively rich study offer. Moreover, their offers encompassed not only business oriented study courses but mostly courses in social and natural sciences. Founders of these private institutions often characterize their commitment to the academic values underlying the disinterested pursuit of knowledge.

In the first years of the transformation period, private institutions offered mostly bachelor study courses. The first private provider, the Private Academy of Business and Administration in Warsaw, was also the first, in 1994, to offer study

courses at master degree level in economics. Private providers which received from the Ministry the rights to confer the master degrees were: in 1995 - Academy of Insurance and Banking in Warsaw in finance and banking, and Academy of Finance and Management in Białystok in management and marketing, followed in 1996 by three other institutions: Koźminski Academy of Entrepreneurship and Management in Warsaw in management and marketing, Łazarski Academy of Commerce and Law in Warsaw in economics, and Warsaw Academy of Management in marketing and management.

To summarize, in the academic year 1997/98, 12 private higher education institutions offered one study line at master degree level, and only the Academy of Management and Banking in Płock developed two study lines at master degree level. These master level courses were offered in management and marketing and pedagogy in four institutions, economics in three, finance and banking in one and painting in two Academies of Arts in Warsaw and Poznań. The remainder of the private institutions offered only undergraduate vocationally oriented education to their students. The common feature of private providers that fulfilled the Ministry requirements to offer master degree courses was their location. Eight private providers were established in Warsaw and the other two in close proximity to Warsaw. Only three institutions were located in other cities: Poznań, Częstochowa and Koszalin, beyond the sphere of influence of academics from Warsaw.

In our hypotheses we argued that program offering, distribution of study fields, and the type of courses offered by private sector in the years 1990 – 1997 were shaped by the particular institutional arrangements, such as low barriers to entry, lack of state financial support for private higher education and for students in the private sector, and external factors, namely, increasing student demand and low degree of competition. Let us look at whether the typical features of private higher education institutions fitted our hypothesis in terms of study offer during the first years of the transformation process.

During the first years after the economic change, almost all private institutions offered vocationally oriented bachelor degree level study programs. The great majority of disciplines were offered in business and management fields. The next largest groups were humanities and pedagogy. The percentage of other study fields delivered in the private sector was insignificant. Diversity within study fields across providers was thus very limited. Finally, most of them (61 %) offered courses only in one study line, 22 % in two study lines, 13 % in three, and only 4 % developed more than three study lines.

Most of the private institutions that emerged claimed a vocational and professional mission. By offering vocationally oriented study courses in high demand fields, they aimed to prepare specialists able to meet the demands of a

market economy. By introducing bachelor degree programs first on the market, private schools facilitated the development of professional education. Their study programs and curricula were intended to provide the specialized education necessary for the changing economy. The formulation of their strategies during the first years of economic transformation was the result of pressures and expectations from different groups, most of all students and business companies, which employed the increased number of higher education graduates, in particular with diplomas in the economics disciplines.

The second important driver for establishing study programs in economics and humanities was the relatively low costs of their provisions. Private higher education institutions, officially recognized and accredited by the Main Councils for Higher Education, as analyzed in the previous sections, were excluded from the state financial support system. According to the data provided by the Main Statistical Office, during the early 1990s, all private providers were totally dependent on tuition fees. Despite the fact that the great majority of them were 100 % financially independent institutions, tuition fees paid by students constituted the main source of their funding, usually being responsible for 100 % of total income. In the following years, the structure of their income has not changed to any great extent. In the academic year 1997/98 the share of tuition fees in the total income of the private sector amounted to 95 %. In the private institutions that were characterized as economics academies, the level was slightly lower (94 %), whereas in the humanities and pedagogical institutions tuition fees comprised almost 98 % of total income. On average, across the private higher education sector, research funds made up only 0.01 % and income from business activities up to 1 %. The difference from the first years of existence came down to the income from interest rates that private institutions received from their financial assets.

The implications of absence of non-tuition sources of revenue was discussed thoroughly in the theoretical chapter. Briefly, we have argued that, according to our theory, non-profit institutions differ from the for-profit entities in the sense that the non-profits' objective function involves 'marginal value'. Due to a 'microeconomic theory of non-profit organizations', this is because all surpluses in non-profits must be reinvested within the entity, rather than inuring to external private stakeholders. Governments and private foundations perceive this constraint as a kind of collateral that public subsidies or private endowments or donations channelled to these institutions will be used as intended, which means furthering the public good. In addition, following Massy (2005), we argue that the distinction between non-profit and for-profit is most important where a degree of subsidy is involved. In the case where organizations do not receive any subsidies the distinction decreases, and is unimportant when the organization's financial sources come only from its sales to consumers. Private colleges deprived of state subsidies are not likely to serve the public interest. Of course, some of them may

conduct basic research and develop low demand study programs, but these choices will be made not in the furtherance of the public interests but to enhance reputation and prestige. In general, the strong reliance on tuition fee-paying students makes the private institutions overly dependent on market forces, and often hampers program development in many different fields.

The next reason that private institutions delivered mostly bachelor programs and vocationally oriented curricula, apart from the high demand on such graduates on the labour market, was the deficiency in numbers of highly ranked academics, and their reluctant to have their primary employment in the private institution. The scarcity of high quality faculty members was one of the major obstacles to the further expansion of private institutions. That is to say, the major weakness that private institutions were attempting to address related to their faculty profile. The majority of their faculty occupied permanent positions at state universities or other public higher education institutions, and only 'travelled' to a private institution to deliver a lecture or seminar. The greater part of employment contacts in private institutions, during the first years of the period analyzed, were for a limited period of time or number of classes (Kryński, 2002). The negative consequences for the educational process in private institutions included a lower faculty commitment to the life of the institution and a lack of research, which was conducted in the home universities of faculty. However, over time, there has been an improvement in this situation. Private institutions attempted to resolve this problem in many parallel ways. Institutions employed business practitioners, such as consultants, managers, practicing lawyers, etc. as assistant professors. Some institutions also made extensive use of foreign visiting faculty members. Finally, a large number of private providers offered substantially higher salaries for the best faculty than those in public sector, in order to employ them on a full-time basis. To summarize, up to 1997 private institutions were able to attract many high ranked scholars. The academic staff in the private sector in 1997 consisted of nearly 4,900 academics, which constituted almost 9 % of the total academic staff in the country. However, when we compare the share of students enrolled in the private sector, which accounted for 19 % of all enrolments, the insufficient number of academic is still apparent.

It is important to note that before 1990, higher education institutions did not offer bachelor degree programs. Higher education was identified with the master degree and diploma. The 1990 Law introduced the two-tier education process; alongside the conventional 5-year progressive mode of study, it introduced 3-year professional programs ending with the award of a conventional or engineering bachelor degree, followed by a 2-year graduate program. While throughout the world vocationalism might be a common feature of higher education, as in the two-level higher education in developed countries, it was new in Poland. Looking back to the 1990s we may safely argue that the 3-year bachelor degree programs suffered from social acceptance and legitimacy, and more than half the

undergraduates continued their education at graduate level. On the other hand, looking from today's perspective, it was an achievement of private higher education that it adopted and applied the two-tier educational process, as the new law on higher education, passed in 2005, introduced an obligatory two-tier education process, in an attempt to harmonize with the European higher education structure.

To summarize, as expected, unsubsidized private higher education institutions mostly developed so-called low-cost study programs in high demand areas. The overwhelming majority of private institutions were single discipline, vocationally oriented institutions offering only bachelor degree programs. Only a few, which could reasonably be called truly academic institutions, had a relatively wide array of teaching programs in a variety of disciplines and conferred master degrees.

12.2.2 Study offer in the years 1997 – 2004

According to our assumptions about a stable, saturated market, we may identify three possible strategic responses of private providers to the new external conditions (see section 6.4). Some private institutions will try to challenge the public institutions by offering more academic rather than vocationally oriented courses, and increase and diversify their program offerings. Privates will try to attract students that previously were served by public universities and colleges. At the other extreme, some private providers will adopt a so-called defence strategy. This approach implies that higher education institutions will offer a very limited number of teaching programs, and will not expand their offer of graduate level courses. Clearly this market strategy resembles Porter's cost leadership strategy. Similarly, most universities and colleges adopting this strategy are considered low quality ones, with low prices and relatively narrow program offerings. Finally, the universities and colleges that adopted the high quality / high price strategy in the new, growing market will not change and further widen their program offerings and quality of education provided.

In addition, in case of new private institutions established during the second period of the transformation process, we expect most of them to choose the low cost strategy and offer a very reduced number of teaching programs, usually vocationally oriented.

Let us look first at those private institutions established before 1997. One of the most important dimensions in institutional diversification was the creation of graduate programs. During the late 1990s and 2000s, a growing number of private higher education institutions introduced graduate training, mostly in economics, management, law, computer science and a few study lines related to humanities and teacher education. The great majority of these programs are limited to master degree courses. However, in 2004, five private higher education

institutions had rights to confer doctoral degrees and conduct doctoral programs. The Koźmiński Academy of Entrepreneurship and Management and the Academy of Insurance and Banking, both in Warsaw, had rights to confer doctoral degrees in economics; the Academy of Psychology in Warsaw confers doctoral degrees in psychology, whereas the Polish-Japanese Academy of Computer Sciences in Warsaw awards PhDs in the field of computer sciences. The Academy of Humanities in Pułtusk had the right to confer doctoral degrees in history and political sciences. Recently, in 2003, the Koźmiński Academy of Entrepreneurship – the first private provider to do so – acquired the right to confer the title of habilitated doctor.

The common feature of all these private higher education institutions was the location – namely in Warsaw or close to the capital city – and Pułtusk in the case of the Academy of Humanities. The large number of highly ranked academics, necessary for gaining the right to confer doctoral or habilitated doctor degrees, allowed these institutions a significant development in terms of study offer. Another common aspect of these institutions is that all of them were established in the early 1990s, as first private providers. In addition, all of them in a relatively short period gained the right to confer master degree courses, namely in the mid-1990s. Their study offer in terms of disciplines was also significant, with three or more study lines. In particular, the Academy of Psychology in Warsaw offered courses in ten disciplines, the Academy of Humanities in Pułtusk in eight, the Koźmiński Academy of Entrepreneurship in six, and the other two in three. Except for the Academy of Humanities in Pułtusk, the remaining four Warsaw institutions also charged some of the highest fees on the market.

According to our typology, we may safely call these establishments truly academic institutions, pursuing a high quality strategy. They have a wide array of teaching programs, offering postgraduate courses in a variety of disciplines. Due to the rights to confer doctoral degrees they also have to conduct research and maintain the academic equipment needed to sustain them.

However, even more striking was the growing number of private providers that offer master degree courses. In 2004 their number increased to more than 100 institutions, compared to just 12 in 1997. This means that, of 287 private providers on the market in 2004, almost 35 percent had rights to confer master degrees. In terms of disciplines offered at master degree level, 56 courses were offered in economics related subjects, 53 in humanities, 20 in pedagogy and teacher training, 15 in the sciences and arts. Interestingly, only a few private providers offered master courses in engineering study fields. Of 100 private institutions that offer postgraduate courses, 10 were established under the new Vocational Higher Education Schools Act of 1997, and at first functioned as vocational schools with an offering limited to bachelor degree courses. Therefore, as we expected, the great majority of private institutions with master courses were established under

the 1990 Act, most of them in fact in the early or mid 1990s. The largest proportion of private providers with postgraduate courses was found in Warsaw: 50 percent, with 30 providers. In other cities and regions their share was lower, amounting to 30 percent.

Analogously, during the period analyzed, a growing share of students in the private sector were enrolled in master degree courses. Looking at the figure below, we can see that their share increased by 17 percent, from 12 percent in 1997 to almost 30 in 2004.

Figure 12.5: Distribution of students by type of enrolment in private higher education



Source: Own analysis based on National Yearbook for Higher Education (1997 – 2004)

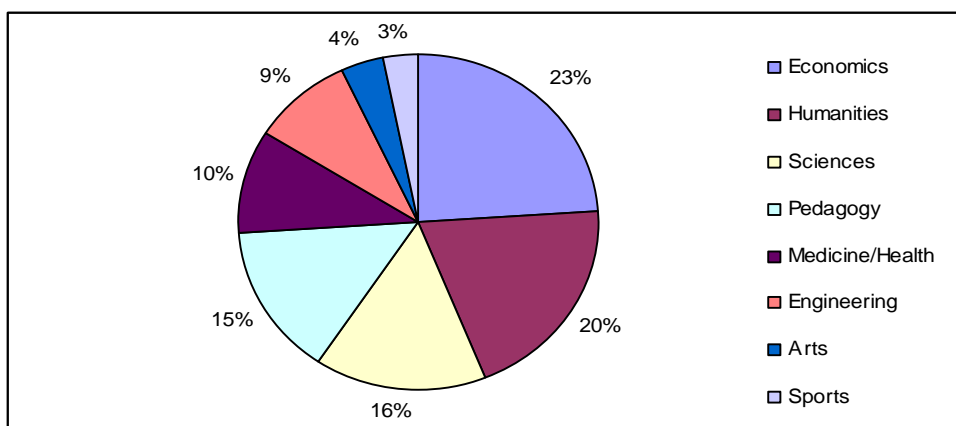
It is important to point out that most providers with master level courses also developed a relatively wide array of study programs in various disciplines, compared to the beginning of the transformation process. In 2004 the average private higher education institution with master degree courses offered five study programs on average. More than 10 private providers established 10 or more study programs in various disciplines. Only 7 private providers offered a single study program.

On the other side of the market we find the institutions established under the 1990 Act that did not offer the master degree courses. There were about 40 such establishments in 2004. In contrast to the providers described above, these non-university type of institutions were usually small, teaching-oriented providers with a reduced number of undergraduate programs. The average number of study fields offered by these institutions did not exceed 2 in 2004. In addition, almost 45 percent of these providers established only one undergraduate study program, while 25 percent offered two. Another significant feature of these institutions was their homogeneity in terms of study disciplines. The great majority provided courses in economics related subjects and the rest in humanities.

To summarize, this homogeneous group carries out teaching activities in low-cost disciplines. They develop neither postgraduate programs nor research. Accordingly, as we shall see in the following sections, they tend to have low or very low tuition fees. Yet there is no clear pattern in their distribution, as some of them are situated in large metropolitan areas and some in small cities.

In terms of the private vocational higher education institutions, the disciplines in which they offered studies was more heterogeneous (see figure 12.6). As expected, a significant proportion of new private providers that are established in saturated markets with a high degree of rivalry will, in order to insulate the demand for their products from the behaviour of other institutions, provide more unique study courses, which were not previously offered by older, private institutions and thus distinguish themselves from the competition.

Figure 12.6: Study offer in private vocational higher education institutions by discipline in 2004



Source: National Yearbook for Higher Education (2004)

We assumed that on saturated markets, with many institutions offering similar products, new private higher education institutions, deprived of prestige and reputation, cannot deliver the same study offer as their older counterparts, because most students will choose more prestige institutions. New providers will have to look for new potential student groups. Hence, the more the institutions differentiate their products, the more insulated demand for their products is from that of other institutions, and the greater the market power within the particular student segments. During the years analyzed, as shown in the figure below, new private providers offered much more diversified studies compared to the privates established at the beginning of the 1990s. Economics related subjects amounted only to 23 percent of programs offered, whereas the programs in the sciences made up 16 % and medicine and health 10 %. In addition, a significant number of

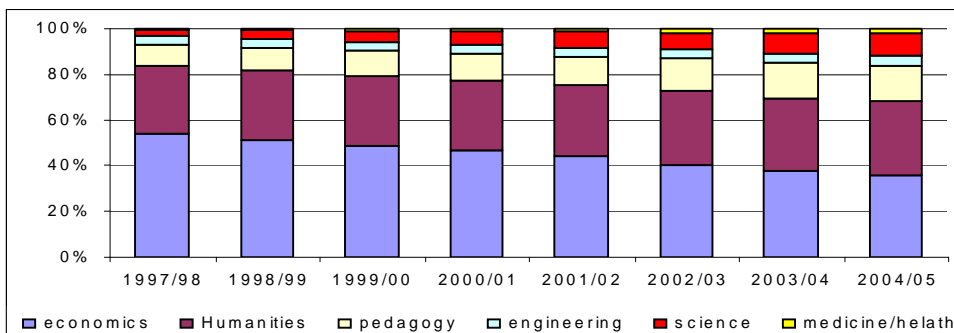
engineering related subjects were developed by new private vocational higher education institutions.

The most popular study courses among economic and humanities related subjects were information technology, mathematics, chemistry, nursing, physiotherapy, public health, geodesy (measurement of the curvature of the earth), architecture and beautician courses. We can see that most of these study programs were not offered by older private higher education institutions.

It is also important to note that the great majority of new private providers offered limited numbers of study courses. In 2004 the average private vocational institution provided two study courses. To summarize, we may safely argue that our theoretical expectations about the study offer in the private providers that entered higher education market in the time of great rivalry and attenuated student demand are confirmed. That is not to say that new providers did not offer the high demand study programs in economics, humanities and pedagogy, but the structure of their study offer by disciplines was much more diversified, and a growing proportion of teaching programs in sciences, medicine and engineering made those schools different from older private providers.

In summary, the student distribution in the private sector by disciplines changed considerably over the years 1997 and 2004 (see figure 12.7). Whereas in 1997 the students attending economics related subjects accounted for more than 50 percent, their share decreased by almost 20 percent, to 36 percent in 2004. The courses in humanities retained their share and enrolled about 32 percent of students in the private sector. Pedagogy and other teaching related programs became more popular, amounting to 15 percent. However, the most significant growth was encountered in sciences, engineering and medicine and health related subjects, the share of which amounted to 10.4 and 1.5 percent, respectively.

Figure 12.7: Students in private sector by discipline



Source: Own analysis based on National Yearbook for Higher Education (1997 – 2004)

12.2.3 Study offer in selected private higher education institutions

In the methodological part of the study we subdivided private higher education institutions into eight strata and took a sample of four or five private providers from each stratum. In the following section we provide an analysis of the studies offered by the selected private providers. We first look at the study offer among private providers established in Warsaw before 1997.

Private providers established in Warsaw before 1997

It is important to note that the study offer in the five selected private higher education providers located in Warsaw was relatively rich compared to other private providers established outside the capital. The table below provides data on the program offerings in five selected higher education institutions in 1997.

Programs in economics were offered by two providers, the Private Academy of Business and Administration and the Łazarski Academy of Commerce and Law. Management and Marketing studies were offered in an additional two: the Academy of Management and the Koźmiński Academy of Entrepreneurship and Management. The Polish-Japanese Academy of Computer Sciences offered study courses in computer sciences. In addition, the Private Academy of Business and Administration developed courses in administration, the Koźmiński Academy in finance and banking, and the Łazarski Academy in law. Nevertheless, as is typical of the common feature of private providers, the most common study lines were in the fields of business and management. On the other hand, the Łazarski Academy was the only private provider to offer courses in law.

Table 12.6: Program offerings in five higher education institutions in Warsaw in 1997

Higher Education Institution	Study fields offered	Master degree
Private Academy of Business and Administration	Economics, Administration,	Yes
Academy of Management	Management,	Yes
Łazarski Academy of Commerce and Law	Economics, Law,	Yes
Koźmiński Academy of Entrepreneurship and Management	Management, Finance and Banking	Yes
Polish-Japanese Academy of Computer Sciences	Computer Sciences	Yes

Source: Own analysis based on National Yearbook for Higher Education 1997

When it comes to the types of study offered, the situation in Warsaw was also unusual, with all providers offering master study courses even in 1997. As indicated before, the Private Academy of Business and Administration in Warsaw was the first private provider with authority to award master diplomas in economics. The school received this right in March 1994. Comparably, the other four providers had received the authority to provide master level courses in the first years of the transformation process. The Łazarski Academy and the Koźmiński Academy acquired the right to confer master diplomas in economics

and management and marketing in 1996. In 1997 the Academy of Management offered master courses in management and marketing, the Private Academy in administration, the Łazarski Academy in law, and the Polish-Japanese Academy in computer sciences, as the first private provider. In addition, the Koźmiński Academy offered a new study line in finance and banking. Therefore, we may argue that in contrast with private providers situated in smaller, non-academic centres, the development of private higher education institutions in Warsaw was significantly different in terms of both study offer and types of diplomas awarded. Mostly due to their access to high ranked academics, these private providers were able to expand their study offer. Postgraduate master level courses were developed by the Academies to help build up prestige, reputation and a 'brand name'. In addition, it provided good contacts with the business community and what is more, master level courses provided higher profit margins as fees for such programs were higher than those for undergraduate studies. According to the Rector of the Łazarski Academy, postgraduate courses induce higher education standards and develop the faculty's teaching skills (Koźmiński, 2000). To summarize, we may argue that private providers in Warsaw launched and developed those 'elite' programs in those times, in order to set high academic standards. This means that these providers based their differentiation on high quality and variety of study offered.

During the second period analyzed, i.e., between 1997 and 2004, those private providers continued to set the highest academic standards in the private higher education sector (see table 12.7). In 1998, the Koźmiński Academy became the first private institution in Poland to gain PhD granting rights in economics, and in the same year the next undergraduate program in public administration was started, while in 2003 the Academy received right to confer the title of habilitated doctor, as the only private provider. In summary, in 2004, the Koźmiński Academy provided six study programs, two at bachelor level (sociology and European relations), and four at master degree level (management and marketing, finance and banking, administration, and law). The Łazarski Academy developed an even more extensive study offer with seven study lines, in which two (economy and law) were also offered as postgraduate master level courses. The first private provider – the Academy of Business and Administration – provided five study courses, three at master degree level (administration, economy, and law), and two at bachelor degree level (computer sciences and sociology).

The Polish-Japanese Academy of Computer Sciences adopted a different development pattern. Instead of building a multidisciplinary academic institution, it decided to be the best non-public technical university in Poland, and to prepare the best qualified candidates for jobs in IT on the Polish job market. The institution developed an extensive cooperation program with IT companies and institutions in order to gain access to the highest qualified staff

and most modern projects. In February 2000 an IT training centre for countries of Central and Eastern Europe was created at the Academy under the auspices of JICA (Japan International Cooperation Agency). In the same year, the first Cisco Network Academy in Poland was opened in the Academy. In the academic year 2002/2003 the Academy launched the first undergraduate program in the e-learning mode in Poland. The studies, delivered almost solely via the Internet, last 4 years and lead to the degree of engineer in computer science. Finally, in the same year the Academy obtained the right to grant the title of PhD in computer science, again as only private institution in Poland.

Table 12.7: Program offerings in five higher education institutions in Warsaw in 2004

Higher Education Institution	Study fields offered	Master degree
Private Academy of Business and Administration	Economics, Administration, Law, Computer Sciences, Sociology,	Yes
Academy of Management	Management, Economics, Economics, Law, Administration,	Yes Yes
Łazarski Academy of Commerce and Law	Computer Sciences, Finance and Banking, International Relations,	
Higher Education Institution	Study fields offered	Master degree
Koźmiński Academy of Entrepreneurship and Management	Management, Finance and Banking, Law, Administration, Sociology, European Relations,	Yes
Polish-Japanese Academy of Computer Sciences	Computer Sciences, Management,	Yes

Source: Own analysis based on National Yearbook for Higher Education 2004

The Academy of Management was the only private institution that did not expand its study offer among five academies studied. In 2004 it offered a master degree study program in management and marketing and a bachelor degree program in economics.

Private providers established in large metropolitan areas before 1997.

The next private providers from the second stratum are situated in metropolitan areas, with the exception of Warsaw. In terms of study offer of those five private higher education institutions included in the sample, all of them offered courses only in the fields of business and management (see table 12.8). In addition, only the Academy of Marketing and Business in Łódź and the Academy of Management and Finances in Wrocław developed two study lines, whereas the other providers launched only one study line. A program in management and marketing was offered at three institutions (Academy of Marketing and Business in Łódź, Academy of Entrepreneurship and Management in Łódź, and Academy of Management and Finances in Wrocław), while a program in finance and banking was offered by four providers (Academy of Banking and Finances in Katowice, Academy of Entrepreneurship and Management in Łódź, Academy of

Management and Finances in Wrocław and in Academy of Banking in Poznań). In contrast to the providers established in Warsaw, none of these privates had rights to confer master diplomas. They offered only three year courses leading to bachelor level degrees.

Table 12.8: Program offerings in higher education institutions in large metropolitan areas in 1997

Higher Education Institution	Study fields offered	Master degree
Academy of Marketing and Business in Łódź	Management,	No
Academy of Banking in Poznań	Finance and Banking,	No
Academy of Entrepreneurship and Management in Łódź	Management, Finance and Banking,	No
Academy of Management and Finances in Wrocław	Management, Finance and Banking,	No
Academy of Banking and Finances in Katowice	Finance and Banking,	No

Source: Own analysis based on National Yearbook for Higher Education 1997

On the other hand, it is important to note that these providers were established later than the private providers from Warsaw. Two private providers included in this stratum were established in 1994 (Academy of Marketing and Business in Łódź and Academy of Banking in Poznań); the Academy of Entrepreneurship and Management in Łódź and Academy of Management and Finances in Wrocław were founded in 1995, while the Academy of Banking and Finances in Katowice was established in 1996. Therefore we may argue that the relatively short period of their existence on the higher education market did not allow them to enhance their study offer nor to provide the postgraduate study courses. Yet the Polish-Japanese Academy of Computer Sciences in Warsaw enrolled its first student in 1995, and managed in just two years to acquire the right to confer master diplomas in a unique study program offered in the private sector.

Over the years 1997 and 2004 those five institutions developed at a different pace and in different directions (see table 12.9). The most expansive strategy in terms of study offer was adopted by the Academy of Entrepreneurship and Management in Łódź. In 2004 it offered six study lines. Management and marketing and International relations were offered as master degree courses, whereas studies on finance and banking, computer sciences, philology and physiotherapy lead to bachelor degrees. The second private higher education institution from Łódź the Academy of Marketing and Business in Łódź did not tend to have any aspirations to become a truly academic institution with postgraduate courses and research activity. Its study offer is limited to three study courses in economic disciplines at bachelor level. We find the same strategic response in the Academy of Banking and Finances in Katowice. This relatively old private provider, established in 1996, remained a small non-university teaching establishment with only two undergraduate study lines in economic disciplines.

Table 12.9: Program offerings in higher education institutions in large metropolitan areas in 2004

Higher Education Institution	Study fields offered	Master degree
Academy of Marketing and Business in Łódź	Management, Finance and Banking, International Relations	No
Academy of Banking in Poznań	Finance and Banking, Management, Computer Sciences, International Relations	Yes
Academy of Entrepreneurship and Management in Łódź	Management, Finance and Banking, International Relations, Computer sciences, Foreign Sciences, Physiotherapy	Yes
Academy of Management and Finances in Wrocław	Management, Finance and Banking, Computer Sciences, Political Sciences,	Yes
Academy of Banking and Finances in Katowice	Finance and Banking, Computer Sciences,	No

Source: Own analysis based on National Yearbook for Higher Education 2004

The Academy of Management and Finances in Wrocław and the Academy of Banking in Poznań, analogously to the Academy of Entrepreneurship and Management in Łódź, tried to capture the students previously served by public institutions, and developed a relatively wide study offer with four study lines, and one leading to master degree in finance and banking in both institutions.

It is fair to say that those three private providers, starting from small ventures with limited study offer, matured over the years, acquiring a higher level of academic quality, whereas the other institutions chose the defensive strategy and did not expand their study offer.

Private providers established in medium-sized cities before 1997.

From the third stratum that covers the private providers established in medium-sized cities, we took a sample of five institutions: Polonia Academy in Częstochowa established in 1992; Academy of Finance and Management in Białystok and Private Academy of Environment in Radom both founded in 1993; Academy of Management and Administration in Opole and Academy of Computer Sciences and Management in Bielsko-Biała, both founded in 1996.

The study offer varied considerably among these private providers, in terms of study lines offered, their number, and degrees awarded (see table below).

Table 12.10: Program offerings in five higher education institutions in medium-sized cities in 1997

Higher Education Institution	Study fields offered	Master degree
Polonia Academy in Częstochowa	Management, Economics, Administration, Foreign languages	Yes
Academy of Finance and Management in Białystok	Management,	Yes
Private Academy of Environment in Radom	Environment Protection,	No
Academy of Management and Administration in Opole	Management,	No
Academy of Computer Sciences in Bielsko-Biala	Computer Sciences,	No

Source: Own analysis based on National Yearbook for Higher Education 1997

Since its establishment the Polonia Academy had developed a broad range of study courses in different fields, such as economics, management and marketing, administration and programs in foreign languages. The first study programs launched at the Polonia Academy were economics and foreign languages majoring in English, German, French and Spanish philology. In the following years the institution had widened its study offer and developed study programs in management and marketing, and administration. In addition, since the academic year 1997/98 the Academy has offered postgraduate studies leading to master diplomas in economics and philology. Nevertheless, the majority of students attended study programs in economics and management and marketing.

The Academy of Finances and Management in Białystok offered only one study line in management and marketing, but it acquired the right to confer a master degree in 1997. The other three private higher education institutions offered one study courses at bachelor level. The Academy of Environment in Radom provided courses in environmental protection, the Academy of Management and Administration in Opole offered management and marketing studies, whereas the Academy of Computer Sciences and Management in Bielsko-Biala launched courses in computer sciences.

To summarize, these private providers typically concentrated on inexpensive fields, such as economics and management, but on the other hand they also offered other courses in more expensive fields, and less common in private sector, such as environmental protection, computer sciences and foreign languages. Three of them were single-discipline institutions with only undergraduate study courses. The scarcity of high ranked academics had major implications for the performance of these private providers in terms of specialization, but particularly in their vocational character.

During the years 1997 and 2004 these private providers divided into two groups. First, we may identify three institutions that matured over the years to broaden their study offer and obtain rights to confer master degrees. The second group comprises two providers that continued to be small, teaching-oriented vocational institutions (see table below).

Table 12.11: Program offerings in five higher education institutions in medium-sized cities in 1997

Higher Education Institution	Study fields offered	Master degree
Polonia Academy in Częstochowa	Management, Economics, Administration, Foreign languages, Nursery,	Yes
Academy of Finance and Management in Białystok	Management, Finance and Banking, Political Sciences, Computer Sciences, European Relations, Foreign Languages, Constructing, Electrotechnics,	Yes
Private Academy of Environment in Radom	Environment Protection, Tourism and Recreation	Yes
Academy of Management and Administration in Opole	Management, Political Sciences, Pedagogy, Computer Sciences, Sociology, Economics,	Yes
Academy of Computer Sciences in Bielsko-Biała	Computer Sciences,	No

Source: Own analysis based on National Yearbook for Higher Education 1997

The Polonia Academy in Częstochowa continued its development and in 2004 offered five study programs, two on master degree courses in economics and foreign languages. The Academy of Finances and Management in Białystok had experienced a significant growth and diversification of its study offer. While in 1997 it offered only one study program in management and marketing, a few years later, in 2004, its offer had expanded to eight study courses in various fields, including engineering programs. Three courses in economics related subjects were offered at master degree level. The Academy of Management and Administration in Opole, a single-discipline undergraduate institution, also evolved into a multidisciplinary academic institution. Its offer expanded to six study courses, two of which were provided at master level.

Yet the Academy of Environment in Radom and the Academy of Computer Sciences and Management in Bielsko-Biała did not increase their study offer. The Academy of Environment in Radom offered two study lines, tourism and recreation at bachelor level, and environment protection at master degree level, whereas the Academy of Computer Sciences and Management in Bielsko-Biała remained a single-discipline institution offering undergraduate study course in computer sciences.

Private providers established in small cities before 1997

The last category of private providers established in the first years of the transformation period are institutions situated in small towns, which previously did not have a functioning public higher education institutions. From this stratum we took four private providers (Academy of Business – National Louis University in Nowy Sącz established in 1992; Academy of Entrepreneurship and Marketing in Chrzanów founded in 1994; Academy of Management in Leszno and Academy of Management in Słupsk, both founded in 1995). These four private providers were established outside the academic centres and principal cities.

Turning to the range of fields and disciplines offered, these private providers were the most homogeneous group. All of them offered study courses in management and marketing at bachelor level. In addition, only the Academy of Business – NLU in Nowy Sącz also offered a program in administration (see table 12.12).

Table 12.12: Program offerings in higher education institutions in small-sized cities in 1997 and 2004

Higher Education Institution	Study fields offered	Master degree
1997		
Academy of Business – NLU in Nowy Sącz	Management, Administration,	No
Academy of Entrepreneurship and Marketing in Chrzanów	Management,	No
Academy of Management in Leszno	Management,	No
Academy of Management in Słupsk	Management,	No
2004		
Academy of Business – NLU in Nowy Sącz	Management, Administration, Computer Sciences, Political Sciences,	Yes
Academy of Entrepreneurship and Marketing in Chrzanów	Management,	No
Academy of Management in Leszno	Management,	No
Academy of Management in Słupsk	Management,	No

Source: Own analysis based on National Yearbook for Higher Education 1997 and 2004

Over the second period analyzed, the oldest private provider in this group (the Academy of Business – National Louis University in Nowy Sącz) has been constantly developing and became one of the most prestigious private higher education institutions in Poland. In 1998, WSB-NLU was granted a licence to offer the masters program in management and marketing. In 1999 the Academy received the licence to offer its own undergraduate program in computer science. In 2000 WSB-NLU received accreditation from NCA (North Central Association) for two undergraduate programs in management and marketing, and computer

sciences. Since then, WSB-NLU is the only school in Poland to offer an American B.A. (Bachelor of Arts) diploma in its undergraduate programs in computer science and management and marketing, as well as the Polish licencjat. In 2004 the Academy also developed an undergraduate course in political science. Since 1995, WSB-NLU has maintained its leading position in various rankings of non-state higher education institutions, conducted by such magazines as *wprost*, *newsweek*, *home & market*, and *polityka*.

The other three providers represent the lower tier of private education. This group is much less affluent and very homogeneous. Their study offer did not change compared to the year 1997. They are single-discipline institutions offering only undergraduate courses in management and marketing.

Private providers established in the years 1997 and 2004

In the methodological chapter we subdivided the group of private providers established after 1997 into four strata, related to the location of institutions, as we did for the privates established in the first years of the transformation process. Furthermore, we assumed, following the neoinstitutional theory, that the institutional framework to a large extent determines the higher education providers' opportunity set. Moreover, in the 'interdependency model' provided in this study we also took into consideration the impact of basic demand and supply conditions on the performance of educational providers. These conditions were different in the beginning of the 1990s compared to the later part of the decade.

The Higher Education Vocational Schools Act was passed in 1997. It changed the higher education institutional arrangements for new providers. Briefly, it lowered the barriers to entry by decreasing the number of high ranked academics that have to be employed in order to open a new higher education institution and to develop a new study program. The new law was designed to fill the gap in the higher education system by providing for the establishment of new public and private higher education institutions in small towns outside the academic centres. As analyzed in the previous section, the aim was achieved, as new private higher education institutions were more evenly distributed across the regions. In addition, as one of the most important handicaps for the development of diversified study offer was reduced – the limited access to high ranked academics in regions without the big academic centres – the new providers were able to offer the same study courses regardless of their location. For these reasons, as we shall see below, the differences between the four strata are no larger than the variation within the strata, in particular in terms of study offer. Therefore, we shall analyze the selected private higher education institutions governed by the 1997 Act in one section, instead of four sections, each for one stratum. Let us look at the study offer among the selected private vocational higher education institutions (see table 12.13). Most of the institutions analyzed were established in 1999 and 2000.

Vocational higher education institutions established in Warsaw had a diversified study offer; however, of all them were single-discipline institutions. The Academy of Personnel Management offered study program in sociology, the Academy of Advertisement in management and marketing, the Academy of Administration and Social Sciences in administration, and the Academy of Beauty and Health Care, as its name suggests, developed courses for beauticians.

Table 12.13: Program offerings in higher education institutions established after the year 1997, in 2004

Higher Education Institution	Study fields offered
Warsaw	
Academy of Personnel Management	Sociology,
Academy of Advertisement	Management,
Academy of Administration and Social Sciences	Administration,
Academy of Beautician and Health Care	Beautician,
Large metropolitan areas	
Pedagogical Academy in Łódź	Pedagogy,
Academy of Business and Foreign Languages in Poznań	Management, Logistic,
Academy of Economics and Computer Sciences in Kraków	Management, Computer Sciences,
Academy of Management and Computer Sciences in Wrocław	Administration, Computer Sciences,
Medium sized cities	
TWP Academy of Humanities in Szczecin	Pedagogy, Sociology,
Academy of Tourism in Częstochowa	Tourism and Recreation,
Academy of Informatics in Gorzów Wielkopolski	Computer Sciences
Academy of Management in Szczecin	Management,
Small cities	
Academy of Management and Administration in Zamość	Physiotherapy, Monument Renovation, Administration, Economics, Computer Sciences, Pedagogy
The Academy of Local Development in Żyrardów	Economics,
Academy in Humanities and Economics in Brzeg	Pedagogy,
Academy of Business and Administration in Łuków	Management,

Source: Own analysis based on National Yearbook for Higher Education (1997 – 2004)

The private providers from the second stratum were established in large metropolitan areas. Analogously to providers from Warsaw, this group is also relatively heterogeneous. The Pedagogical Academy in Łódź was a single-discipline institution offering a study line in pedagogy. The other three institutions provided two undergraduate study courses: the Academy of Business and Foreign Languages in Poznań in management and marketing and logistics; the Academy of Economics and Computer Sciences in Kraków in management

and marketing, and computer sciences; the “Copernicus” Academy of Computer Sciences and Management in Wrocław in computer sciences and administration.

The institutions from the third stratum were established in medium-sized cities. Except for the TWP Academy of Humanities in Szczecin, which launched two study programs in pedagogy and sociology, the others were single-discipline institutions. The Academy of Management in Szczecin offered courses in management and marketing, the Academy of Tourism in Częstochowa taught tourism and recreation, and the Academy of Informatics in Gorzów Wielkopolski offered computer sciences.

Finally, the last group consists of four vocational institutions established in small non-academic cities outside the large urban areas. Except for the Academy of Management and Administration in Zamość, which offered six study courses, the others were single-discipline institutions. The Academy of Management and Administration in Zamość was founded in 1997 and is governed by the 1990 Act. For this reason, the institution was able to apply for a license to confer master degree programs, but by the academic year 2004/2005 the institution offered courses only at bachelor level. Nevertheless, the institution had a relatively wide array of undergraduate programs, offering courses in physiotherapy, monument renovation, administration, economics, computer sciences and pedagogy. The Academy of Local Development in Żyrardów was founded in 1998 and is also ruled by the earlier 1990 Act. However, the institution chose the so-called low cost strategy and during the eight years of its existence developed only one undergraduate study course in economics. Other two providers are ruled by the 1997 Vocational Act. The Academy of Humanities and Economics in Brzeg offered courses in pedagogy, and the Academy of Business and Administration in Łuków taught management and marketing.

To summarize, as expected by our hypothesis, a significant share of new private providers established on saturated markets with high degree of rivalry, in order to insulate the demand for their products from the behaviour of older more prestigious institutions, had more differentiated study offer, and developed more unique study courses, which were not previously offered by older private institutions, such as courses for beauticians, physiotherapy, monument renovation, sociology and tourism and recreation.

12.2.4 Summary – study offer in private sector

We can argue that during the initial reform phase, and the first years of existence of a private higher education sector in Poland, one of the main keys to conceptualizing its performance in terms of study offer was the location of private providers. To a large extent, this helps to explain the variation both in range of study fields and types of programs offered by private providers. Those

established in Warsaw with access to a large pool of high ranked academics had more opportunities to develop and launch a fairly wide selection of study lines and postgraduate courses. On the other hand, the performance of the Polonia Academy in Częstochowa in terms of its wide range of courses and in particular obtaining the right to confer master degrees in two study fields, shows that even in a relatively small city with a limited number of academics, a private institution could work its way up academically.

In general, the great majority of selected private providers offered so-called low cost undergraduate study courses in high demand fields, in economics, management and humanities. Only a few institutions, mostly in Warsaw, developed a relatively wide array of teaching programs and had rights to confer master degrees. Therefore, we may safely argue, that the performance of selected private higher education institutions during their first years confirms our earlier findings on the limited range of study offered in the private sector. Research, postgraduate courses, expensive facilities and high costs study programs were rarely found among those private providers, mostly due to a lack of non-tuition sources of revenue and their demand absorbing character.

When it comes to the second reform phase, the performance of selected institutions also confirms our theoretical expectations and earlier general findings. Those private providers that from the beginning chose a high quality strategy continued their development. In 2004, in terms of study offer, some of them can be safely called truly academic institutions, with a wide range of study programs in various disciplines, and programs leading to master and in few cases to doctoral degrees. The next most numerous group of private institutions also tried to challenge the position of the public institutions and attract those students previously served by public, by offering more academic instead of vocationally oriented courses and diversifying their program offerings. The remainder of the private providers adopted a different strategy, called in this study a defensive one. They restricted their study offer to one or two undergraduate study courses, usually in high demand programs.

In terms of vocational higher education institutions, we find that their study offer is more diversified than their older private counterparts. As explained, this type of private institution has evolved as a result of new market conditions in response to a specific demand for specialized training, serving niches that were not filled by most traditional public institutions and older private institutions.

12.3 Enrolment in private sector

In this section we look at the hypotheses about the expansion of private higher education and at the structure of enrolment in the private sector. We predicted

that on new and growing markets, most of private providers would choose an aggressive growth strategy through market expansion, in particular on part-time programs, and only a few private providers would adopt the steady growth policy with a balanced structure of enrolment in terms of part-time and full-time students. When the external conditions change, and the higher education market become saturated and student demand attenuates, we expect that most private providers will try to attract more students onto full-time courses and thus will penetrate the student group that was previously served by public institutions.

12.3.1 Enrollment in the years 1990 - 1997

Levy (2005) in his paper on the legitimacy of private higher education in Central and Eastern European countries, argues that the “ECE was unusually late to start private higher education...Even more striking than lateness, however, was suddenness. In no other region was the private sector inaugurated by such a singular event of regional scope as the fall of communism. Within a couple of years the great majority of ECE countries had a private higher education sector of note. The explosion was particularly strong in Romania, Poland, Georgia, and Ukraine, more muted in Hungary, Russia, and the Czech Republic. No other region has jumped so quickly from zero to 10, 20, or 30 percent depending upon country.”

As analyzed in the study, in 1990 the free market regulations in the Polish economy introduced a radical shift in social priorities to the labour market. Immediately wages in private and public companies become tied to qualifications, skills and as a result to education. The process occurred quickly and was compounded by the increasingly large numbers of 19-year olds who were appearing as a result of the demographic boom. The Polish academic community responded to this growing demand for education in an active and entrepreneurial manner. Alongside the public institutions, which expanded their offer, a new trend has emerged: the creation of private higher education institutions. Following Pawlowski (2004), it was amazing that in a sector far removed from the conventional economy, the fundamental free market rule came to life once again; if a demand for higher education exists, a supply will arise to fill the vacuum. Liberal higher education law, well suited to the period of transformation, resulted in the so-called ‘Polish educational miracle’, as we can only describe the four-fold increase in student numbers during the decade.

The enrolment into private higher education institutions has been increasing rapidly since 1991, not only in total numbers but also as a share of total enrolment. The table and figure below provide data about the development of private higher education in Poland. While in the academic year 1992/93 the share of students enrolled in the private sector accounted for only 0.9 % of all students, in five years it jumped to 18.9 %. Even more impressive was the expansion of private providers in terms of first-year enrolment (see figure 12.8). In the academic year 1995/96 new

entrants in the private sector accounted already for 16.9 % of total entrants, to reach its peak in 1997/98 with a 28.1 % share.

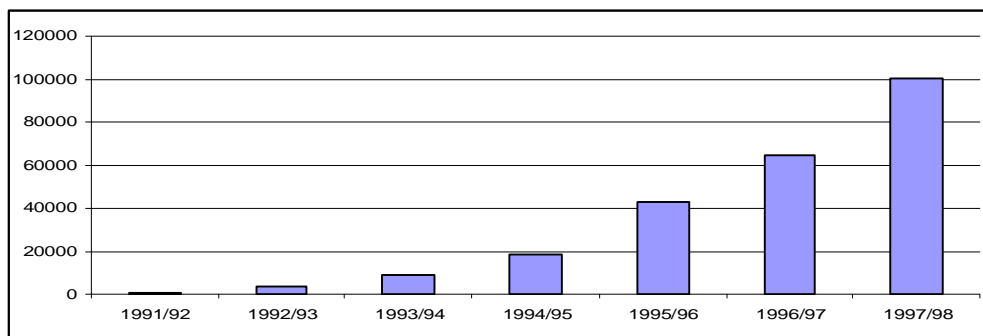
Despite the enormous growth in numbers of new higher education institutions that emerged on the market, the average student numbers enrolled in a single private provider has been increasing for all the years, to reach 1602 students in academic year 1997/98. Of course, older private institutions established at the beginning of the 1990s had more students enrolled, as they provided a complete education process, compared to those established later on. Therefore, a better indicator of the expansion of the private sector and the potential that Polish higher education possessed is the average number of new entrants per single private higher education institution. The number increased to almost 800 students for a single private provider in the academic year 1997/98, notwithstanding the overall increase in institution numbers to 128 schools.

Table 12.14: Students in private higher education in 1990 - 1997

	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
Number of private HEIs	1	11	27	46	70	103	128
Students in private sector	500	4 100	14 100	32 000	70 500	122 900	205 100
% of total students	0,1	0,9	2,4	4,7	8,9	13,3	18,9
New entrants	500	3 600	9 100	18 400	43 100	64 400	100 100
% of total new entrants	0,4	2,4	5,3	8,6	16,9	21,4	28,1
compared to previous year	-	3 100	5 700	9 300	22 700	21 300	35 700
New entrants per one private HEI	-	327	337	400	614	625	782
Students per one private HEI	-	372	522	695	1 007	1 193	1 602

Source: Own analysis based on National Yearbook for Higher Education (1990 - 1998)

Figure 12.8: Numbers of new entrants in private higher education sector



Source: National Yearbook for Higher Education (1990 - 1998)

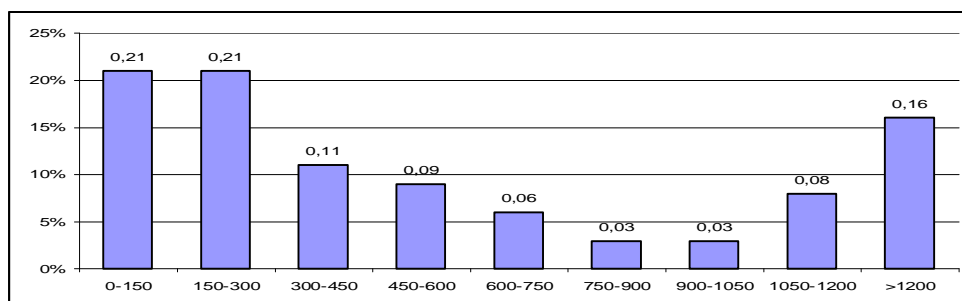
To gain a better view of the size of the private higher education system, table 12.15 presents data about the distribution of enrolment number across private higher education providers. An analysis of the data in the table below shows that the number of enrolled students differed significantly across private providers. While in the academic year 1993/94 the value of the median was almost identical to the value of the mean, two years later those two measures of central tendencies differed, as the mean value accounted for 187 percent of median value. In 1997 this ratio decreased to 151 percent. This means that the distribution of enrolment per single private higher education institution stretched to the right and we can say that the distribution was right or positively skewed and asymmetric. In a positively skewed distribution the extreme scores pull the point of central tendency in a positive direction and the mean is not an accurate measure of central tendency (see figure 12.9). In addition, it is useful to analyze the standard deviation, as this is the best overall indicator of dispersion as it measures a sort of average of the differences of all scores from the mean and shows how much variability there is in the scores. As the units of measurement of standard deviation are always the same as those of the dependent variable, thus in our model the standard deviation indicates that an average difference from the mean for number of new entrants enrolled at private higher education institutions was 211; 632 and 828 in 1993/94, 1995/96 and 1997/98, respectively. We may argue that the standard deviation was relatively high compared to the value of the mean.

Table 12.15: Distribution of first-year students across private higher education providers

	1993/94	1995/96	1997/98
1 st quartile	163 students	171	262
2 nd quartile (median)	319	328	518
3 rd quartile	434	889	911
Mean	337	614	782
Population standard deviation	211	632	828

Source: Own analysis based on National Yearbook for Higher Education (1990 – 1998)

Figure 12.9: Histogram of the relative frequencies in the distribution of number of first-year students across private higher education providers in academic year 1995/96



Source: Own analysis based on National Yearbook for Higher Education (1996)

The diversity within the number of students enrolled at private institutions was caused by several factors. First, the institutions that offered study programs in arts and sciences had usually many fewer students than business and humanity oriented institutions, which shows that institutions that offered low cost, high demand programs attracted more students. The former institutions' enrolment accounted for fewer than 100 students and remained at the same level during the period analyzed, while the latter usually exceeded 300 students. In 1997 there were four private higher education institutions that offered study programs in the arts, which in sum enrolled about 180 new students; two institutions with programs in mathematics with 30 new entrants each; and a few institutions that offered programs in biology and environmental protection with fewer than 100 students enrolled on first-year programs in each. Excluding these, a dozen or so private institutions from the sample gives us more homogenized group of private providers in terms of student body size.

The next important variable that determined the number of students enrolled in private institutions was the number of years that a private institution had been operating. Based on our theoretical considerations we argued that private higher education institutions' main feature on the new market with low degree of rivalry, high student demand, low barriers to entry and lack of state financial support will be demand-compensation, which means providing more higher education than public institutions are able to deliver. Therefore, privates will often chose the aggressive growth policy and increase their enrolments in successive years. The statistical data confirm our expectations. On average, at the beginning of the 1990s, one additional year of an institution's operation caused its enrolment to increase by 130 percent.

The so-called 'high quality / high cost' private higher education institutions, which a Rector of one of the best private higher education institution in Poland, Pawlowski (2004), called true 'private' institutions, differ significantly from the 'professor cooperatives' private providers, which are the second type of private institutions identified by the Rector, in many respects. First, the former institutions dedicate part of their tuition income to infrastructure investments, the development of creative and high ranked academics, and student services, while in 'professor cooperatives' private institutions, the flow of tuition is almost entirely consumed by the lecturers that are directly involved with student activities and by the managers of the institutions, while investments in infrastructure and student facilities are scarce. A significant distinctive feature of the former institutions is their study offer. They usually provide a broader study offer in terms of more study lines available, or attract potential students by offering study programs at master degree level. The latter institutions are more often single discipline institutions with courses at bachelor degree level.

In addition, the other crucial distinction between the two identified types of private institutions was the size and structure of their enrolment. The expansion of enrolments in private providers that chose 'high quality and high cost strategy' is usually of less magnitude than in other private providers. The true 'private' institutions tried to have more balanced structure of their enrolment with many students enrolled at full-time study courses instead of part-time programs. Conversely, other private providers' enrolment structure was highly dominated by part-time students. It is not to say that institutions that tried to be perceived as high quality ones did not welcome the expansion of student enrolment, as all of them were predominantly tuition fee-dependent institutions. The expansion of enrolments helped those institutions to develop their infrastructure, student facilities, attract the high ranked academics and increase research activities. On the other hand, the expansion in particular in part-time enrolments had raise questions and doubts about the increase of faculty workloads, difficult working conditions, and was viewed among those high quality institutions as 'a potential cause of lowered requirements and academic standards' (Kozmiński, 2000). Part-time enrolment was seen by the Rectors of these high quality private providers as a reminder of socialist times, when the leading party was interested in accelerating time-to-graduation rather than the acquisition of knowledge by people in full-time employment (Pawlowski, 2004). Part-time programs were and still are, by definition, modest in size and scope compared to the full-time mode of delivery. Students enrolled on part-time programs, despite attending lectures only four days a month (compared to 20 day monthly cycle for full-time), can graduate and receive the same diploma as their full-time peers in the same period of time, that is three years to bachelor degree and five years to master degree.

The 'high quality' institutions were aware of the possible outcomes of huge expansion in part-time enrolment and tried to prevent such deterioration in quality. Therefore, the one most visible effort that those institutions made was to limit the number of part-time students and maintain the balance between the enrolment on part-time and full-time study courses. As a result, in the academic year 1997/98 students enrolled on full-time mode of delivery accounted for 22 percent of total students in the private sector, while in those 'high quality' institutions this ratio was significantly higher. Table 12.16 presents the institutions with the highest share of full-time students, the numbers in brackets indicate the position of the school in the register of private higher education institutions held by the Ministry, whereas table 12.17 provides data about the distribution of students number across different modes of delivery for the private sector as a whole.

Table 12.16: Private higher education institutions with the highest share of full-time students in 1997/98

No.	Higher education institution	Full-time students	% of full-time students
1.	The Academy of Foreign Languages in Częstochowa (104)	234	71
2.	The Academy of Business – National Louis University in Nowy Sącz (10)	1 406	63
3.	The Academy of Management and Banking in Kraków (55)	908	62
4.	The Academy of Hotel and Gastronomy Management in Poznań (29)	1 098	62
5.	The Academy of Management in Warsaw (3)	1 888	54
6.	Lazarski Academy of Commerce and Law in Warsaw (22)	3 467	53
7.	Private Academy of Business and Administration in Warsaw (1)	833	51
8.	Polish-Japanese Academy of Computer Techniques in Warsaw (51)	357	50
9.	Academy of Foreign Languages and Banking in Częstochowa (8)	456	49
10.	The Academy of Psychology in Warsaw (95)	820	48

Source: Own analysis based on National Yearbook for Higher Education (1998)

Table 12.17: Distribution of student numbers across different modes of delivery in private sector

Number of students;	1991		1993		1994		1996		1997	
	I	II	I	II	I	II	I	II	I	II
Total	400	100	14 107	100	32 072	100	122 250	100	205 100	100
full-time	360	90	7 493	53	12 213	38	29 427	25	44 196	22
part-time	40	10	6 208	44	19 117	60	85 354	69	147 973	72
evening-time	0	0	354	3	745	2	7 469	6	10 913	6

Source: Own analysis based on National Yearbook for Higher Education (1991 – 1998)

I – In numbers,

II – In percentage

We find that most of the private higher education institutions that adopted the strategy leading towards high academic standards and had their enrolment structure balanced in favour of full-time students and did not expand their enrolments regardless of the unavailability of high ranked academics and the lack of teaching space, were established during the first years of the transformation process. Therefore, we may argue that a greater part of the institutions established later in the mid-1990s adopted an aggressive growth strategy in terms of enrolment size compared with the relatively 'oldest' private institutions.

In the next section we provide further analysis of the differences in the performance of private higher education institutions, as the structure of enrolment is not the essential indicator of the strategy adopted. Other important aspects of the institutions' performance is the study offer, degree granted, faculty number, admission policy and the level of tuition fees.

However, in general, the common feature of the structure of the enrolment of most private providers was the majority of students enrolled in part-time study programs. Table 38 presents the data about the distribution of student enrolment across different modes of delivery in private sector. The disparity between the numbers of full-time and part-time students increased during the period analyzed. Whereas in 1993 more students were attending full-time study courses, two years later the number of part-time students was double those in full-time study. In 1997, full-time students accounted only for 22 % of all students in the private sector. Moreover, in the academic year 1997/98 private institutions offered only 9 percent of all available full-time places.

There are two reasons for such an uneven distribution of students in the private sector. According to the Polish Constitution, students had right to free higher education, but only at public institutions and in full-time programs. And as state institutions retained their monopoly of public funding, fair competition did not exist between public and private sectors. Private institutions, devoid of state support, had limited opportunities to compete with state universities and colleges, especially in the sector of full-time programs. Secondary school graduates, who constituted the majority of entrants to full-time courses, faced with a choice between free studies at public institutions and paid programs in privates ones, chose the former, regardless of the study offer, curricula, and quality of programs.

On the other hand, the budgetary restrictions meant that public institutions could offer only a limited number of tuition-free study places on full-time programs, which lead to the introduction of competitive entry examinations. Public universities accepted only those with the best results. The winners in this competitive situation were and still are the candidates who came from social groups characterized by a tradition of attending higher education, living in large cities, and coming from wealthy families that expended considerable financial effort on the children's education at the previous levels. Other reasons, such as the lower quality of secondary education outside big cities, especially in small towns and rural areas, had caused an under-representation of students from these areas.

In general, as discussed in the theoretical chapters, achievements are strongly correlated with socio-economic background. Therefore in the higher education system that provides free higher education in the merit-based form for only the

best candidates, and is restricted in size, students from the wealthiest, best educated families will have better access to free public universities⁷ (Rakowski 1993; Świerzbowska-Kowalik, Gulczynska, 1999). The result of such state policy provides for a situation in which the Polish Constitution assures democratic access to higher education, but not an equitable one. Students from better socio-economic classes received a gift in the form of free higher education, whereas those from lower socio-economic classes had to pay for their education both in state and private institutions.

One may consider that if the number of free-tuition, full-time study places at public universities is limited, students who fail the entry exams will apply for full-time courses in the private higher education sector. However, as those students mostly came from lower socio-economic classes from less well-off families, usually living in smaller towns, then in order to pay for their education they had to take a job. Therefore, the majority of them applied for part-time courses in order to combine work and study. Several investigations conducted in the 1990s focused on the characteristic features of part-time students (Rakowski, 1993; 1994; 1997; Borek, 2000) in terms of, among other things, parental income and education, available family income, sources of income, and students' activity on the labour market. The findings confirm our assumptions about the social composition and levels of disposable income. In addition, according to the research the great majority of students on part-time courses in both private and public sectors combined work with study, although the share of working students was higher in private institutions than in public ones. On average about 85 percent of students attending part-time courses in private higher education institutions worked during the week. For example, in the Academy of Management and Administration in Opole in the academic year 1997/98, this ratio accounted for 90 percent, whereas in the Private Academy of Environment in Radom it was 77 percent in 1997/98 and 87 percent in 2001/2002 (Rakowski 2000; 2004). In public institutions the share of working part-time students made up about 60 percent. By definition, full-time students had fewer possibilities to combine study with work; however, almost 20 percent of full-time students had part-time employment (Rakowski 2000; 2004). Additionally, there was a significant difference in the average students' income between full-time and part-time students, with higher levels for full-time students (Rakowski, 1997). It is worth noting that full-time students from the private sector were excluded from state financial support in terms of means- and merit-based scholarships until 2001. This also had a negative impact on the demand for full-time programs provided by private higher education institutions.

⁷ The analysis of the student body composition in higher education for the years 1990 – 1997 is presented in section 10.5.1: 'Admission policies and tuition fees in public sector'.

To summarize, the financial situation of candidates, lack of state financial support and the tuition burden forced many secondary school graduates to decide on part-time programs, because of the possibility of combining work and the costs of higher education.

The second important driver for the unprecedented growth of demand for the part-time mode of delivery in both the private and public sector was the surge in the demand for higher education from third-age, so-called 'mature' students. The structure of society in terms of educational achievements during the socialist period was deformed in comparison to the developed nations, as was the labour market. The economic transformation reversed this situation. Changing labour market demands for skilled and qualified workers in Poland had major implications for higher education in general, and in particular for the distribution of students by age. With the anticipated increase in knowledge-related employment opportunities, older generations of society decided to improve their qualifications by attending higher education courses. However, as most of them were employed and/or have families, the logical choice was the part-time mode of delivery, which enabled them to make studies compatible with family and work. The great share of those 'third-age' students were enrolled in economic study fields, because of the increased demand for specialists in this field in the new Polish economy. There are no data on the distribution of students by age across different types of higher education providers, but the available data shows significant differences in age structure between full-time and part-time students in the Polish higher education system. In the academic year 1997/98 the share of 24 year and older students in the total number of new entrants on full-time programs was 16.1 %, whereas on part-time programs they made up 31.9 %, while the proportion of these students to the total number of students enrolled on full-time programs was 14.7 %, and on part-time programs it was almost 54 %.

Summarizing, one can state that the enrolment structure within the private higher education sector was homogenized, with a substantial and expanding share of part-time students, with only few exceptions. The higher education institutional framework, with state universities retaining their monopoly of public funding and tuition-free study places on full-time programs, made the competition between private and public providers for full-time students non-existent and drove private higher education providers to focus on part-time programs. Additionally, the external conditions, in terms of growing demand for the part-time mode of delivery from 'third-age' students, contributed to the increase in the supply of this kind of program.

12.3.2 Enrolment in the years 1997 – 2004

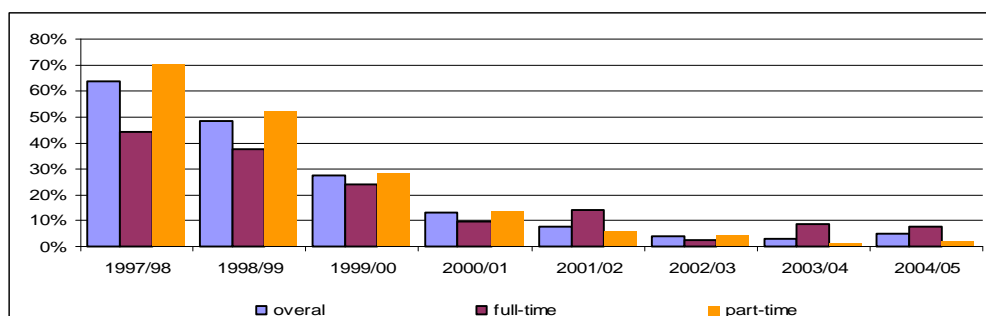
The demographic changes that came slowly to the higher education institutions resulted in a lower rate of increase in the number of enrolments in private higher

education over the second period analyzed, and particularly in the first years of the new millennium. Whereas the increase in the student numbers in private sector in each year in the early 1990s amounted on average to more than 100 percent, it dropped to just 4 percent in 2004. The most visible drop was encountered in part-time new enrolments, falling by 69 percent from 71 in 1997 to less than 2 percent in 2004. There was a less significant decrease in the case of full-time enrolment, from 45 in 1997 to 8 percent in 2004.

There were several reasons for this. First, public higher education institutions had significantly expanded their study offer and study places. More importantly, public institutions abandoned their strict entry requirements. In case of part-time programs, in the late 1990s in fact all candidates were accepted. Admission requirements for full-time courses in the form of entry examinations remained in use longer, but by the year 2004 this form of admission in the majority of public institutions had also ceased. The decreasing numbers of students who applied but were not admitted to public universities were finding a second opportunity in the private sector. Secondly, the so-called postponed demand from 'third age' students had slightly decreased, as a significant share of older generations of society that decided to improve their qualifications by attending higher education had already been enrolled. Yet their share was still significant and amounted to 14 percent of total new entrants to part-time programs. Thirdly, the most important reason was the demographic decline, which, as presented in the previous chapter, reached higher education in 2003. Thus, the attenuated growth in student enrolment was partly a response to the law of supply and demand.

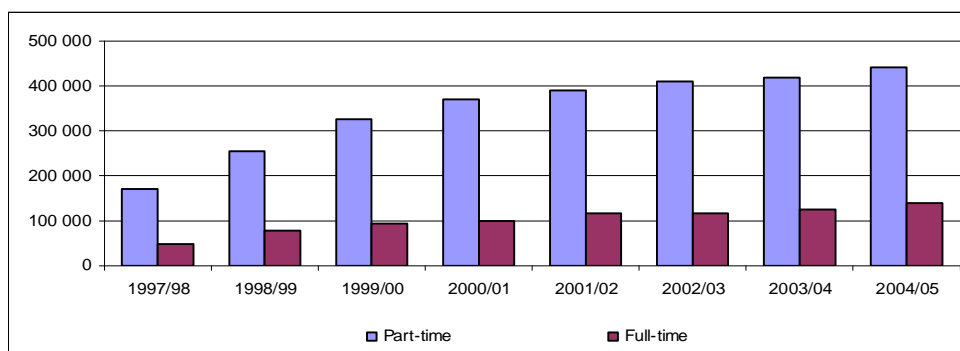
The figures below give data on the increase of student numbers in the private sector during 1997 and 2004 and the total number of students enrolled in the private sector by mode of delivery.

Figure 12.10: Increase in students numbers compared to previous year in %



Source: Own analysis based on National Yearbook for Higher Education (1997 – 2005)

Figure 12.11: Number of students across different modes of delivery in private sector



Source: Own analysis based on National Yearbook for Higher Education (1997 – 2005)

However, despite the fact that private institutions had decreased their pace of growth in terms of student numbers, their share in total number of students had further increased, by 4.2 percent, from 24.3 percent in 1997 to 28.5 percent in 2004. Yet the share of first year students decreased slightly by 1 percent, and amounted to 35 percent of total new entrants in 2004. The total number of students in the private sector increased from 308 thousand students in 1997 to more than 550 thousand in 2004.

The worsening situation in the private sector became obvious after an analysis of the number of new entrants and students number per single private higher education institution. The average number of first year enrolment in private institutions decreased by almost 35 percent, from 990 students in 1997 to 650 students in 2004, while the average number of total students enrolled in private institutions decreased by 11 percent, from 2,140 students in 1997 to 1,925 students in 2004. This was caused by a rapid increase in the number of private higher education institutions, which doubled their number over the period analyzed. The distribution of enrolment per single private higher education institution was analogous to that during the first period. This means that the distribution was right or positively skewed and asymmetric, with the majority of private providers enrolling fewer students than the mean value for the private sector, with few providers enrolling many more than the average, which pulled the point of central tendency in a positive direction.

It is also worth indicating that during 1997 and 2004, the private providers started to collapse because of low enrolment, as 10 private providers were closed down. Four of them were terminated by the State Accreditation Commission as they did not employ the minimum number of high ranked academics required for a delivering a study program. Among those four private providers two were established in the beginning of 1990 and were governed by the 1990 Act, whereas

the other two were vocational schools. The remaining 6 private providers were closed down by their founders because of losses incurred. However, in the following years growing number of private providers are expected to leave the higher education market, as their income from tuition fees will not cover the costs of providing education.

The table below gives data on the basic facts on private higher education in Poland over the years 1997 and 2004, with respect to students number.

As analyzed in the previous section, some private higher education institutions that started off as a small ventures with limited facilities and part-time academic staff, focusing mostly on part-time students, matured over years to become true academic institutions, which introduced graduate training and research in various disciplines, and in turn tried to attract more full-time students. As private higher education institutions have continued to develop, competition for students was a key to their stability on the market. Therefore, most demand- absorbing private institutions tend to behave increasingly like elite private providers and traditional public institutions. They widened their program offerings, appointed high quality faculty and consciously and consistently invested in their own development, trying to become an alternative to public institutions. In short – they also started to concentrate more on quality than quantity alone. As a result, together with the relative decrease in student demand for part-time programs, the structure of enrolment in the private sector became more balanced.

Table 12.18: Students in private higher education in years 1998 – 2004

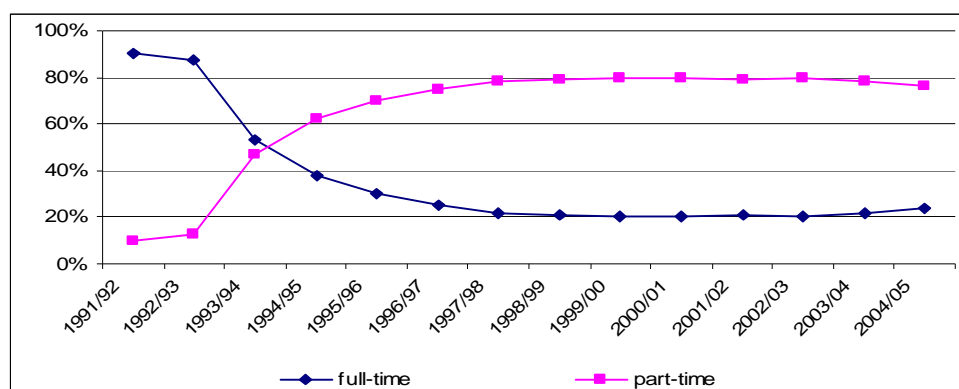
	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Number of private HEIs	144	160	180	207	238	260	287
Students in private sector	308 000	393 400	445 400	480 800	500 800	516 900	552 400
% of total students	24,3	27,5	28,2	28,1	27,8	27,8	28,5
New entrants	142 600	158 100	155 700	155 500	147 800	157 200	178 000
% of total new entrants	35,9	37,3	35,1	33,2	31,3	33,1	35,0
New entrants per one private HEI	990	988	865	750	620	605	650
Students per one private HEIs	2 140	2 460	2 490	2 320	2 105	1 990	1 925

Source: Own analysis based on National Yearbook for Higher Education (1998 – 2005)

Looking at figure 12.12 we can see that from the academic year 2000/01 the share of full-time students started to increase, reaching its peak in 2004 with 25 percent of total private enrolment. In the following years the share of full-time students in the private sector is expected to grow further, amounting to 40 percent around the year 2010. Private institutions became more aware of the fact that the academic qualifications of part-time students are less well regarded than those on full-time courses, especially when we compare those students who undertake higher education immediately after graduating from secondary school. As

mentioned before, part-time programs were by definition modest in size and scope compared to full-time courses, and designed for people in full-time employment who had to combine work with studies. According to Pawlowski (2004) the differentiation between the two modes of delivery would not be so problematic if there were fewer part-time students, as happened during the 1980s, when they amounted to 20 percent. Yet, as their share passed 80 percent in the private sector during the 1990s, the level of part-time graduate qualifications was determining the whole value of graduates from the private sector.

Figure 12.12: Distribution of students in private sector by mode of delivery



Source: Own analysis based on National Yearbook for Higher Education (1990 – 2005)

It is also important to note that since 2001 the government made full-time students in the private sector eligible for state means- and merit-based scholarships. As we can see, since that year, the share of full-time students in the private sector has been increasing. We can argue that this was an important factor that increased the popularity of full-time programs in the private sector.

12.3.3 Enrolment in the selected private higher education institutions

In the previous section we showed the significant increase in student enrolment in the private higher education sector during the first period analyzed, as well as the increasing dominance of part-time enrolment in most private higher education providers. In addition, we found that there was a relationship between the institution's enrolment and the year of the provider's establishment, but with the exception that a few, relatively old private higher education providers decided not to expand enrolment on part-time programs and made efforts to balance their enrolment structure more in favour of full-time students. The data on the development of the private sector during the second period show the

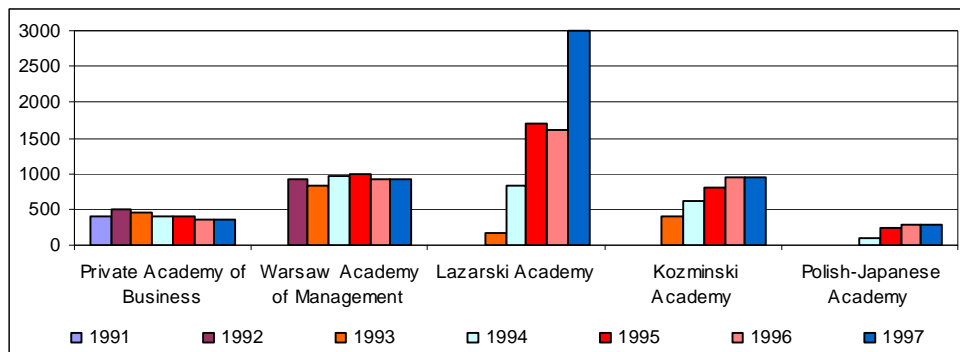
attenuated increase in student enrolment in the private sector as well as the changes in the structure of enrolments with increasing share of full-time students.

In this section we look at the number of student enrolled and type of enrolment across the selected private higher education providers.

Enrolment in the years 1990 – 1997

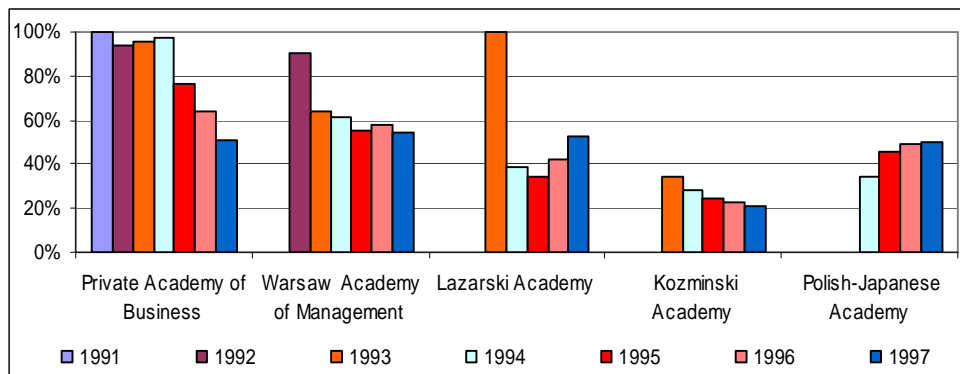
We first analyze the performance of private providers from the first stratum. We may expect that the oldest private providers will have a well balanced structure of enrolment in terms of full-time and part-time students. The figures below present data on the enrolment changes in the five private higher education institutions in Warsaw in selected academic years. We see that the two providers established first enrolled more students on full-time courses, in fact having almost 100 percent full-time enrolment in the academic year 1992/93. However, over the long run, the situation in those two providers changed and tended to display the common features of the private sector in terms of an increase of part-time mode of delivery. But on the other hand, in contrast to the situation in most private providers, the part-time enrolment did not dominate, staying under 50 percent. Two other providers exhibited a similar pattern, with a slight dominance of part-time enrolment. Only the Kozminski Academy of Entrepreneurship and Management enrolled more than 70 percent on part-time programs.

Figure 12.13: Size of first-year enrolment.



Source: Own analysis based on National Yearbook for Higher Education (1990 – 1998)

Figure 12.14: Share of first-year full-time students



Source: Own analysis based on National Yearbook for Higher Education (1990 – 1998)

It is also important to note that only two providers experienced a significant expansion in terms of first-year student enrolment: the Łazarski Academy and the Koźmiński Academy. To some extent this supports our previous findings that enrolment increase was welcomed by all private providers, despite the strategy they adopted, as both institutions offered few study lines and had rights to confer master diplomas. For instance, in 1994 the Łazarski Academy enrolled about 800 students, while three years later the number reached 3000. The other two providers also displayed less impressive growth, the exception being the Private Academy of Business and Management with constant student enrolment. The youngest provider, the Polish-Japanese Academy of Computer Sciences established in November 1994, increased its first-year enrolment from 90 to 290 in 1997.

The expansion of enrolment number in terms of disciplines confirms our general findings on the distribution of student numbers across different study fields. Those private providers that offered courses in economics and management areas were able to attract many students to a particular study line. For instance, in the academic year 1997/98 the Łazarski Academy of Commerce and Law enrolled about 2800 students into a first year of study in an economics program, and only 207 into law courses. The Polish-Japanese Academy had 285 first year students in the computer sciences study line.

As all of these five providers offered master degree level courses in the 1990s, it is worth analyzing the structure of enrolment in terms of type of study.

In the case of the Private Academy of Business and Management, which was the first private provider in Poland to receive the right to confer master diplomas in economics, the balance between the enrolment on bachelor programs and

conventional 5-year progressive type of study leading to the master degree changed in favour of master degree programs. While in 1994 the Academy enrolled the majority of students on bachelor study programs, in a few years time the structure of enrolment had reversed with the majority of enrolments on 5-year programs. In addition, the Academy managed to attract many students to postgraduate 2-year studies leading to the master diploma. These postgraduate studies attract both undergraduates from the Academy as well as from other private providers. In 1997 there were more master degrees graduates both in the conventional 5-year and 2-year postgraduate courses than bachelor ones.

The situation evolved in the same direction in other private providers that developed master degree programs. The Koźmiński Academy of Entrepreneurship and Management launched a master program in economics in the academic year 1996/97. However, for the next two years the institutions enrolled students only on 3-year bachelor degree programs and on 2-year postgraduate programs. Only in the academic year 1998/99 did it begin to enrol students simultaneously both on 3-year bachelor and 5-year master programs. In the following years enrolment on master programs prevailed. What is more, about 80 percent of the Academy's bachelor graduates continued their education in postgraduate master programs. Therefore, we can see that the structure of the mass of students had changed during the period analyzed. In those private higher education providers with master degree programs the postgraduate programs took an increasing number of students. Looking at this trend, we may argue that the 3-year bachelor program did not gain social acceptance and legitimacy and the majority of undergraduates studied all the way to the master graduate stage.

Since none of the private providers in the *second stratum* had developed master degrees programs, our research will focus on the size of their enrolment and structure in terms of part-time and full-time programs. It is worth recalling that they offered study lines only in economics and management.

The oldest private providers from this stratum are the Academy of Marketing and Business in Łódź and the Academy of Banking in Poznań, both established in 1994. The Academy of Entrepreneurship and Management in Łódź and the Academy of Management and Finances in Wrocław were founded in 1995, and the Academy of Banking and Finances in Katowice in 1996.

In 1994 the Academy of Marketing and Business in Łódź, which offered study fields in management and marketing and finance and banking, enrolled 254 students, including 94 full-time. In the following years its first-year enrolment grew from 248 in 1995 (72 full-time students), to 447 students in 1996 (138 full-time), and 614 students (152 full-time) in the academic year 1997/98. We can see that first-year enrolment increased significantly. On the other hand, the structure of enrolment remained stable with an increasing majority of students on part-

time programs. In the academic year 1997/98 the total enrolment was 1370 students, with the majority attending part-time courses, making up about 75 percent of total enrolment, compared to 63 percent in 1994.

The Academy of Entrepreneurship and Management, also established in Łódź one year later, offered study courses in management and marketing. In its first year of functioning the Academy succeeded in attracting relatively many students (559 enrolled), but only 86 were full-time. During the ensuing years the first year enrolment expanded significantly to 851 and 1342 in the 1996/97 and 1997/98 academic years, respectively. The share of part-timers increased to almost 85 percent (2571 students), while total enrolment reached 3089 students.

Developments in other three private higher education institutions were analogous to those in the preceding two providers. With the growth of the provider's size, they became increasingly part-time oriented. The first-year enrolment in the Academy of Banking in Poznań had increased from 495 students in 1994 to 1495 students in 1997. The share of part-time students reached its peak in 1997 (87 percent). In the same academic year total enrolment was 6328 students.

The emergence of the Academy of Management and Finances in Wrocław was less spectacular, with only 128 students, 26 of them enrolled full-time. However, in just two years, in 1997, the first year enrolment jumped to 904 students. The share of part-time students remained stable over time at 75 percent. Finally, the Academy of Banking and Finances in Katowice, the last one to be established, in 1996, witnessed the same changes and developments as its older counterparts. Its first year enrolment increased from 239 students to 419, though the changes in the structure of enrolment shifted in favour of full-time students, as their share increased from 38 to 40 percent. The majority of students continued to attend the part-time mode of delivery.

For the five private higher education institutions their structure of enrolment was different than their peers from Warsaw, with a clearly higher share of part-time students. But in terms of enrolment size the picture was the same, with rapidly increasing student numbers.

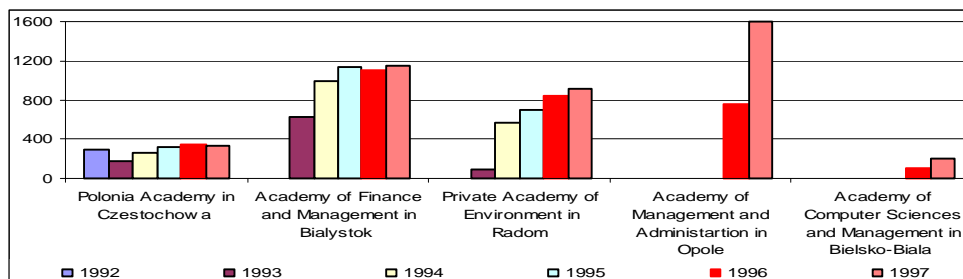
The *third stratum* includes the private higher education institutions established in medium sized cities. The figures below give data on the developments in first-year enrolment numbers and the share of full-time students. The Polonia Academy in Częstochowa was founded in 1992 and had developed a wide range of studies, both in terms of disciplines and degrees awarded. As presented in the previous section, it launched study courses in economics, management and marketing, administration, and foreign languages. It also acquired the right to confer master diplomas in economics and foreign languages. Thus, compared to

other private providers on the market its study offer was exceptionally extensive and well developed. The other four providers offered one study line. In addition, the Academy of Finance and Management in Białystok had the right to award master degrees in finance and banking.

Looking at the figures below (12.15 and 12.16), we can see that there was a great deal of variety in the size and structure of student enrolment across the five providers. Polonia Academy, despite having a wide range of study programs and postgraduate courses, enrolled the smallest number of students, but on the other hand it had the highest share of full-time students. At the other extreme we find the Academy of Management and Administration in Opole and the Private Academy of Environment in Radom with their rapid expansion in enrolments combined with a low share of full-time students. The Academy of Computer Sciences in Bielsko-Biala offered quite a unique study program in the private sector – computer sciences – and therefore attracted fewer students than economic academies, but with a higher share of daily full-time students.

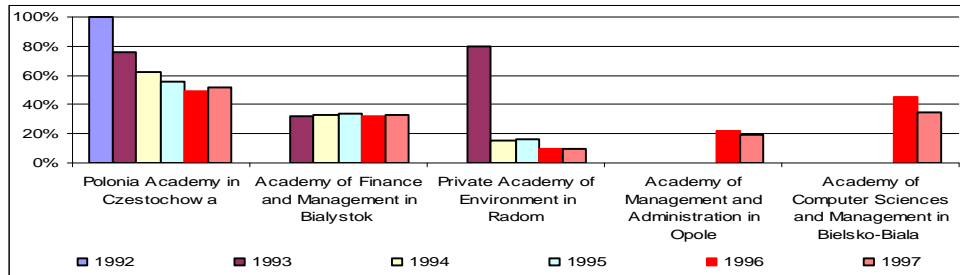
Nevertheless, some general trends among those five providers can be found. The providers that had been significantly and continuously increasing their enrolment had their enrolment dominated by part-time students. This trend confirms our earlier findings about the relationship between the strategy adopted by private higher education providers and the size and structure of their enrolments. The enrolment increase in those providers that chose a ‘high quality’ strategy was usually less in magnitude than in other private providers. They also had a more balanced enrolment structure, with many students enrolled in full-time study courses rather than part-time programs. Conversely, other private providers’ enrolment structure was very much dominated by part-time students. Of course, this is not to say that this was a rule, as some providers with high enrolment had a relatively large share of full-time students, such as the Academy of Finance and Management in Białystok in this stratum, or some Warsaw private providers, as described above.

Figure 12.15: Size of first-year enrolment



Source: Own analysis based on National Yearbook for Higher Education (1990 – 1998)

Figure 12.16: Share of first-year full-time students



Source: Own analysis based on National Yearbook for Higher Education (1990 – 1998)

In terms of enrolment on master degree programs, the Polonia Academy in Czestochowa and Academy of Finance and Management in Bialystok received the right to confer master diplomas in 1997, and therefore we cannot provide an analysis of changes in the structure of enrolment with regard to bachelor and master programs. However, both schools, similarly to providers in Warsaw, offered only 3-year bachelor level degree programs and 2-year master graduate programs, rather than 5-year conventional master programs. However, it is worth noting that in 1997 the Polonia Academy managed to enrol 200 students on 2-year master program, which accounted for more than 70 percent of its bachelor graduates, while the Academy in Bialystok enrolled about 400 students, which in turn made up about 30 percent of its bachelor graduates.

Finally, we move to developments in private higher education institutions from the *fourth stratum*. The oldest provider in this group, the Academy of Business – National Louis University in Nowy Sącz, was established in 1992. Its policy in terms of expansion and structure of enrolment resembles those adopted by the Polonia Academy and higher education providers from Warsaw, with relatively modest growth and a balanced structure. In its first academic year the institution enrolled 138 students, all of them full-time. In the following years the first-year enrolment increased to 421, 635 and 666 in 1994, 1996 and 1997, respectively. The share of full-time students continued to remain at high levels, with 63 percent in the academic year 1997/98, which is the second-highest share among all private higher education institutions in Poland.

The developments in the other three providers – Academy of Entrepreneurship and Marketing in Chrzanów, Academy of Management in Leszno and Academy of Management in Slupsk – reflected the typical pattern observed in the private sector. The first-year enrolment in the Academy in Chrzanów jumped from 192 students in 1994 to 609 students in 1997, in the Academy in Leszno from 334 in 1995 to 535 in 1997, and in the Academy in Slupsk from 256 in 1995 to almost 400 two years later. Moreover, the share of part-time students was recorded as the

average level for the whole private sector, with 31, 14 and 17 percent respectively in academic year 1997/98.

To sum up, the analysis provided in this section supports in great part our earlier findings, which were also expected theoretically. First of all, first-year enrolment was increasing during the period analyzed in almost all private higher education providers. Secondly, we discovered the relationship between the strategy adopted by providers and their structure of enrolment. Those private providers that chose the 'high quality' strategy and offered a broad variety of study programs or unique programs and launched master level programs, had their enrolment structure balanced as between the number of full-time and part-time students. By contrast, the other private providers – usually single-discipline undergraduate institutions – had their enrolment dominated by part-time students, in some cases amounting to 85 percent of total enrolment. In addition, it is worth noting that these private 'high quality' institutions were usually founded as the first privates on the market, with such providers from our sample as the Private Academy of Business and Management in Warsaw, Warsaw Academy of Management, Łazarski Academy of Commerce and Law in Warsaw, Polonia Academy in Częstochowa, and Academy of Business – National Louis University in Nowy Sącz. Providers established later on were usually vocationally oriented with a dominance of part-time students.

In addition, as we have expected, location did matter, to some extent, for the development of private higher education providers. In particular, those private higher education institutions located in Warsaw, the capital city of Poland, with access to many high ranked academics and a large higher education age population, differed considerably from providers outside Warsaw. As they developed a broad study offer, had the right to confer master degrees, and provided postgraduate courses, they were able to attract many students on a full-time basis, as the average share of full-time students amounted to more than 50 percent among providers from Warsaw. Private higher education institutions outside Warsaw usually followed a different evolution pattern. They were usually undergraduate, single discipline institutions predominated by part-time enrolment, with a few exceptions, like the Academy of Business – National Louis University in Nowy Sącz and the Polonia Academy in Częstochowa.

Turning now to our hypotheses about those private higher education providers that chose a high quality / high price strategy, we assumed that their enrolment growth would be steady instead of the aggressive one adopted by other private providers. However, the empirical research suggests that this is not true in case of most of these providers. Looking at those providers it can be observed that most of them enrolled more and more students each year, and some, such as the Łazarski Academy of Commerce and Law in Warsaw and Warsaw Academy of Management, were among the largest in the country. The expansion of student

enrolment has generally been approved and appreciated by the institutions' managers as all private providers were predominantly dependent on tuition fees. When planning further development, increasing prestige and expanding research activities, their managers needed the increased financial resources.

It is also worth indicating that location to some extent determined the size of enrolment. Private providers situated in Warsaw and other large metropolitan areas usually had more students enrolled. Several alternative explanations can be put forward, but they are not mutually exclusive. First, the explanation is that there were larger numbers of secondary school graduates and thus more potential students. Second, more providers situated in larger cities offered master degree programs and thus attracted students from its region and outside. This relationship was also caused because of the developed labour market for skilled and qualified workers, mostly higher education graduates, in large cities, and hence better job prospects for them.

Enrollment in the years 1997 – 2004

We first analyze the enrolment size and structure among the selected private providers established before 1997. In the second part of the section we provide an analysis of selected vocational higher education institutions, ruled by the 1997 Act.

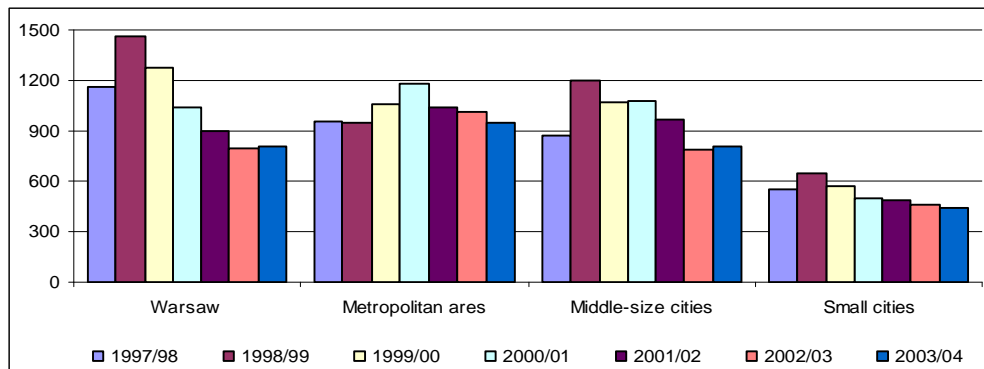
In terms of the size of enrolment, corresponding to the general data for the private sector, the number of new entrants increased on average up to the academic year 1998/99. Since this year, the average enrolment for selected private providers, except those situated in large metropolitan areas, started to decrease at a considerably pace (see figure 12.17).

The most significant drop in enrolments (30 percent) was experienced by the providers situated in Warsaw, as the average number of new entrants for the five selected providers decreased from almost 1200 to 800 new entrants. Among those five institutions, the number of new entrants in Łazarski Academy and Warsaw Academy of Management dwindled by almost 50 percent, while it remained stable in the other three higher education institutions. We may find different reasons for such a decrease in the case of each provider. In case of the Łazarski Academy of Commerce and Law, its enrolment was one the biggest in the country, with several thousand students enrolled at study courses in various disciplines. Over the years, together with the increasing number of private higher education institutions situated in Warsaw, the study offer of which also included postgraduate courses leading to master degrees in various fields, the Łazarski Academy began to lose some of its potential students to other private providers. Nevertheless, in 2004 the Łazarski Academy had one of the highest enrolments among all private higher education institutions in Poland. In case of the Warsaw Academy of Management, its limited study offer, confined to only one study line

in management and marketing, had a major implication for its low enrolment. As other institutions in Warsaw offered a wide array of study fields in various disciplines, single-discipline institutions were fated to become small teaching establishments.

A significant decrease in the student enrolment number was also encountered in private institutions situated in small cities. There are two main reasons for this. First, under the 1997 Act, a significant number of new private and public vocational higher education institutions were established in small cities and regions outside the urban areas with academic centres. These new providers offered a more diversified range of studies than the incumbent institutions with their limited study offer in courses in high demand areas, such as economics and humanities. An additional factor that contributed to the significant decrease in the average number of new entrants relates to the new public vocational higher education institutions and their increased number of free-tuition-fee study places on full-time study courses. Secondly, as described in the previous sections, three providers from this stratum represent the lowest tier of private education: single-discipline institutions with only undergraduate courses. On the other side of the higher education market, the fourth provider, the Academy of Business – National Louis University in Nowy Sącz, adopted a high quality / high price strategy with relatively strict entry requirements and student quotas. For those reasons, the institution's enrolment did not expand over the years, but on the other hand, it remained at the same level during the demographic decline.

Figure 12.17: Average number of new entrants in selected private providers in four strata



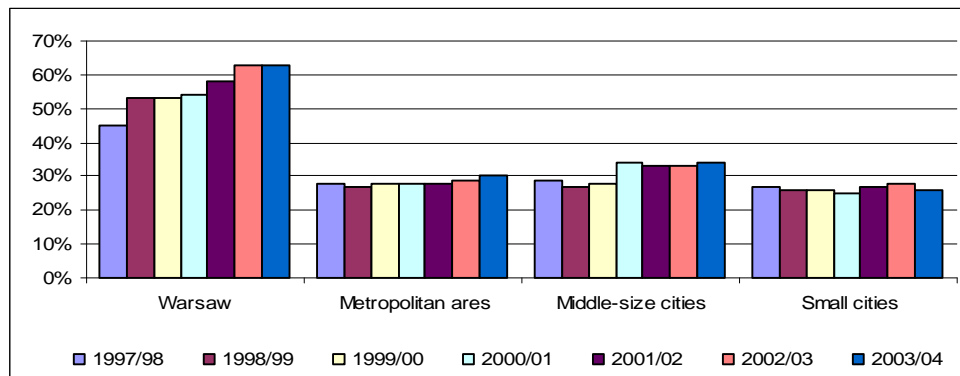
Source: Own analysis based on National Yearbook for Higher Education (1998 – 2004)

Within the groups of private providers situated in large metropolitan areas and medium sized cities, we find a similar relationship between the size of enrolment and study offer, as described above. This means that those institutions that developed and offered new study lines and postgraduate courses did not experience a decrease in enrolment numbers, whereas those providers with a

reduced number of undergraduate teaching programs lost market share, in terms of a significant drop in new entrant numbers. For instance, the number of new entrants in the Academy of Banking and Finances in Katowice, with only two undergraduate study lines in economic disciplines, decreased by 35 percent, from 420 in 1997 to fewer than 280 in 2004, while in the Academy of Entrepreneurship and Management in Łódź and Academy of Banking in Poznań, which had a wide array of undergraduate and postgraduate study courses, the number of new entrants increased by about 10 percent.

When it comes to the distribution of student by modes of delivery, the relationship observed during the first period analyzed between the share of full-time students and the strategy adopted by private institutions increased in magnitude (see figure 12.18). Those private institutions that choose a high quality strategy had their enrolment balanced, with a large share of full-time students, whereas those 'non-university' types of institutions with reduced number of vocational, low-cost study courses, which according to Levy's classification are called 'demand absorbing' institutions (Levy, 1986), had the great majority of their students enrolled on part-time programs, amounting to 70 or 80 percent. During 1997 and 2004 the significance of this relationship started to increase, as the share of full-time students in high quality providers increased on average by 20 percent, in many cases reaching more than 60 percent. The following providers had the highest share of full-time students: Łazarski Academy of Commerce and Law in Warsaw, Polish-Japanese Academy of Computer Sciences in Warsaw, Private Academy of Business and Administration in Warsaw, Koźmiński Academy of Entrepreneurship in Warsaw, Polonia Academy in Częstochowa and Academy of Business – National Louis University in Nowy Sącz. On average, full-time enrolment accounted for more than 60 percent in these providers. As we can see, each of these providers had developed an extensive study offer with master and – in case of Koźmiński Academy and the Polish-Japanese Academy – doctoral degree courses. In short, they adopted the high quality / high price strategy.

Figure 12.18: Average share of full-time students in selected private providers across the regions



Source: Own analysis based on National Yearbook for Higher Education (1998–2004)

The second group of private providers, with the share of full-time students around 30 to 40 percent, consisted of those institutions that had evolved from the single-discipline undergraduate institutions into multidisciplinary institutions with master degree courses in several disciplines. Those institutions decreased their share of part-time students, as their development and marketing activities aimed to attract as many full-time students, mostly fresh graduates of secondary schools. We may identify the following providers that pursued this kind of strategic response to the new external conditions: Warsaw Academy of Management, Academy of Banking in Poznań, Academy of Management and Finances in Wrocław, Academy of Finance and Management in Białystok, Academy of Management and Administration in Opole and Academy of Entrepreneurship and Management in Łódź.

Finally, the last group of private providers, usually single-discipline institutions, or in a few cases with two study programs, mostly undergraduate ones, had experienced a further decrease in the share of full-time students. Those institutions were clearly more interested in developing part-time courses, due to the much lower costs of providing such education. The following private institutions adopted this kind of strategy: Academy of Marketing and Business in Łódź, Academy of Banking and Finances in Katowice, Private Academy of Environment in Radom, Academy of Entrepreneurship and Marketing in Chrzanów, Academy of Management in Leszno and Academy of Management in Słupsk. On average, the share of full-time students in these providers amounted to 20 or even less percent of their total enrolment.

To summarize, as presented above, we may identify three types of private higher education institutions with regard to the distribution of students by modes of delivery. We may also find a relationship when it comes to the location and types

of private higher education. The elite private sector institutions are concentrated in large urban areas, in case of Poland mostly in the capital city, Warsaw. Looking at the figure above, we can see that the average share of full-time students in selected private higher education institutions in Warsaw amounted to more than 60 percent in 2004. The second type of private providers with 30 to 40 percent of full-time students, that try to mirror the traditional public institution and elite privates in their curricula and intentions, are usually also situated in large metropolitan areas, but some of them, such as Academy of Finance and Management in Białystok, Academy of Management and Administration in Opole, are in medium sized cities. The institutions from the third group, in which the proportion of full-time students in average did not exceed 20 percent, are mostly established in small cities, with some exceptions, such as the Academy of Marketing and Business in Łódź and Academy of Banking and Finances in Katowice, which are situated in large metropolitan areas, and the Private Academy of Environment in Radom, in a medium sized city.

When it comes to enrolment size and structure among selected private vocational higher education institutions, we find a very homogeneous group. Despite the great diversification within the vocational private higher education institutions in terms of study courses offered, both the numbers of students enrolled and the structure of enrolment were similar. On average, their enrolment was modest, usually less than 300 new entrants in each academic year, whereas the share of full-time students amounted to about 30 percent, except for the providers established in small cities, with less than 10 percent (see figure below).

There are two reasons for this. First, those institutions were already established in a saturated higher education market, with a high degree of rivalry and attenuated student demand. Second, in many cases they located themselves in market niches, offering a relatively unique study courses with lower student demand, such as beautician courses, monument renovation, mathematics, physiotherapy and other health related subjects. As we have shown, they emerged as a result of a specific market conditions in response to a specific demand for specialized training, niches that were not filled by other higher education institutions, but on the other hand, those niches, by definition, did not provide large student enrolments. Yet, as most of these providers enrol a relatively high share of full-time students (above 25 percent on average, which was the average for whole private higher education sector), their diversified study offer attracted many fresh secondary school graduates, who prefer to study full-time.

However, also among the private vocational higher education institutions we find a group that is much less successful at attracting a sizeable number of students, namely vocational institutions situated in small cities. Like their older private counterparts located in regions outside the large urban areas, they lost students in favour of new public vocational higher education institutions, mostly established

in small non-academic cities and attracting many students, as they offer free-tuition, full-time study places.

12.4 Academic faculty in private higher education

The academic faculty governs the proper and efficient functioning of higher education providers. The number of academic faculty and its structure and qualification level are the most important aspects in the long term development of higher education. However, at the beginning of the transformation process, newly established private higher education providers suffered from a lack of academic staff. In particular, there was a scarcity of high ranked academics, such as professors and habilitated doctors. As the analysis of the number of academic staff has already been provided in this study, here we will focus on the development of academic staff employed in the private sector.

The table below gives an overview of the development of staff in the private and public sectors. The increase in student numbers was not reflected in a comparable increase in the number of academic staff, which remained stable until the mid 1990s, to increase significantly between 1995 and 2000. In total, the number of academic faculty increased only by 39 percent during the period analyzed, whereas student numbers increased almost 5-fold.

The expansion of private higher education in the 1990s was based to a large extent on academics from public institutions. Private higher education providers might, and usually did, employ teaching staff on different terms from those in the public sector. Whereas the great majority of the staff from the public sector was employed there on permanent term, or tenure, in privates they had contracts, part-time jobs, or were not formally employed but did teaching on commission. In addition, most of faculty was also employed in public universities and colleges. The problem of academics holding several posts in different higher education providers has already been discussed in the preceding chapters. Here, one can state that, despite their being familiar with the quality problems caused by the limited number of high ranked academics and because of overworked faculty that gave lectures at several higher education providers, academics in both public and private sectors during the 1990s had to a great extent ignored the problem. The policymakers and Ministry of Education also tolerated the various employments contracts of many academics. Such a situation was beneficial and favourable for both academics and the Ministry, as it allowed them to keep the salaries of academic staff in the public sector at relatively low levels, because of the opportunities academics had to earn additional income outside public higher education providers.

Table 12.19: Academic staff in private and public higher education institutions*

Year	Total number	State HEIs	Non-state HEIs**	Professors full & associate	Assistant Professors
1990	60 143	60 143	-	5 474	43 028
1991	60 376	60 356	20	7 569	41 575
1992	60 493	60 299	194	10 418	39 156
1993	62 075	61 630	445	10 824	39 555
1994	63 745	62 854	891	11 148	40 489
1995	66 900	65 643	1 257	11 490	40 838
1996	67 507	64 929	2 578	12 390	41 357
1997	70 224	66 679	3 545	13 007	41 993
1998	72 471	67 126	5 345	13 766	42 390
1999	78 091	70 977	7 114	15 562	46 629
2000	80 208	72 284	7 924	16 400	47 496
2001	82 401	73 409	8 992	17 764	48 215
2002	85 338	75 375	9 963	18 858	49 159
2003	88 158	77 039	11 119	19 951	50 161
2004	92 758	79 843	12 915	21 247	52 516

Source: Own analysis based on National Yearbook for Higher Education (1990 – 2005)

* Church funded HEIs are included into public sector

** Full-time employment

According to research conducted in 1993 (Kryński, 2002), the average private higher education provider employed about 35 lectures, only 18 of them being employed full-time, which means about 50 percent. Yet the lectures made up more than 70 percent. The share of professors made up less than 30 percent. In addition, about 70 percent of staff employed in the private sector was also employed in public higher education institutions. Therefore, we may argue that the academics from public institutions employed in the private sector determined the quality of education provided in the private sector during the first years of the period analyzed. On the other hand, managers from the private sector were aware of the fact that this situation should be only transitory and made efforts to acquire their own faculty.

Since none of the private providers during the 1990s had the right to confer PhD degrees, and only few offered master degrees, an important way to develop their own faculty was to offer the academics better working conditions and financial incentives. In general, the salaries in the private sector were an average of 30 percent higher than in the public universities. In addition, the professors' contracts were usually negotiated individually and allowed private institutions to offer higher salaries for the best faculty. On the other hand, the level of salaries varied substantially across the private higher education providers, the lowest being paid in small vocationally oriented institutions and the highest usually in the biggest institutions, situated mainly in Warsaw. Because of the scarcity of data

it is not possible to provide a detailed analysis of the level of salaries in the private sector. For instance, in the academic year 1998/99 in the Koźmiński Academy of Entrepreneurship and Management in Warsaw, the salaries offered were on average 75 percent higher than in the public sector. The contracts of professors varied from 750 USD to 2000 USD per month, while in public universities professors' earnings were about 800 USD. Assistants with exclusivity contracts received 600 USD. The average academic salary in Poland was on average about 450 USD, which was lower than average salaries in the rest of the economy.

In addition, private institutions solved the problem of the scarcity of academics by employing business practitioners as adjunct professors. A few private providers made extensive use of foreign visiting professors. For instance, the Koźmiński Academy of Entrepreneurship and Management in Warsaw employed at least 10 foreign professors, while the Academy of Business – National Louis University in Nowy Sącz employed an average of 9 foreign professors to deliver lectures. However, most private providers did not appoint foreign academics because the institutions did not provide English tracks as their students lacked an adequate knowledge of the English language.

Based on our theoretical considerations we may assume that, during the development of the private higher education sector, the focus of private higher education providers would be on the high ranked academics employed full-time, which means that private providers would first of all concentrate their efforts on attracting the group of academics that was needed to fulfil the Ministry requirement for minimum staffing to offer study programs. In addition, it is worth emphasizing the influence of the State Accreditation Commission on the number full-time appointed academics in private sector, as the Commission looked carefully whether the institutions were meeting the minimum staff requirements.

The table below summarizes the development of academic staff in the private higher education sector, in terms of the number of full-time and part-time academics and their structure. As suggested above, we can identify two important features in the development of faculty staff in the private sector: a significant increase in the number of full-time professors, and similarly, an increasing share of full-time employment. We can see that there were almost 5 400 full-time professors, and more importantly, almost 99 percent of high ranked academics had a full-time appointment. A similar trend was observed for all academics, with the share of full-time employed increasing from 50 percent in 1992 to 95 percent in 2004. In 1992/93 the average private provider appointed 6 professors full-time, while in the academic year 1996/97 there were more than 11, rising to almost 20 in 2004.

It is worth noting that in private institutions the average full-time employment per single private higher education institution was increasing during the period analyzed from 17 academics in 1992 to 45 in 2004.

When it comes to the student / staff ratio in the private sector, we can see that the ratio was increasing during the 1990s, with its peak in the academic year 2000/01 of 56.1 students per academic faculty member, while during the 2000s the ratio decreased substantially to 42.6 in 2004.

Table 12.20: Distribution of academic staff in private sector

	1992/1993	1994/1995	1996/1997	2000/01	2002/03	2004/05
Full-time employed academics	194	891	2 578	7 924	9 963	12 915
Part-time employed academics	192	489	1 021	646	649	631
Full-time employed academics per one HEIs	17,6	19,4	25,1	44,0	41,9	45
Part-time employed academics per one HEIs	17,4	10,6	9,9	3,6	2,7	2,2
% of full-time employed to total employment	50,2 %	64,5 %	71,7 %	92,4 %	93,9 %	95,3 %
Full-time employed professors	67	426	1 138	3 074	4 159	5 359
Part-time employed professors	45	168	163	99	89	84
% of full-time employed professors to total number of professors	59,9 %	71,7 %	87,5 %	96,8 %	97,9 %	98,5 %
Full-time employed professors per one private HEIs	6,1	9,3	11,1	17,0	17,5	18,7
Part-time employed professors per one private HEIs	4,1	3,7	1,6	0,55	0,4	0,3
Student / academic staff ratio	20,6	35,9	55,4	56,1	50,1	42,6

Source: Own analysis based on National Yearbook for Higher Education (1992 – 2005)

The favourable developments in the academic staff employed in private sector were diminished by the fact that for the many of these people work in a private higher education institution was a second job. At the beginning of the 2000s,

about 60 % of academics in the private sector held multiple teaching posts both in public and private higher education institutions and stated that their first job was in public providers (Kryński, 2002). Those academic teachers who were simultaneously employed permanently in public higher education institutions often had additional hours in more than one private institution. This issue has implications for the quality of education provided in private institutions. Academic staff who took multiple teaching posts were less likely to devote much time to the needs of students in the private sector, despite the fact that the courses were paid for. Usually, the non-paying students on full-time courses in public institutions tended to get priority attention, as they were the best students, selected through competitive admission procedures (World Bank, 2004).

In sum, in the academic year 2004/05 the academics in the private sector numbered nearly 13 000 people, constituting about 14 % of total academic staff in the country, while student numbers amounted to 31 % of all students. Therefore, despite the relative growth in the number of academics appointed in the private sector, the student / staff ratio in the private sector was considerably higher than in the public sector and in the academic year 2004/05 amounted to nearly 43 students per single faculty member, whereas in the public sector it was 16. This relatively high ratio contributed to the notion that rapid expansion of private higher education providers without a sufficient number of academic staff had some unfavourable outcomes in terms of dilution of quality. The unprecedented growth in student numbers unaccompanied by the increase in the number of academic staff had resulted in drastic workload increases (Pawłowski, 2004; Koźmiński, 2002; World Bank, 2004). The negative consequence of that was also a decline in the scientific and research activity of most staff in the private sector.

The analysis of the distribution of academics across different private higher education providers shows the differentiation within the sector. Because of the Ministry requirements on minimum numbers of academic staff that had to be employed in order to offer the study lines, most vocationally oriented private providers offering only one study line more often employed only a few academics, usually part-time, whereas other private higher education providers that developed more study lines and offered courses at master degree levels appointed more high ranked academics. In addition, most of them had exclusivity and full-time contracts.

According to the statistical data, we may identify several private higher education institutions that succeeded in solving the main obstacle to further development and expansion of student numbers and attracted many high ranked academics. The largest number of high ranked academics was employed in those institutions that had rights to confer doctoral and master degrees in various disciplines. During the early 2000s, the following private institutions appointed numbers of

professors significantly above the average for the private sector: Academy of Management and Banking in Płock, Academy of Humanities in Pułtusk, Private Academy of Business and Administration in Warsaw, Academy of Insurance and Banking in Warsaw, Academy of Economics in Warsaw, Academy of Management and Marketing in Warsaw, Polonia Academy in Częstochowa, Koźmiński Academy of Entrepreneurship and Management in Warsaw, Academy of Business – NLU in Nowy Sącz, Academy of Psychology in Warsaw, Polish-Japanese Academy of Computer sciences in Warsaw, and Łazarzski Academy of Commerce and Law in Warsaw. As we can see, these private providers were established in the early 1990s, so they were relatively old, mature private providers. More importantly, each private provider from this group had developed a wide array of study courses and had rights to confer master or doctoral degrees.

One distinctive feature of the policy of these providers was to decrease the number of professors who had other teaching commitments in other higher education institutions. Those higher education institutions provided additional funds for academic development of faculty, owned the infrastructure and equipment that supported teaching staff, and in general made the academic career more attractive for academics by offering them better payment.

On the other side of the market there were several private providers with a limited number of high ranked academics, and a significant share of part-time employed academics. Usually these were single-discipline undergraduate institutions. For instance, we can mention a few private providers with the lowest number of high ranked academics and lowest share of full-time appointment: Academy of Management in Słupsk, Academy of Insurance in Kielce, Academy of Marketing and Management in Leszno, Academy of Business in Dąbrowa Górnicza, Academy of Management and Banking in Kraków, Academy of Local Development in Żyrardów, Academy of Humanities in Żary, and a few other vocational higher education institutions. As mentioned, their common features were the limited number of undergraduate teaching programs, usually in low-cost / high-demand study programs, such as economics, management and pedagogy. Clearly, those institutions followed the so-called low cost strategy, and reduced costs in all aspects of their activities, such as academics, equipment, and infrastructure. In addition, the majority of these 'low cost' providers were established in the mid-1990s, or after 1997, and were ruled by the 1997 Act.

To summarize, the overall picture of academic staff in the private higher education sector improved during the period analyzed, but it was still dissatisfactory, with an inadequate number of academics and a high student / staff ratio. Yet we can see a positive trend in the structure of academics employed in the private sector and the growing number of high ranked academics appointed on full-time contracts in private institutions.

12.4.1 Academic faculty in selected private higher education institutions

As mentioned before, the Ministry laid down the minimum number of highly ranked academics that had to be employed in order to offer the study line and master degree program, therefore we assume that there was a relationship between the study offer and the number of academics employed, in particular highly ranked ones. The previous section confirmed our expectations, with the highest numbers of academics in those private providers with the broadest study offer. Let us briefly present the situation in the private providers included in our sample.

Private providers from Warsaw differed significantly from other providers in terms of the number of academic employed and in particular in the employment structure. Compared to the average number of academics per single private higher education institution in Poland during the period analyzed, we can see that all five providers were above the average, both in terms of total employment and numbers of high ranked academics. For instance, in the academic year 1996/97 the average private provider employed 25 full-time academics and 11 professors, whereas the numbers for five providers in Warsaw were 63 and 27, respectively. In the academic year 1997/98 the Private Academy of Business employed 136 academics and 28 professors, Koźmiński Academy 72 and 27, and Łazarski Academy 130 and 63, respectively. Therefore, we may argue that one of the main focuses of those private providers was to foster activities that led to an improvement in their academic staff. Their managers understood that the number of academics employed and the faculty structure and qualification level are the most important aspects of long-term higher education development. Taking this fact into consideration, they intensified activities to employ many high ranked academics, and in contrast to the situation in most private providers, the increase in student numbers was reflected in a comparable increase in the number of their academic staff. For instance, the average student/staff ratio for the private sector in 1996 was 48, while for those five providers the ratio was 36, and in the case of the Private Academy of Business is was 21.

During the second period analyzed, those institutions continued their policy and increased the number of full-time high ranked academic appointed. For instance, in 2004, the Polish-Japanese Academy of Computer Sciences appointed 16 full-time professors in the faculty of information technology, while the minimum number for one master degree program is eight professors. The most significant growth in academic numbers was encountered in the Academy of Psychology, with more than 120 full-time professors, a higher number than in many traditional public universities. The other three providers also employed a large number of highly ranked academics.

In the case of providers from the following three clusters, the situation to a large extent resembled the general development of academic staff in the private sector over the period analyzed. This means a slow but gradual increase in the number of full-time academics and especially those with higher scientific degrees, but still at a much slower pace than the increase in student numbers. For this reason we shall not provide a detailed analysis across providers in each cluster but focus on those private higher education institutions that differed from the average in both positive and negative developments.

As we might expect, private higher education providers with the highest student/staff ratio and above-average number of academics employed will be particularly those institutions that offered few study programs and had the right to confer master diplomas. And this is true in all cases. In addition, a few private providers that did not offer postgraduate courses leading to master degree also managed to attract many academics. On the other side of the market were single-discipline, undergraduate private institutions established in the mid-1990s and those under the new 1997 Act, which had to meet the lower entry requirements in terms of fewer highly ranked academics employed

Those privates that were aware that much of the quality of the education they provided depends on the capabilities and quality of the academic staff, and therefore recruited a large number of permanent academic staff were the following: Academy of Business – National Louis University in Nowy Sącz, Academy of Finance and Management in Białystok, Academy of Banking in Poznań, Academy of Entrepreneurship and Management in Łódź, Academy of Management and Administration in Opole, Academy of Management and Finances in Wrocław, and Polonia Academy in Częstochowa. All of these institutions offered master degree courses. According to the statistical data we find that the most impressive growth in full-time employment during the first period analyzed was displayed by the Academy of Banking in Poznań, which in just three years increased its employment from 28 academics in 1994 to 144 in the academic year 1997/98, while the number of professors rose from 15 to 39. A remarkable growth was also witnessed in the Academy of Finance and Management in Białystok. This private provider attracted mostly academics from Warsaw, because of the short distance between Białystok and Warsaw.

During the years 1997 and 2004, those institutions, analogously to providers from Warsaw, continued to develop their academic staff, both in terms of quantity and quality, by increasing the number of highly ranked academics. For instance in 2004, Academy of Business – National Louis University in Nowy Sącz and Academy of Management and Administration in Opole had appointed more than 30 full-time professors, while the Polonia Academy and Academy of Entrepreneurship and Management in Łódź employed more than 40.

In contrast to the above providers, the remainder cannot be truly characterized as those that presume that academic staff constitutes the core of higher education institutions. For instance, the Academy of Marketing and Business in Łódź appointed only 1 permanent professor in 1997, while it had been present on the market since 1994, and 14 full-time professors in 2004. The employment at the Academy of Environment in Radom stayed at the same level, despite the enormous growth in student numbers (see preceding section), to increase in 1997 for to a few full-time professors. Part-time employment predominated in those institutions, with a share ranging from 40 percent in the Private Academy of Environment in Radom to almost 90 percent in the Academy of Marketing and Business in Łódź, which appointed 86 non-permanent academics in 1997 compared to only 14 permanent ones.

Over the second period analyzed, the number of highly ranked academics employed in those institutions remained much below the average level for private higher education institutions ruled by the 1990 Act.

When it comes to the private vocational higher education institutions, as those schools develop neither graduate programs nor do research, they have a very limited number of faculty staff, in particular highly ranked academics. In addition, as they are governed by the 1997 Vocational Higher Education Schools Act, they were required to employ only two or one professor per study line offered. Of the selected higher education institutions established after 1997, only the Academy of Management and Administration in Zamość had above average numbers of full-time academics for the private sector. Other institutional employment did not usually exceed the minimum requirements. For instance, in 2004 the Academy of Humanities in Brzeg employed 15 academics full-time, and only 1 professor.

Summarizing, there was a clear relationship between the strategy adopted by private higher education institutions and the quantity and quality of their staff. Those 'elite' private institutions, and a few others that have matured over the years into multidisciplinary, truly academic institutions with postgraduate courses, had a faculty comparable in quality and in some cases in quantity to the public sector, whereas, on the other side of the market, we find a group of private institutions that carry out only teaching activities in undergraduate courses, which had more part-time faculty and a shortage of full-time professors.

12.5 Admission policy and level of tuition fees in the private sector

This section examines the admission requirements and procedures adopted in the private sector and the level of tuition fees, and therefore tests the part of our hypotheses related to these issues. Based on our theoretical considerations we

assumed that most private providers will be low or non-selective; only some will introduce some forms of entry requirements. When it comes to the level of fees in the private sector, the theoretical models presented suggest that the level of tuition fees in particular private higher educations will depend primarily on the fees charged in public institutions located in the same region, which will provide a pricing umbrella for fees charged in the less prestigious private sector. On the other hand, we demonstrated that increased competition on the higher education market in terms of increase in the degree of rivalry will cause effect a drop in the level of tuition fees charged in both the private and public sectors.

12.5.1 Admission policy

Admission procedures and requirements are determined at the university level. The necessary requirement for higher education in both the public and private sectors is the matura certificate. However, as indicated previously, the insufficient number of public higher education institutions and the limited number of places in the first year of study offered by public providers allowed them to introduce selective, strict entry requirements. Therefore, in the 1990s, the precondition of having passed the matura examination in practice did not secure entry to any public higher education institution. The situation looked different in the private sector.

In the theoretical chapter we showed that if non-profit higher education providers do not have non-tuition sources of revenue, they will be forced to expand enrolment in high demand study fields, usually in so-called low cost study programs. The analysis provided in previous sections has confirmed our expectations about the kind of study programs offered in the private sector and the rapid expansion of enrolment in this sector. Analogously, we may expect that private higher education institutions in Poland, confronted with a lack of state financial support and other non-tuition sources of revenue, will often be low or non-selective providers without strict entry requirements.

Our research supports our theoretical findings. During the whole period analyzed, i.e., from 1990 to 2004, the necessary and only admission requirement adopted by private providers was the matura certificate. In contrast to public institutions, no private institution introduced entrance requirements, except one. The majority of private institutions required only from the candidates that they submit a set of documents, such as the matura certificate, a completed questionnaire, photographs, etc. within a fixed period of time. The candidates also had to pay the entrance fee, which was on average 120 USD (Kryński, 2002). Only a few private providers decided to introduce some additional entry requirements, usually in the form of qualifying interview or English language tests. For instance, an English test was a necessary entry procedure in the Academy of Business – National Louis University in Nowy Sącz and Polonia

Academy in Czestochowa. The only private higher education institution that introduced an entry examination was the Koźmiński Academy of Entrepreneurship and Management in Warsaw. In addition, it is worth noting that these more selective private providers introduced these additional entry requirements only for full-time programs, while the requirements for part-time programs were based on a passed matura certificate.

Nevertheless, the great majority of private higher education institutions did not adopt any additional requirements, other than the matura certificate, which was required by the Ministry. Therefore we may characterize the private higher education as non-selective or in a few cases as a low-selective sector. That is to say that under the institutional arrangements characterized by state support available only for public institutions combined with limitation of these resources, the great majority of private institutions, in order to attract prospective students, enrolled all secondary school leavers with a matura certificate without any additional entrance requirements. This in turn contributed to the relatively low standing and legitimacy of the private sector, as society was used to the strict admission requirements adopted in public sector.

We shall not analyze admission policies in selected private higher education institutions further, as none of them, except the three mentioned above, introduced any additional entry requirements.

12.5.2 Tuition fees in the years 1990 – 1997

The Constitution of the Republic of Poland guarantees that higher education is free of charge. However, there are exceptions to this rule, as charging fees is permitted in part-time courses at public institutions and in the private sector in both full-time and part-time courses. Because of the insufficiency of state funds provided to public higher education providers in the 1990s, as the state budget subsidies did not increase proportionally to the growing number of students, the overall response to the educational boom and growing demand for higher education was the creation of fee-paying forms of study in the private and public sector. In general, looking at the share of fee-paying students, which amounted to more than 50 percent in 2004, one can state that this form of studies had accommodated the majority of growing demand for higher education.

As presented in previous sections, private higher education institutions were entirely dependent on tuition fees, so the level of tuition fees and its impact on student enrolment has had a strong impact on their budgets.

According to our theory we may identify three strategies for setting the level of tuition fees charged by private providers. These strategies relate to the overall strategy of the provider, which in turn is determined by the external supply and

demand conditions and by the institutional arrangements. These tuition fee strategies are: low fees, neutral or average fees, and high fees.

When choosing the first – low cost – strategy, providers usually target selected student segments, like working students or students from lower socio-economic classes. Private providers that adopt this strategy usually offer vocationally oriented study programs in specific, narrow fields. They usually offer specialized training in a small number of study fields. The second strategy of neutral or average level of tuition fees enables providers to reduce the weight attached to the level of tuition fees as a competing tool and concentrate on other elements of competition, such as quality offered. In addition, the more providers that use this strategy, the lower the probability that a price war will emerge, which usually has negative consequences for the providers. The third strategy of high levels of tuition fees is adopted by providers that try to position themselves on the premium segment of the market, i.e. they wish to be perceived as prestigious, high quality providers. In brief, they base their competitive advantage on their high quality.

We have also argued that private higher education institutions, since they are not able to compete directly with their state-subsidized public counterparts, will mostly be demand-absorbing institutions. Therefore, their main function will be to provide more higher education. This function implies that most private providers will adopt a low or average cost strategy, in order to attract many students, mostly drawn from lower socio-economic backgrounds and thus less well-off than students enrolled in the highly selective public higher education sector. On the other hand, it is worth noting that, according to the economic rule of equilibrium between demand and supply, when demand is increasing it is easier for the producers to increase the prices without fearing a decrease in demand (Begg, et. al. 1991).

From the 'microeconomic theory of non-profit organizations' we have also learnt that when the state appropriations for public higher education providers are low, public providers are forced to look for additional sources of income, mostly by increasing enrolment on fee-paying programs. In order to attract many students, public providers will charge low or average levels of tuition fees and thereby force private higher education institutions to follow in their wake.

As there is a scarcity of data on the level of tuition fees in both private and public higher education during the period analyzed, we are not able to provide a detailed analysis of this issue. On the other hand, some research conducted by academics and data from surveys conducted in this study allow us to give an overall picture and draw some conclusions.

According to research conducted in 2001 among secondary school leavers, higher education was perceived as investment and worth paying for. Prospective students agreed that higher education is both a private and a public good and therefore accepted tuition fees. It is important to emphasize that the level of tuition fees per se was not perceived as an indicator of quality of a higher education provider. Yet the majority of them agreed with the opinion that if a higher education provider enjoys high prestige and reputation, and its graduates have well-paid jobs, then a high level of tuition fees is acceptable. On the other hand, among the majority of them who planned to study in private higher education institutions, the most important factor that determined the choice of the provider was the family financial situation and the prices charged by competitive providers (Kolasiński, Lisiecki, 2004a). The same research provides an analysis of the determinants of level of tuition fees charged by private higher education providers. The bottom limit of tuition fees was mostly set on the basis on costs incurred, while the top limit was calculated on the basis of tuition fees charged by similar private higher education providers situated in the same city or region. Only a few private providers set tuition fees regardless of the level of tuition fees charged by competitive providers. These providers usually offered master level courses and were perceived as high quality institutions. Fees charged by these providers were much higher than the average for private providers.

In addition, it worth noting that the level of tuition fees differed according to the study lines, mode and type of delivery. According to Kryński (2002), fees charged for part-time programs were lower on average by 30 percent than for full-time programs. Similarly, the fees charged on master level courses were about 120 percent higher than those on bachelor level courses. Postgraduate courses that last two years and lead to master diplomas for bachelor graduates attracted the highest prices, usually amounting to more than 130 percent of those charged on bachelor courses. This was due to the fact that only about 30 percent of private providers offered master level courses, which were in high demand. In terms of differentiation of tuition fees in different study lines, one should note that the variation was insignificant, but with some typical features for all providers. Despite the highest demand for study programs in business and management fields, they were offered at average prices because of the high supply of such courses in both the private and public sectors. Tuition fees for study programs in pedagogy, humanities and political science were somewhat lower, being on average 90 to 95 percent of those charged in economics. The highest levels of tuition fees were in computer sciences, psychology programs, and health related subjects such as physiotherapy, because of the high costs of delivery, high demand for such programs and a limited supply from only a few private providers that had such programs on offer.

During 1990 and 1997, tuition fees were relatively low in comparison with developed world standards, with the highest fees in 1997 amounting to 2 625 USD

per year of study on full-time master degree level courses. The average level of tuition fees amounted to no more than 800 USD, while the lowest levels represented about 250 USD per year of study on part-time bachelor degree level programs. The great majority of private providers set average tuition fees; only a few charged high program fees (Kryński, 2002). In general, the level of tuition fees varied considerably across private providers depending on the type of programs, location of provider and the strategy adopted.

The following private higher education providers set the highest program fees in 1997⁸:

- Private Academy of Business and Administration in Warsaw, established as a first private higher education provider and charged the highest fees. Fees for a full-time master level course were 2 625 USD per year of study, while admission fees were 160 USD. Fees on part-time programs were lower, at 1 300 USD. The provider offered programs in economics and management fields.
- Academy of Business – National Louis University in Nowy Sącz, the tenth private provider to be registered with the Ministry, also charged relatively high tuition fees, amounting to 1700 USD on full-time programs per year of study and 2000 USD on part-time programs. In contrast to the common pattern in the private sector, the Academy charged higher fees for part-time programs, despite the lower costs of part-time course delivery. This was caused by the policy adopted, called in this book the ‘high quality / high price’ strategy. The Academy perceived the negative consequences of increasing the number of students in particular on part-time programs and made efforts to prevent a possible deterioration of quality by charging higher fees on part-time programs. Therefore, students were more interested in full-time courses.
- Polish-Japanese Academy of Computer Techniques in Warsaw, established in 1994 as one of the first technical private higher education institutions and offering a study program in computer sciences in cooperation with computer companies from Japan and Poland, charged very high tuition fees. The high costs of providing the courses in new computer techniques and the prestige and reputation the institution had achieved allowed it to set a high level of fees: 2 200 USD on both full-time and part-time programs. In addition, entry fees were 500 USD, which, compared to the market average, were a few times higher.
- Analogously, the Academy of Psychology in Warsaw, which offered is the only private provider to offer courses in psychology, set high tuition fees: 1 500 USD per year of study on full-time master degree level courses.

On the other side of the market we may enumerate several private providers with program fees amounting to no more than 600 USD per year of study. Those

⁸ 1 USD = 3.3 PLN (Polish zloty) in 1997

providers were usually located in smaller towns outside the academic centres and offered vocationally oriented bachelor study programs mostly in management and business fields. Those private providers that adopted a low costs policy included: the Academy of Entrepreneurship and Marketing in Chrzanów with program fees of 700 USD on full-time courses and 500 USD on part-time programs per year of study; Silesian Trade Academy in Katowice, which charged 500 USD and 400 USD on full-time and part-time courses, respectively; the Jański Academy of Management and Entrepreneurship in Łomża with program fees lower than 500 USD on both full-time and part-time courses.

During the first period analyzed the level of tuition fees increased each year following the rate of inflation, which ranged from 15 percent in 1997 to 43 percent in 1992. A few private providers set the tuition fees in US Dollars and kept the level of fees unchanged for several years. Other providers increased tuition fees each year to compensate for the high inflation rates. Tuition fees consisted of 95 percent of total income for the private sector in the academic year 1997/1998. As there is a scarcity of information on the changes on the level of program fees for private sector, we may argue that in real terms the level of tuition fees remained stable during the period analyzed.

Despite the relatively low levels of tuition fees in the private sector, private higher education institutions had achieved net profits in each year in the 1990s. In 1997 the net gain of the private sector amounted to about 101,100 thousand zlotys, equivalent to almost 25 million US dollars. In comparison, the public sector made a net profit of 23 million US dollars. In 1997 only 11 private providers incurred losses, while 117 reported net profits. The total income of the private sector was 101 million USD, with an expenditure of 76 million. Public higher education institutional income was 1,280 million USD, with an expenditure of 1,257 millions. So the private higher education institutions' rate of return on income was 25 percent, while the public sector only achieved 2 percent. In addition, it is important to note that 98 percent of expenditure in private higher education institutions related to instruction costs, which confirms our earlier findings about the mostly teaching character of private providers. Additionally, the found capital of private higher education sector in Poland comprised of 19 million US dollars in 1997, while net profit was 25 million US dollars, which means that private providers earned more than they had accumulated to that date.

To summarize, over the years 1990 and 1997 the level of program fees were low compared to the standards of the US or other developed economies (Pawlowski, 2004). The level of tuition fees was parallel to the kind of study offered, particular in higher education institutions. Those providers with master degree level courses charged higher tuition fees, as well as those with such unique programs as psychology and computer sciences. This was because of the higher quality of teaching staff and the greater proportion of highly ranked academics employed in

such institutions. Additionally, location to a large extent determined the level of fees. In metropolitan areas and academic centres fees were higher than in comparable providers in terms of study offer, located in smaller towns.

These findings confirm our expectations that most private providers in the first phase of the transformation process set low or average levels of tuition fees with only a few exceptions of providers that decided to launch high fees. However, it must be stated that the level of fees has been increasing every year to compensate for inflation, and what is more, the fee levels allowed private providers to achieve high net profits. So we may assume that most private providers had room to lower the fees, while still earning a profit. However, due to the rapid increase in student demand and the relatively low degree of rivalry (despite the new privates entering the market) private institutions derived the benefits of the surplus of demand over supply and acted like local monopolies, pricing at monopoly levels and thus generating substantial cross-subsidies. As we have mentioned before, when the demand increases the prices may easily rise, as the producers have no fear of losing their consumers. In terms of private higher education in Poland during the 1990s, when student demand grew rapidly and the degree of rivalry on the higher educating market was still relatively low, private providers were able to set the level of fees far above their costs.

In addition, according to our theoretical considerations, the fees charged at public institutions provided a pricing umbrella for prices in the private sector, which means that most private institutions will set the fees at a similar or slightly lower level than the public institutions located in the same region, despite the low costs of providing some programs, which would allow private providers to set lower fees. The analysis of the huge net gains in the private sector and the fees charged in the public sector (see next chapter), which were on average equal to those in privates, supports our theory. Private institutions set their fees by de facto copying them from their public counterparts. Only in cases of high quality private providers were the fees indistinguishable from those in the public sector.

12.5.3 Tuition fees in the years 1997 – 2004

In the second period analyzed, especially the early 2000s, the situation with regard to the level of tuition fees changed. New external conditions, articulated particularly in attenuated student demand and a persistent insufficiency of state funds provided to state higher education institutions, had an impact on the pricing policy in state universities in tuition-fee bearing part-time programs. Analogously to the previous years, the limited state resources were one of the main factors that pushed state higher education institutions into attracting as many students as they could onto part-time programs in order to gain additional funds. (See the next chapter on public higher education.) However, in times of a

rapid increase in student demand they could easily enrol many students as well as increase their tuition fees.

It is worth indicating that during the years 1997 and 2004, analogously to the previous period, the revenues from tuition fees in the private sector in average accounted for 96 percent of total income.

Yet the situation changed, the demographic low reached higher education, and student demand attenuated. Our theoretical expectations lead us to assume that public institutions, confronted by insufficient state funds and a slowdown in student demand, will likely decrease the level of tuition fees on part-time study programs in order to maintain or increase their part-time tuition-bearing enrolment numbers so as to attract less-well-off students from poorer socioeconomic backgrounds, who were previously served by private sector. Therefore, the publics will lower tuition fees regardless of the decreasing marginal value of the part-time courses. According to our theory, the level of tuition fees charged at state universities provides a pricing umbrella for non- and low-selective private higher education institutions, which usually set the level of tuition fees at similar levels to the publics. The empirical analysis of pricing policy in the private sector during the 1990s confirmed our expectations.

Analogously, private non- and low-selective higher education institutions are forced to follow the fee-charging behaviour of the publics. Yet when the fees in the public sector decrease or stay at the same level, regardless of inflation, privates will be forced to copy the lower level of tuition fees in order not to lose their enrolment to the public sector,. However, beyond some tuition levels private institutions will no longer break even and will start to lose money. In the long run they leave the market, while public providers with state support can survive short-run losses.

The empirical analysis confirmed our expectations to some extent, as the average level of tuition fees neither increased, as in previous years, nor decreased during the 2000s. In general, the level of fees in the private sector has remained stable since 2000, despite inflation running as high as 5 – 6 percent. According to the research conducted by Kryński (2002), the average annual level of tuition fees charged in private higher education institutions on full-time master degree courses in the academic year 1999/2000 amounted to 1,350 USD (5,300 PLN), whereas part-time programs charged on average 1,170 USD (4,700 PLN) and postgraduate 2-year courses designed for bachelor graduates ran at 1,600 USD (6,600 PLN). The level of fees on bachelor degree courses was much lower, as in previous years. The same research reports that the average level of annual fees on undergraduate full-time courses in the academic year 1999/2000 was 1,100 USD (4,400 PLN), while part-time courses charged 800 USD (3,200 PLN). On average,

the fees on master courses were 20 percent higher on full-time courses and almost 40 percent on part-time courses.

We can say that at the end of the 1990s, similar to the first period analyzed, the level of fees varied considerably within the private sector depending on the type of program, whether it led to a master or bachelor diploma. In addition, there were also differences with regard to location. In Warsaw and other large metropolitan areas, the fees on similar programs were on average 10 percent higher than those charged by institutions situated in small cities in less developed regions. For instance, in the academic year 1999/00, in the Academy of Humanities in Pułtusk, which is a small city, the fees for full-time master degree programs in political science were 860 USD, whereas in history and pedagogy courses they were 660 USD. The Academy of Finance and Management in Białystok charged about 1000 USD per year of study on its full-time master degree program in economics and 800 USD for part-time study. On the other hand, providers situated in Warsaw charged much higher fees. For example, the Private Academy of Business and Administration in Warsaw charged 2,100 USD for full-time and 1,300 USD for part-time postgraduate courses in economics; the Academy of Insurance and Banking in Warsaw charged 1,350 USD full-time and 1,000 USD for part-time master degree courses in economics.

The lowest fees at the end of the 1990s were found among vocational higher education institutions situated in small cities. On average, they did not exceed 650 USD (2,600 PLN) per year of study on full-time bachelor degree courses and 550 USD (2,200 PLN) on part-time programs. Nevertheless, during the 1990s, in all types of private higher education institutions, even in low costs schools, tuition fees were increasing gradually and steadily. During the 2000s, when the student demand attenuated, the relative level of tuition fees did not increase further, while if one takes account of inflation, in many cases the level of fees decreased. The changed pricing strategy touched all kinds of private providers, although the effect was less apparent among those 'elite' high quality private providers, who were able to increase their fees further, with some exceptions.

For example, the highest fees in 2004 were set by the same private providers as charged the highest fees during the 1990s. In general, this means that those private providers that adopted a high quality strategy at the beginning of the transformation process did not change over the years. They offer a relatively wide spectrum of degrees at postgraduate level, and charge very high tuition fees. Among other factors, their high fees support their 'elite' strategy and ensure that their clientele comes from upper and upper-middle income groups. The highest fees were charged by the Polish-Japanese Academy of Computer Sciences, which charged 3,500 USD (11,000 PLN) per year full-time and 2,100 USD (7,000 PLN) for part-time master degree courses in computer sciences. The Academy of Psychology in Warsaw also charged high tuition fees, amounting to 2,500 USD

and 2,200 USD on master degree courses in psychology. Other 'elite' institutions charged on average about 1,900 USD for full-time and 1,600 USD for part-time courses.

In case of those private higher education institutions that evolved over the years, from single-discipline undergraduate institutions with the great majority of students attending part-time courses into multidiscipline higher education providers with postgraduate courses, the average level of tuition fees did not increase after 2000. We do not have complete data on the level of tuition fees in the private sector over the years, but the data from the surveys conducted by the present author clearly indicate that this kind of private providers did not increase their fees in recent years. For instance, the Academy of Entrepreneurship and Management in Łódź has charged the same level of fees on all study courses provided since the academic year 2000/01. The Academy of Management and Administration in Opole followed the same pattern, but in the academic year 2004/05 the fees were decreased by an average of 5 percent. The Academy of Management in Szczecin also decided to decrease the level of fees starting in 2001, since when fees have been decreased by almost 15 percent. Another private provider in Szczecin – The Academy of Public Administration – has decreased its fees by 10 percent since 2002. Of course, there were some cases when privates have decided to increase the fees since the beginning of 2000, but they are relatively rare.

In addition, it is worth noting the new trend among those private providers. According to our theoretical expectations, we assumed that on markets with attenuated student demand and a high degree of rivalry, a significant share of private institutions that had previously had a clearly demand-absorbing character with the majority of students attending part-time courses, would try to attract new student groups previously served by public providers, especially young people who enrol in higher education immediately after graduation from secondary school, mostly on full-time courses. Our empirical research regarding to study offer confirms our expectations, but the pricing policies in the private sector also display a change of strategy.

In previous years, this group of private providers tended to have much higher fees on full-time programs, as they were primarily interested in attracting many students to part-time programs, where tuition fees were much lower. However, during the second period analyzed, when their focus shifted more to full-time students, the fees for both modes of delivery tended to be similar. For example, fees on full-time courses were about 110 to 120 percent of those on part-time courses, with many higher education institutions charging the same price. As a result the institutions were able to attract more students to full-time courses.

When it comes to the last group of private providers – the single-discipline undergraduate private providers ruled by the 1990 Act and new vocational higher education institutions ruled by the 1997 Act – their tuition fees were below average. In the former case, the institutions were offering mostly part-time courses adapted to lower-middle class students who took studies while keeping their day jobs. Accordingly they tend to have low tuition fees in order to make studies affordable. In the latter case, the vocational institutions were new on the market and had less prestige and reputation than their older private counterparts. One way to attract potential students was their relatively diversified study offer, while a second was the level of tuition fees, which was lower than in other private and public providers. Nevertheless, those vocational institutions that offer unique study courses, as in advertisement, physiotherapy, and beauty and in other health-related subjects, charged higher fees than those vocational schools with low cost / high demand study programs in economics and humanities.

12.5.4 Tuition fees in selected private higher education institutions

Turning now to the developments of selected private providers in terms of level of tuition fees, we shall provide the average levels of tuition fees for a particular stratum, highlighting those providers that differed most in their pricing policy⁹.

In case of private higher education providers from Warsaw, during the first period analyzed selected institutions charged tuition fees that belonged among the highest on the market. There were a number of reasons for this. First, each provider from this cluster offered postgraduate courses leading to the master degree. Second, in case of the Polish-Japanese Academy, its offer was quite unique for the private sector at this time, with master degree courses in computer sciences. Third, as we shall see in the following sections, the tuition fee levels in public higher education institutions in Warsaw were also the highest on the market, which indirectly allowed privates to charge high tuition fees without the fear of losing their enrolment to public institutions. And finally, we may argue on the basis of our analysis that these five providers chose a high quality / high price strategy and therefore they based their differentiation on high quality, unique products, which allowed them to charge high tuition fees. It is also important to note that Warsaw was the most developed region in Poland and offered the best career prospects for higher education graduates.

The Private Academy of Business and Administration, which was the first private provider to be established, also charged the highest fees. In the academic year

⁹ For comparison with other countries we provide data on tuition fee levels in USD. 1991/92 – 1 USD = 1.4 PLN; 1992/93 – 1 USD = 1.5 PLN; 1993/94 – 1 USD = 1.8 PLN; 1994/95 – 1 USD = 2.2 PLN; 1995/96 – 1 USD = 2.4 PLN; 1996/97 – 1 USD = 2.7 PLN; 1997/98 – 1 USD = 3.3 PLN; 1998/99 – 1 USD = 3.5 PLN; 1999/00 – 1 USD = 3.9 PLN; 2000/01 – 1 USD = 4.3 PLN; 2001/02 – 1 USD = 4.1 PLN; 2002/03 – 1 USD = 4.1 PLN; 2003/04 – 1 USD = 3.9 PLN; 2004/05 – 1 USD = 3.7 PLN.

1991/92 the fees amounted to 2390 USD per year of study on full-time bachelor level programs. The tuition fees set on part-time programs were much lower, amounting to 1300 USD. During the period analyzed the level of fees on part-time programs remained stable, while on full-time they increased to 2,635 USD in 1997. It is also worth noting that fees were set in US dollars rather than Polish zlotys, which in turn protected them from inflation. The second highest fees were charged by the Polish-Japanese Academy: 2,200 USD per year of study in 1997. The other three providers in Warsaw also set relatively high tuition fees, but they were much lower than those in the Private Academy. For instance, Łazarski Academy of Commerce and Law set its fees in 1993 at 1,200 USD per year of study. Four years later, in 1997, the fees had risen to 1300 USD. The lowest tuition fees were set by the Academy of Management, but they were still higher than average in the private sector. On average during the period analyzed the fees in those providers were about 140 percent of the average for whole sector. It is also worth indicating that the tuition policy adopted when these five institutions started to function was pursued in succeeding years, meaning that all these schools chose the high price strategy from the very beginning.

During the second period analyzed, as has already been described in the previous section, the pricing policy of those 'elite' private providers remained unchanged, with very high tuition fees, which also increased over the years, in contrast to the average situation in the private sector. The highest fees were charged by the Polish-Japanese Academy of Computer Sciences and Koźmiński Academy.

Providers situated in large metropolitan areas experienced a different situation in terms of level of fees than providers situated in Warsaw. During the 1990s they charged lower fees than those of providers in Warsaw. As this group was very homogeneous in terms of study offer, the level of fees was also similar within the cluster. The fees were highest in the Academy of Banking in Poznań: 1,300 USD per year of study on full-time courses in its first years. The Academy of Marketing and Banking in Łódź charged about 900 USD for full-time courses and 770 USD for part-time programs during the period analyzed. The Academy of Entrepreneurship and Management in Łódź, established in 1995, set its fees slightly higher, charging about 1000 USD for full-time and 700 USD for part-time courses. Students paid the lowest fees in the Academy of Finances and Banking in Katowice, which charged 800 USD for both full-time and part-time courses. In summary, these institutions charged slightly higher fees than the average in the private sector, despite the fact that their offer was average; with undergraduate courses leading to bachelor diplomas in economics and management fields.

During the second period, when there was attenuated student demand and an increase in rivalry on the higher education market, these institutions did not increase their level of tuition fees. As explained above, as those institutions tried to attract new student groups previously served by public providers, in particular

the fresh secondary school graduates who prefer full-time courses, their tuition fee levels on full-time courses had been decreasing. In 2004 the highest fees were charged by Academy of Banking in Poznań: 1,250 USD (4,400 PLN) per year of study on full-time courses and 1,150 (4,000 PLN) USD on part-time courses. The Academy of Entrepreneurship and Management in Łódź charged the same level of fees for all study courses provided since the academic year 2000/01: 1,050 USD (3,600 PLN) on full-time programs and 900 USD (3,200 PLN) on part-time ones. Fees charged by the other three providers were similar to those charged by Academy of Entrepreneurship and Management in Lodz.

Once we move to the third stratum we find a group that was very heterogeneous during the first period of the transformation process. Inside this group it is useful to distinguish two categories. The first group was composed of two institutions: the Polonia Academy in Częstochowa and the Academy of Finance and Management in Białystok. Due to their rich study offer and their right to confer master degrees they set higher fees than the other providers in the cluster. The institutions from the second group kept tuition fees low in order to be affordable for their lower-middle class and working students.

The Polonia Academy in Częstochowa charged about 1,200 USD on full-time courses and about 900 USD on part-time courses per year of study during the period analyzed in all faculties. The Academy of Finance and Management in Białystok differentiated the level of fees according to the type of study. Fees on full-time bachelor degree programs amounted to 800 USD per year of study in 1993, increasing to 900 USD in 1997, whereas students attending part-time modes of delivery paid an average of 700 USD during the period analyzed. As expected, fees on postgraduate courses were higher, at 1,200 USD.

The levels of fees charged by the other three providers were lower and similar to the average price on the market. In the academic year 1994/95 the Private Academy of Environment in Radom charged 950 USD for full-time courses and only 550 USD for part-time ones. In 1997 the fees increased in Polish zlotys, but remained at the same levels in US dollars. The Academy of Management and Administration in Opole, established in 1996, set the program fees in its first year at average levels: 850 USD for full-time and 800 USD for part-time programs. The level of fees was the same in 1997. The last private provider in this group, the Academy of Computer Sciences in Bielsko-Biala, adopted a similar policy on fee levels.

During the second period, over the years 1997 and 2004, the level of fees charged by these five private providers had equalized, as all providers, except the Academy of Computer Sciences and Management in Bielsko-Biala, offered master degree courses and thus aspired to ascend to a better tier of the private higher education sector. Analogously to the providers from second stratum, the level of

tuition fees has stabilized since the beginning of the 2000s. Therefore, in 2004, the average fees charged on full-time courses for this group of institutions, was about 1,050 USD (3,700 PLN) on full-time courses and 900 USD (3,200 PLN) on part-time ones.

We can see that the level of fees in the second and third stratum were very similar, especially in the 2000s, as a result of the similar strategy adopted by all these institutions. They developed a relatively wide spectrum of programs and obtained rights to confer master degrees in a few disciplines. They also became more interested in full-time students rather than part-time ones, in contrast to their first years on the market. In summary, to some extent they emulate the behaviour of 'elite' private providers and traditional public higher education institutions. As public institutions situated in their region set the average levels of tuition fees (see the next chapter), they had to follow their example.

The fourth stratum includes four private providers established in small towns. We find two institutions that followed the high price policy and two that kept fees at low levels. The most distinguished was the Academy of Business – National Louis University in Nowy Sącz. The academy was one of the first on the market had consciously and consistently invested in its development in terms of study offer, quality of academics and students. The policy adopted by the Academy focused on full-time students rather than expansion of part-time programs. This was reflected in the pricing policy, as the fees on part-time programs were higher than on full-time ones: 1,600 USD on full-time programs per year of study and 2,000 USD on part-time ones.

The Academy of Management in Słupsk also charged relatively high fees: 1,250 USD on full-time courses and 900 USD on part-time ones in 1996 and 1997. The other two providers followed the low costs policy and in fee level terms were situated below the average for the private sector. For instance, the Academy of Entrepreneurship and Marketing in Chrzanow, established in 1994, charged 650 USD for full-time courses and 500 USD for part-time ones in its first year and maintained this level for in subsequent years.

As expected, during the second period the Academy of Business – National Louis University in Nowy Sącz did not change its strategy and become one of the most prestigious private higher education institutions in Poland. For this reason, the tuition fees remained high, although compared to other 'elite' private higher education institutions they were relatively low, and in fact had decreased since 1997. In 2004, the Academy charged on average about 1,600 USD for full-time courses and 1,200 USD for part-time ones. The Academy of Management in Słupsk did not develop so extensively: in 2004 the institution was offering only two undergraduate courses in economic related subjects. As such, the fees charged by the Academy decreased by 10 percent from 2000 on full-time courses:

reaching 1,000 USD (3,600 PLN) in 2004, while fees for part-time courses increased by 15 percent to 900 USD (3,200 PLN).

The other two providers remained single-discipline undergraduate institutions, both offering management and marketing studies. Yet the fees charged remained relatively stable and in case of the Academy of Entrepreneurship and Marketing in Chrzanów, in fact have increased during recent years. In 2004 the fees charged for full-time courses were 1,050 USD (3,800 PLN) and 850 USD (3 100 PLN) for part-time courses in both institutions.

Among the vocational higher education institutions ruled by the 1997 Act, we find two pricing strategies, which are unrelated to the location of the provider. For this reason, our analysis will highlight the differences between these two strategies, rather than focusing on four identified strata with regard to institutional location. The former strategy adopted by those vocational providers that offered undergraduate courses in inexpensive study fields, such as economics, humanities and pedagogy, which are also offered by the great majority of older private providers and traditional state universities, followed the low cost strategy. From our sample we may identify the following schools that charged relatively low or very low tuition fees: the Academy of Business and Administration in Łuków, the Academy of Local Development in Żyrardów, the Pedagogy Academy in Łódź, the Academy of Administration and Social Sciences in Warsaw, the Academy of Economics and Computer Sciences in Kraków, the Academy of Business and Foreign Languages in Poznań and the Academy in Humanities and Economics in Brzeg. The average fees in those institutions amounted to 800 USD (3,000 PLN) for full-time programs and 750 USD (2,800 PLN) for part-time ones.

The other group of vocational institutions consisted of those providers that developed relatively unique study programs, addressing their offer to specific student niches. For this reason, as the competition from other providers was relatively low, they could charge higher tuition fees. In our case we may identify the following institutions where the diversified study offer allowed them to set higher fees: the Academy of Advertisement in Warsaw, the Academy of Personnel Management in Warsaw, the Academy of Beautician and Health Care in Warsaw, the Academy of Computer Sciences and Management "Copernicus" in Wrocław, the Academy of Tourism in Częstochowa, the Academy of Computer Sciences in Gorzów Wielkopolski and the Academy of Management and Administration in Zamość (physiotherapy). These schools charged average or above-average tuition fees for the private sector. The most expensive one was the Academy Advertisement, which was the first private provider to offer study courses in advertising. The average level of tuition fees charged by these institutions was 1,200 USD (4,200 PLN) per year of study on full-time courses and 1,050 USD (3,800 PLN) for part-time programs.

To summarize, during the first period, as theoretically expected, there was a relationship between the study offer and the level of tuition fees. Location had an impact on prices, too. In general, we may distinguish two groups: one of so-called 'elite' private providers situated mostly in Warsaw but also in other regions; and a second group that was much less affluent and more heterogeneous than the first.

According to our hypothesis, the 'elite' providers chose the high quality / high price strategy. They offer high quality study programs at master level, usually with high levels of tuition fees. In addition some of them adopted some form of entry examinations. They tried to gain a more balanced enrolment structure as between part-time and full-time students. These institutions compete on a nationwide market and do not focus only on regional students. These providers differ from other institutions in terms of the high level of tuition fees, but also in terms of the smaller difference between fees on full-time courses and part-time ones. The Academy of Business in Nowy Sącz charged higher fees for part-time courses, while a few others charged the same fees for both modes of delivery. The second group had lower fees, reflecting the average fees charged in the private sector. These institutions were usually undergraduate single discipline institutions. Their enrolment structure was dominated by part-time students, and in fact their policy focused on attracting those students. Therefore, these providers charged much lower fees for part-time programs than full-time ones. In terms of location, the average level of fees was slightly higher in bigger cities in comparable institutions.

So, over the years 1997 and 2004, we may identify three pricing strategies of private providers. The 'elite', high-quality institutions charged, as previously, very high tuition fees. The second group that also set its fees above the average consisted of those institutions that developed over time, introduced new study lines, obtained rights to provide master degree courses and shifted their focus from part-time to full-time students. These private providers, in direct competition with state higher education institutions, usually mirrored the level of fees set by their public counterparts situated in the same region. In addition, we may include in this group, a few new vocational higher education institutions, which offered unique study courses and also charged relatively high fees. Finally, the last group of private providers comprises usually single-discipline undergraduate institutions that carry out their teaching activities in low cost disciplines, mostly in economics and humanities. These institutions, adapting their pricing policy to the lower income student group, kept their fees at affordably low levels.

12.6 Summary – strategic responses of private higher education institutions

12.6.1 Summary – the first period analyzed

First, let us summarize the performance of private providers during the initial years of transformation. Demographic and economic pressures, together with the new institutional arrangements driving the educational system in Poland during the 1990s, created a rapidly expanding demand for higher education. The pressures, supported by the improvements in coverage at the secondary school level, in terms of increased share of secondary school graduates with the matura certificate, resulted in an expansion of the system of higher education, which almost tripled in size, from the academic years 1990/91 to 1997/98. Because the barriers to entry to private higher education were eliminated, private higher education institutions were a large part of the story. By 1997 private higher education institutions constituted a sizeable proportion of the higher education sector, with 128 private providers and 205 thousand students, amounting to almost 19 percent of all students.

The analysis of the strategic responses of private higher education institutions in Poland in the first year of transformation process provided in the preceding sections has revealed an interesting array of developments, most of which were envisaged in the theoretical chapters and formulated in the hypotheses.

From the standpoint of the location and distribution of private providers, we may safely argue that our theoretical expectations and hypotheses have been confirmed. First, when a demand for higher education exists, supply will rise to fill the void. This means that new private providers entered the higher education market, and were founded especially in those regions with high, unmet student demand. The private providers' main function was mostly demand absorbing. Therefore, the great majority of institutions were low-selective or unselective without any form of entry requirements.

In addition, the hypothesis on the relationship between the entitlement of private providers to state financial support and the performance of higher education institutions was also supported. Unsubsidized private higher education institutions developed mostly low cost study programs in most student demand areas, in particular in economics and management, the share of students enrolled in disciplines within these fields amounting to 60 – 70 percent. The analysis also shows that the growth of private providers was mostly based on part-time students. The overwhelming majority of private institutions were single discipline, vocationally oriented institutions, offering only bachelor degree programs.

As expected, only a few private higher education institutions chose the high quality / high price strategy, offering high quality study programs at master level, usually at high tuition fee levels, with some additional form of entry examinations. The majority of them were established as the first privates on the market, usually in Warsaw but also in some other regions. Most of them had balanced enrolment in terms of full-time and part-time students. However, a mixed picture emerged in terms of expansion. Instead of the steady growth policy envisaged in the hypotheses, most of them experienced an aggressive enrolment growth. These providers, being totally dependent on tuition fees, welcomed the increase in student numbers, as they needed resources for further qualitative and quantitative expansion.

In terms of the level of tuition fees, we may argue that in times of increasing student demand and a relatively low degree of competition on the market between higher education providers, the institutions were able to increase the level of tuition fees without fear of losing students. According to our theoretical expectations, such external conditions allowed privates to price at monopoly levels, thus generating substantial profits. The level of fees charged in the public sector provided a pricing umbrella for private higher education. The average private institution could not charge more but could set its prices at the same level or slightly lower than public institutions (see the section on tuition fees in the public sector). Therefore, private institutions, although they generated huge profits, did not decrease their prices but were able to increase them.

When it comes to our hypotheses on the development of private higher education institutions in an emerging market with a low degree of rivalry, we may safely argue that they have to a large extent been confirmed.

In the first hypothesis we assumed that when the barriers to entry in the higher education market are low, and there is an unmet demand for higher education, then the fundamental free market rule will come to life once again: private providers will enter the higher education market and fill the void. In Poland, after the 1990 Act on higher education, which allowed private providers to enter the higher education market and set relatively low requirements in order for them to become a state recognized higher education provider, private institutions had proliferated. Over a few years, in 1997, their number grew from 0 (excluding private Catholic institutions) to 128 and they accommodated a growing number of students.

The second hypothesis based on our theoretical considerations states the relationship between the entitlement of private providers to state financial support and the behaviour of higher education institutions. According to the hypothesis, unsubsidized private higher education institutions, which were also deprived of any other non-tuition sources of revenue, will be mostly demand-

absorbing institutions. Their main function will be to provide more higher education, which will to a large extent determine their location, the students they target, their admission policies and study offer. We argued that they will be established mostly in large urban areas and in the well-developed regions, rather than in small cities in poorer regions. In addition, they will focus mostly on underserved clients, such as third-age, mature students and those from lower socio-economic backgrounds, who are very often the first in their families to aspire to higher education. And again, the empirical analysis of Polish private higher education sector has confirmed our expectations. The private higher education institutions were not evenly distributed across the regions, with the great majority of schools concentrated in and around large metropolitan areas. Their students came mostly from the lower social classes (Rakowski, 1993; 1997, 2004), and in order to pay for education they usually applied for part-time courses, so that they could combine study and working. In 1997, the fraction of part-time students in the private sector accounted for almost 85 percent of all students in the private sector. The majority of private providers were seen primarily as a second-best alternative to the state higher education, and fresh secondary school graduates who prefer to study full-time, were automatically dismissed them as a second choice. Therefore, the paradox of public funds financing the higher education of middle and upper classes in state universities free of tuition fees, with strict entry requirements, touched the Polish higher education system, too.

The third hypothesis is in fact a derivative of the second one. We argue that most private providers, in order to attract a critical mass of students, will offer high demand, 'low cost' undergraduate study programs, usually in business and humanities. They will develop neither graduate programs nor research, their faculty will to a large extent consist of part-time academics. Thus, they will be primarily teaching institutions. Therefore, most new private providers will choose the 'low cost / aggressive growth strategy', focusing on regional students and basing their product differentiation mostly on low costs and location.

By 1997, only 12 private providers among 128 on the market had the right to confer master degrees, so the great majority offered only undergraduate courses. The majority of higher education institutions offered only one (77) or two (28) study lines. Only 23 private providers had developed three study courses or in a few cases even more. In terms of student distribution by disciplines, those enrolled in disciplines in the field of economics prevailed significantly during the period analyzed., and in the academic year 1997/98 they represented almost 55 % of all students. Students in humanities related subjects, such as administration and political science, comprised more than 30 % of total enrolment. On average, during the 1990s, one additional year of an institution's operation caused its enrolment to increase by 130 percent or more. In terms of academic staff in the private sector, at the beginning of the transformation process most of them had

contracts, part-time jobs, or were not formally employed but taught on commission. In addition, most of the faculty in the private sector was also employed in public universities and colleges. It is also important to note that the great majority of private institutions were non-selective, without any form of entry requirements.

The last hypothesis, too, assumes that only a few private higher education institutions will choose the steady growth strategy, offering high quality postgraduate study programs, having high levels of tuition fees, and adopting some form of entry examinations. And in fact, in Poland during the 1990s, only a few private providers adopted such strategy. Most of them were situated in Warsaw, with a few exceptions, like the Polonia Academy in Częstochowa and the Academy of Business – National Louis University in Nowy Sącz. These institutions developed a relatively wide array of study courses at master degree levels. They also managed to attract more students on to full-time courses, their share amounting to 50 percent. The fees charged by these schools were far above the average for the private sector, by as much as 150 percent or more.

Yet we assumed that their enrolment growth would be steady rather than the aggressive strategy adopted by other private providers. However, the empirical research suggests that this is not true in case of most of these providers. It can be observed that most of them enrolled more and more students each year, and some, like the Łazarski Academy of Commerce and Law in Warsaw, the Koźmiński Academy in Warsaw and the Warsaw Academy of Management, were among the largest in the country. The expansion of student enrolment has generally been approved and appreciated by those institutions, as all private providers were predominantly tuition fee-dependent institutions. Their managers needed the increased financial resources when planning for further development, raising of prestige and increasing research activities.

12.6.2 Summary – the second period analyzed

The new Vocational Higher Education Schools Act, in 1997, was a second legal change in the institutional arrangements that boosted the development of private higher education. During the second period analyzed, their number doubled to reach 287 in 2004.

As the new 1997 Act decreased the barriers to entry for new providers in regard to the minimum number of high ranked academics employed, new potential entrants had more choices in terms of the location, as access to academics did not matter as much as previously. And we may safely argue that the 1997 Act brought positive effects in terms of the distribution of private providers. Over the years 1997 and 2004, private higher education institutions proliferated more in

the less developed regions. As a consequence, in 2004, private higher education was more evenly distributed across the country than it was in 1997.

The program offerings in the private higher education sector in the 2000s also changed. Since the early 2000s, student demand started to attenuate and competition on higher education market became fierce, with many new private and public providers, so institutions had to expand their study offer in order to remain viable and enrol a critical mass of students.

In 2004, the range of studies offered in the private sector by disciplines were also much more diversified than during the early 1990s, with many schools offering courses in information technology, sciences, engineering, and health. The student distribution in the private sector by disciplines changed considerably over the years 1997 and 2004. Whereas in 1997, students attending classes in economics related subjects exceeded 50 percent, their share decreased by almost 20 percent, to 36 percent in 2004. The courses in humanities retained their share and enrolled about 30 percent of students in the private sector. Pedagogy and other teacher related programs became more popular and grew to 15 percent. The most significant growth was encountered in sciences, engineering and medicine and health related subjects.

The Private sector also managed to attract many high ranked academics, as their number tripled over the period. In 2004 the total number of full-time academics amounted to almost 13,000.

When it comes to the level of tuition fees, we may safely argue that our theoretical expectations have been confirmed. Most private institutions, following the pricing policy of public higher education institutions, did not increase the level of fees. As we have assumed, only the 'elite' private provider were more insulated and were able to keep their fees at high levels, regardless of the behaviour of the publics and attenuated student demand.

In general, the hypotheses about the strategic responses of private higher education institutions to the new institutional arrangements and changed external conditions were to a large extent confirmed.

According to the first hypothesis regarding the strategic responses of private higher education institutions during the second period analyzed, private institutions would challenge the position of public institutions by offering more academic rather than vocationally oriented courses, and by increasing and diversifying their program offerings. In short – the privates would try to attract students that previously were served by public universities and colleges.

As the analysis shows, the program offerings in private higher education sector over the years 1997 and 2004 changed considerably. In 2004, of 287 private higher education institutions, 100 had rights to confer master degrees, 4 institutions introduced doctoral studies, and one, the Koźmiński Academy in Warsaw, had the right to confer the title of habilitated doctor in the field of economics. Over the period, the share of students on postgraduate courses in the private sector increased by 17 percent, from 12 percent in 1997 to almost 30 in 2004. In addition, a significant share of private providers had a wide array of study programs, offering a few study lines in various disciplines. As such, some private multidisciplinary providers developed more than 10 study lines. There was also a change in the enrolment structure in the private sector. In the 1990s the share of part-time students increased substantially to almost 85 percent, while the pattern changed during the 2000s, and the share of full-time students increased from 15 percent to almost 25 in 2004.

The next hypothesis argues that the 'elite' private institutions will not change their premium positioning strategy over time, basing their competitive advantage on the high quality of their products. Those few identified private higher education institutions that from the very beginning pursued the 'high quality / high price' strategy continued their development over the second period both in terms of study offer and prices. Some of them obtained rights to confer doctoral degrees and all provided master degree courses. In terms of academic staff, they have a faculty comparable in quality and quantity to the traditional public higher education sector. Among other factors, their very high tuition fees reinforced their 'elite' character and superior quality.

We have also assumed that on saturated markets with a high degree of rivalry, the new private entrants will either follow the low costs strategy and offer undergraduate courses in high demand study fields for very low prices, or will base their differentiation on the uniqueness of their offer and thus charge higher prices. This assumption fitted very well in case of the Polish higher education market, as shown in empirical analysis.

When it comes to our hypothesis on the relationship between the state higher education policy in terms of implementation of market mechanisms and the behaviour of private institutions, we assumed that whenever the state introduces some market elements into the higher education market, to make it more 'market reliant', then competition between the private and public sector will grow, as privates will be able to challenge the position previously occupied and dominated by public subsidized universities and colleges. However, as the state higher education policy with regard to private sector remained relatively unchanged over the period analyzed, we cannot fully test this hypothesis. But when in 2001 the government made full-time students in the private sector eligible for state means- and merit-based scholarships, there was a substantial growth in private

enrolment on full-time courses, and since that year the share of full-time students in the private sector has been increasing. Of course, we cannot argue that this was caused only by this factor, as privates also tried to attract more full-time students by offering master degree courses, but there is a clear relationship.

The second change in the institutional arrangements in favour of market forces – the 1997 Vocational Higher Education Schools Act, which lowered the barriers to entry – also had a significant impact on the development of the private sector, especially in terms of the distribution of new private providers and their study offer. More providers were established in small cities outside the large urban areas, and their study offer was more diversified, with courses in engineering, sciences, sports and health.

Thus, the two examples allow us to claim that steps towards ‘market reliance’ in state higher education policy can have a positive impact on the development of private higher education.

13 Strategic responses of public higher education institutions

This chapter of the empirical part provides us with an analysis of the strategic responses of public higher education institutions to changes in the institutional arrangements and external basic supply and demand conditions. First we analyze the hypotheses related to the performance of state higher education institutions on the growing market, with a low degree of rivalry and state appropriations available only for public institutions, and secondly, on the mature, saturated market with increased degree of rivalry.

According to our hypotheses, on growing markets with increasing student demand, public providers faced with a low degree of competition from private providers for full-time students, will not significantly diversify their offer within this sphere of their activity because of their striking advantage of free of tuition study places. They will not substantially increase their enrolment on full-time courses, and will continue to apply strict entry requirements. On the other hand, in accordance with the microeconomic theory of non-profit organizations, if the state subsidies for public institutions are inadequate to provide study programs that cannot survive on their own, but which do produce 'value' for the institution, public institutions will have to generate profits on some other programs in order to cross subsidize or provide discretionary spending on these mission-value programs. This implies that public institutions will look for additional sources of revenue. Because of high and increasing student demand, the most convenient way to accumulate the supplementary income is to increase enrolments on tuition-bearing, part-time programs. Therefore, they will have to expand enrolment on some programs to increase their contribution margin and profits. Paid part-time courses in high demand study fields, such as business and economics, will be significantly expanded in order to gain necessary resources. We also assumed that in order to attract many students on part-time programs, public institutions will lower the entry requirements for those courses.

The second set of hypotheses concern the strategic responses of public higher education institutions during the second period analyzed, i.e., to the changed external conditions, in terms of attenuated student demand and high degree of rivalry, and to the changed institutional arrangements articulated in the 1997 Vocational Higher Education Schools Act.

We assumed that on a saturated market, public providers will try to attract new groups of students. Public institutions will challenge the private institutions by entering their market niches, mostly by lowering entry requirements for full-time

courses and thus increasing the enrolments on those programs. Public institutions will also significantly increase their study offer, both on full-time and part-time courses. In seeking to adapt to new institutional arrangements and surroundings, new public providers will emerge in small non-academic cities in order to attract new groups of students that were previously targeted by regional private institutions. Let us look at the Polish state higher education institutions and their development over the period analyzed.

13.1 Structure of public higher education

The public sector, apart from universities, consisted of polytechnics (technical universities) and academies of various profiles – economic, medical, agricultural, fine arts, physical education, pedagogical, naval, military, and theological. This kind of separation is itself a vestige of the changes implemented in the early 1950s, when Polish higher education was reorganized along the Soviet pattern. In 1990, the network of public higher education institutions comprised 98 institutions.

13.1.1 Structure in the years 1990 – 1997

The distribution of public higher education institutions across the regions did not change during this period. Only a few public institutions changed their status, evolving from pedagogical academies into universities or from technical academies into technical universities. This means that those institutions offered more study programs and acquired rights to confer doctor and habilitated doctor degrees in a few disciplines. Those institutions were: Pedagogical academies in Opole, Bydgoszcz and Olsztyn, and Technical academies in Koszalin, Opole, Radom and Zielona Góra.

In 1997, students enrolled in the public sector were more evenly distributed across the regions, compared to the situation in 1990 (see table 13.1). In 1990 almost 18 percent of all students were attending public institutions in Warsaw, and the overwhelming majority were enrolled in large metropolitan areas. The situation had changed by 1997. Looking at the table below we can see that the share of students in Warsaw and other metropolitan areas in the public sector had decreased. In 1997 students attending public higher education institutions in smaller cities, of between 100 and 150 thousand inhabitants, usually non-academic centres, amounted to almost 15 percent, and those in cities of size between 150 and 300 thousand inhabitants amounted to almost 20 percent. Warsaw had experienced a decline from 17.3 percent in 1990 to only 13.3 percent in 1997. On the other hand, as no public higher education institution emerged in small towns, the share of students in those regions remained stable with 1.1 percent of all students.

Therefore, one can state that one of the important developments to result from the changes in the institutional arrangements, particularly in terms of enhanced autonomy of public higher education institutions and their ability to set the number of study places, has been the increased dispersion of students in the public sector across regions. However, compared to the private higher education institutions, some of them founded in small, non-academic towns, we may argue that public higher education institutions were less evenly distributed across the country.

Table 13.1: Distribution of students in public higher education sector by location over 1990 – 1997 (percent)

	1990	1991	1992	1993	1994	1995	1996	1997
Warsaw	17,3	16,9	16,8	15,9	15,6	15,1	14,7	13,3
Kraków	12,6	12,4	12,1	11,7	11,4	11,2	11,2	11,2
Wrocław	9,1	9	8,9	8,6	8,3	8	8,1	8,3
Poznań	8,9	8,9	8,9	8,7	8,5	8,4	8,3	8,4
Lublin	7,9	7,9	7,9	7,7	7,6	7,3	7	6,9
Gdansk	6,4	6,1	5,8	5,6	5,4	5,3	5,2	5,2
Katowice	6,3	6,5	6,7	6,6	6,7	6,6	6,5	6,1
Łódź	5,8	5,8	5,8	5,6	5,8	5,7	5,7	5,6
cities < 300 000 inhabitants	15,8	15,8	16	16,5	16,7	17,8	18,6	19,0
cities < 150 000 inhabitants	8,8	9,6	11,1	11,8	12,6	13,2	13,5	14,8
cities < 100 000 inhabitants	1,1	1,1	1,2	1,3	1,4	1,4	1,2	1,2

Source: Own analysis based on National Yearbook for Higher Education (1990 – 1998)

In terms of the change in the structure of enrolments, universities and technical universities enrolled the bulk of the students, as they offered the broadest range of study programs and employed the majority of academics. However, other public higher education institutions had also enhanced their study offer and number of students enrolled. The tables below give data on the characteristics of public higher education institutions, in terms of fields of study offered and number of students. It is clear that the range of disciplines increased substantially, both on full-time and part-time modes of delivery. In particular, we can see the rapid and extensive development of fee paid part-time study offer at public higher education institutions.

Table 13.2: Full-time study fields offered in public higher education institutions

	1991	1992	1993	1994	1995	1996	1997
Universities	39	39	40	42	42	46	48
Technical Universities	24	25	26	29	29	33	34
Pedagogical Academies	22	22	23	24	25	26	27
Academies of Economics	7	6	6	8	8	9	9
Agriculture Academies	16	17	19	21	21	22	22
Acad. of Psychical Culture	2	3	3	3	3	4	4

Source: Own analysis based on Guide-book for secondary school graduates (1991–1998)

Table 13.3: Fee-paid part-time study fields offered in public higher education institutions

	1992	1993	1994	1995	1996	1997
Universities	23	25	33	35	37	38
Technical Universities	15	17	28	29	30	31
Pedagogical Academies	14	16	17	19	20	23
Academies of Economics	7	6	6	8	9	9
Agriculture Academies	11	12	16	15	15	15
Acad. Of Psychical Culture	3	3	3	3	3	3

Source: Own analysis based on Guide-book for secondary school graduates (1992 – 1998)

Table 13.4: Enrolment structure in public higher education institutions (thousands of students)

	1991	1992	1993	1994	1995	1996	1997
Universities	153,9	171,1	202,9	240,1	265,3	292,5	316,8
Technical Universities	93,5	103,7	130,5	152,4	177,4	201,9	232,8
Pedagogical Academies	46,6	52,6	63,7	70,6	78,7	88,1	97,5
Academies of Economics	26,9	34,2	42,7	46,1	53,4	59,3	63,7
Agriculture Academies	36,2	40,9	46,6	52,8	60,1	68,1	76,5
Acad. Of Psychical Culture	13,9	15,4	16	16,7	17,6	18,9	19,8
Medical Academies	37,4	35,1	30,1	28,5	25,1	24,9	25,3
Art Academies	8,3	8,5	8,8	9,3	9	9,5	9,9
Others	9,2	10,2	14,1	15,5	13,7	15,9	17,9
Total	425,9	471,7	555,4	632	700,3	779,1	860,2

Source: Own analysis based on National Yearbook for Higher Education (1990 – 1998)

Analogously to private sector, fee-paying forms of study programs were primarily created in areas and subjects that which were in high demand from the students, and did not require extensive capital investment in infrastructure and equipment. These study programs were developed mainly in the fields of economics, management, pedagogy and humanities.

It is worth noting the most innovative in establishing new fields of study were technical universities. Before the transition period they offered study courses only in engineering, but by 1995 all of them had developed and launched new 'fashionable' study programs in economics and management, both full-time and part-time. Agricultural academies also offered a broad variety of study courses in these high demand areas. Universities and pedagogical academies lagged behind. Especially the pedagogical academies offered study programs in relatively restricted numbers of fields, compared to other types of public higher education institutions. In 1992 technical universities and pedagogical academies had a comparable range of study fields. By 1997, technical universities launched several new programs and more than doubled their study offer on part-time programs, whereas pedagogical academies offered only five new full-time programs and nine part-time ones. For instance in 1997, 18 technical universities among 19 existing ones, offered courses in management and marketing, and 3 in economics and administration. By contrast, only 3 pedagogical academies offered courses in management and marketing, 2 in administration and 1 in economics.

These changes in terms of an extensive expansion of non-engineering study fields in technical universities and agricultural academies had resulted from strategic decisions taken by the institutions' managers in response to the demands of the new labour market. Thus, there has been an especially steep increase in student numbers in faculties of economics and administration in technical universities. The popularity of these subject areas was also connected to the fact that some established disciplines, such as construction (house building), mechanics, and electricity had been losing students. In addition, most agricultural academies, in response to changes in student demand, increased the places as well as the number of fee-based form of study fields in economics and management.

13.1.2 Structure in the years 1997 – 2004

The passage of the 1997 Vocational Higher Education Schools Act boosted the development of public higher education institutions. As we have already stated, the new regulations were designed to fill a gap in the higher education system by encouraging the establishment of both public and private higher education institutions in small cities, outside the large urban areas and academic centres. These public institutions would function at regional level, under the joint supervision and leadership of the Ministry, regional authorities and the established traditional public universities with which they would sign collaboration agreements. This joint supervision had to assure both proper academic quality, as the academic staff for new institutions would come from the traditional universities, as well as responsiveness to the needs of the region and the labour market (World Bank, 2004). According to Kaiser and Wach (2003), these new vocational schools were also funded in smaller cities in a government effort to give an economic boost to those cities that lost their status as provincial

capital under the administrative reform of 1996, as well as to gain a more even distribution of state higher education institutions throughout the regions.

Therefore, in order to foster the development of new vocational higher education institutions in small cities, and in less developed regions in particular, the entry requirements for new providers were slackened, meaning that fewer highly ranked academics would need to be appointed to establish a vocational school or to launch new study line. The new state vocational higher education institutions could deliver only undergraduate bachelor study courses, which meant that they prepared their graduates for work in a specific occupation.

Since 1998, the number of public higher education institutions has been increasing substantially and gradually each year. Over the second transformation period, 28 new state vocational higher education institutions were established, representing an increase in the number of state providers of almost 30 percent, from 98 in 1997 to 126 in 2004. Alongside the growing number of state vocational schools in small cities, the distribution of students in the public higher education sector changed considerably. Looking at the table below we can see changing pattern of student distribution in the public sector according to location. In 1997 only 1.2 percent of students were attending public institutions situated in small cities, whereas in 2004 their share increased almost 6-fold, to 7 percent. On the other side of the market, the share of students in Warsaw and other large metropolitan areas has been decreasing year-on-year.

It is also important to note that the majority of new state vocational providers were established in less developed regions, in particular in the eastern parts of Poland, with huge unemployment rates and low per capita income. For these and other reasons, by providing a free of tuition study places they significantly increased the study options for students from lower socio-economic classes.

Table 13.5: Distribution of students in public higher education sector by location over 1997 – 2004 (percentages)

	1997	1998	1999	2000	2001	2002	2003	2004
Warsaw	13,3 %	12,9 %	12,8 %	12,4 %	11,9 %	11,8 %	11,4 %	11,4 %
Kraków	11,2	10,8	10,3	9,6	10,1	10	10,1	10,2
Wrocław	8,3	8,5	8,5	8,7	8,7	8,6	8,4	8,2
Poznań	8,4	8,5	8,6	8,1	7,8	7,8	7,7	7,6
Lublin	6,9	6,7	6,3	6,2	5,8	5,5	5,5	5,4
Gdańsk	5,2	5,2	5	4,8	4,7	4,6	4,5	4,5
Katowice	6,1	5,8	5,9	5,4	5	5	4,9	4,7
Łódź	5,6	5,6	5,6	5,6	5,2	5,1	5	5
cities < 300 000 inhabitants	19	19,6	19,2	20,5	21,9	21,7	21,7	21,8

	1997	1998	1999	2000	2001	2002	2003	2004
cities < 150 000 inhabitants	14,8	14,9	15	15,2	14,2	14,3	14,4	14,2
cities < 100 000 inhabitants	1,2	1,5	2,8	3,5	4,7	5,6	6,4	7

Source: Own analysis based on National Yearbook for Higher Education (1997– 2004)

When it comes to the structure of enrolments, similarly to the previous period, universities and technical universities enrolled the majority of the students, as they offered the broadest range of study programs and employed the majority of academics. Nevertheless, new vocational higher education institutions managed, in a relatively short period of time, to attract many students. The share of students attending vocational institutions increased to 7 percent in 2004, as they enrolled almost 100 thousands students. Universities have further increased their share to almost 40 percent in 2004, from 37 percent in 1997. On the other hand, two types of higher education institutions lost their share of student enrolment, namely the Pedagogical Academies and Academies of Economics. In the former case, academies enrolled about 8,000 students fewer in 2004 than in 1997, their share decreasing significantly from 11.2 to 6.6 percent of total student enrolment. There were two reasons for this. The most important was the relatively slow development of these higher education institutions in terms of study offer. Looking at the tables below (13.6, 13.7 and 13.8), we can see, that on full-time studies, Pedagogical Academies during the period analyzed, had launched only 2 new study lines, whereas the Universities almost doubled the number of programs offered, as did the Technical Universities. In case of part-time programs, the situation was similar with 5 new programs developed. Students having a wide choice of other public and private higher education institutions thus decided to apply to other institutions. The second reason relates to the establishment of new vocational higher education institutions in small cities. As a few of Pedagogical Academies are situated in medium sized cities, they enrolled many students from rural areas and small towns. When the new institutions emerged, they took away some of the potential candidates of Pedagogical Academies.

In the case of Academies of Economics, they enrolled relatively fewer students because, since 2001, there had been a decline in student demand for subjects related to economics and management. The labour market was saturated with graduates of such programs. As Kaiser and Wach argue (2004), for a few years there appeared to be a problem of harmonization: finding a balance between the needs of the labour market and job prospects with the study courses offered by public and private higher education institutions. According to statistical data (GUS, 2005) the number of graduates in most popular study programs was much too large, exceeding the jobs available. This problem relates mostly to economics, management, law, and some humanities courses. In addition, the majority of

private higher education institutions launched programs in these disciplines and enrolled a large number of students. For these reasons, as more and more secondary school graduates became aware of that fact, the demand for these programs decreased significantly over the last few years.

Table 13.6: Enrolment structure in public higher education institutions (thousands of students)

	1997	1998	1999	2000	2001	2002	2003	2004
Universities	316,8	340,1	392,1	423,5	488,8	505,2	519,8	531,2
Technical Universities	232,8	259,5	277,3	308,2	324	333,7	331,9	329,9
Pedagogical Academies	97,5	106,1	100,7	107,6	91,2	94,6	91,9	89,2
Academies of Economics	63,7	67,1	69,8	72,6	75,2	75,5	76,6	77,5
Agriculture Academies	76,5	84,3	76,5	83,8	89,4	96,2	102,1	105,8
Acad. of Psychological Culture	19,8	20,4	21	22,1	22,9	23,6	24,8	26,9
Medical Academies	25,3	26,3	27,1	28,4	31,7	36,6	40,9	42,6
Vocational Schools	0	4,3	11,7	25,5	43,2	62,5	79,4	93,7
Others	27,8	29,4	31,2	35,1	37,1	43,8	45,4	47,2

Source: Own analysis based on National Yearbook for Higher Education (1997–2004)

Table 13.7: Full-time study fields offered in public higher education institutions

	1997	1998	1999	2000	2001	2002	2003	2004
Universities	48	49	53	58	65	74	77	83
Technical Universities	34	34	36	39	42	51	51	52
Pedagogical Academies	27	28	29	29	30	28	29	29
Academies of Economics	9	8	8	8	8	8	8	9
Agriculture Academies	22	22	23	23	23	23	25	25
Acad. of Psychological Culture	4	4	4	4	4	4	5	5

Source: Own analysis based on National Yearbook for Higher Education (1997–2004)

Table 13.8: Fee-paid, part-time study fields offered in public higher education institutions

	1997	1998	1999	2000	2001	2002	2003	2004
Universities	38	37	43	46	51	64	70	71
Technical Universities	31	31	32	32	34	45	46	48
Pedagogical Academies	23	25	26	26	28	27	28	28
Academies of Economics	9	9	8	8	8	8	8	9
Agriculture Academies	15	15	15	17	19	21	22	22
Acad. Of Psychological Culture	3	3	3	3	3	3	4	4

Source: Own analysis based on National Yearbook for Higher Education (1997–2004)

According to our theoretical considerations, we expect that on saturated markets with high degree of rivalry public higher education institutions will significantly expand their study offer, in order to attract new groups of students. We can safely argue that our expectations are confirmed. In comparison with the first period of the transformation process, with increasing student demand and a low degree of rivalry on the higher education market, there is a visible increase in the program offerings in the public sector, as over the years 1990 and 1997 universities launched 9 new study lines on full-time studies and Technical Universities 10, while during the second period the number of new study lines was 35 and 18, respectively. Other types of state higher education institutions also expanded their study offer. What is interesting, though, is that providers were launching new study courses in disciplines previously reserved for other institutions. For example, universities developed courses in engineering related subjects, such as construction (housebuilding), surveying, electronics and telecommunications, electrical engineering and civil engineering. In addition, their new study offer also encompassed courses related to health, such as physiotherapy and nursing; to music, like jazz and acoustics; to agriculture, like horticulture and farming, as well as many other disciplines. On the other hand, technical universities established courses in humanities, pedagogy and health. It is worth indicating that since 2004, one sports academy has been offering courses in management and marketing, as do all agricultural academies.

13.2 Study offer in public sector

13.2.1 Study offer in the years 1990 – 1997

The table below gives the data on the distribution of total enrolment across the different disciplines. We can see that the largest proportion of students in state higher education were studying economics, with 21 percent in the academic year 1997/98, and engineering, with 19.6 percent share of students. The other two most popular study programs were in the fields of humanities and pedagogy, with 16 and 13 percent of total students, respectively.

Table 13.9: Full-time and part-time students enrolled in state higher education institutions by discipline in the years 1990 - 1998

	1990/91	1993/94	1995/96	1997/98
Pedagogy	11.6 %	10,5 %	14,1 %	13,1%
Humanities	15,4	15,9	15,7	16,2
Sciences	9,5	9,2	5,4	4,6
Engineering	22,0	22,1	20,9	19,6
Agriculture	5,7	5,0	3,9	3,2
Medicine/Health	8,5	5,7	4,9	3,7
Economics	10,7	16,1	17,4	20,8

	1990/91	1993/94	1995/96	1997/98
Law and administration	6,3	8,2	8,5	8,9
Various disciplines	10,3	7,3	9,2	9,1

Source: Own analysis based on National Yearbook for Higher Education (1990–1998)

The growth of student numbers at the beginning of 1990s was the highest in economics and pedagogy. In the first case the number of students grew constantly over the period analyzed, from about 40 thousand students in 1990 to more than 170 thousand in 1997, while the proportion of students enrolled in economics had more than doubled in the 1990s, from 10 percent in 1991 to more than 20 percent in 1997. The share of students enrolled in study programs in the field of pedagogy increased from 11.6 to 13.1 percent. In case of subjects related to humanities their share was relatively constant and amounted to 16 percent of total students.

On the other hand, in the case of engineering studies, despite the growth in the number of students attending those programs from about 90 thousand students to almost 160 thousand in 1997, their relative share declined from 22 percent to 19.6 percent. Nevertheless, the most spectacular growth, analogously to private sector, was encountered in economics, which jumped from about 50 thousand students to almost 190 thousand.

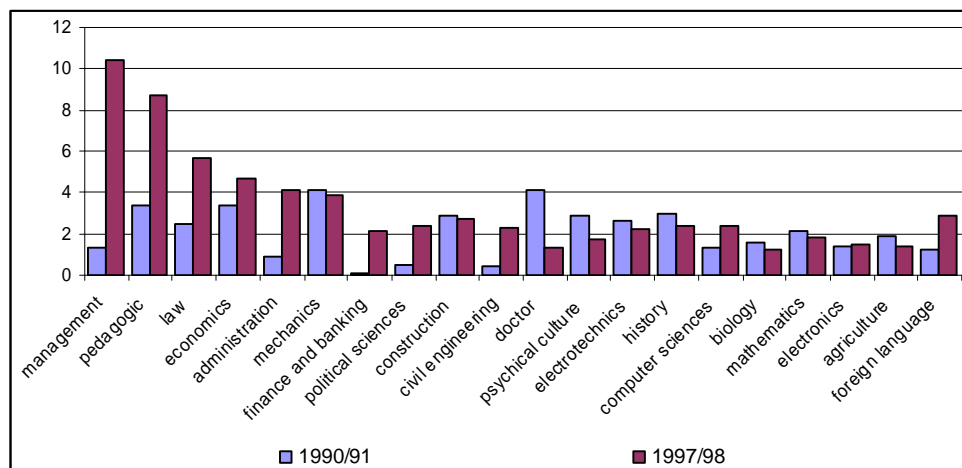
On the other side of the higher education market, the proportion of students had decreased in agricultural, mathematics and natural sciences, as well as in medicine. The total enrolment in science related subjects had increased from about 43,000 students in 1991 to only 50,000 students in 1997, which in terms of proportion meant a decrease from 10 percent to 5. However, a most significant decline was observed in medical studies from 9 percent to less than 4. The reason for this was a decrease in state funds provided for medical academies, coupled with the inability to offer part-time courses in medicine, as those studies by definition were only for full-time students.

It is important to note that despite the substantial increase in the engineering related subjects, the breakdown by study line within engineering shows that there have been some shifts in the interest of students enrolled. Although the technical universities had retained all their traditional academic programs, they had to extend their educational offer and develop and launch new programs in such areas as information technology, electronics, computer sciences, and civil engineering. The proportion of students enrolled full-time in traditional engineering programs, such as mechanics and construction (housebuilding), had decreased slightly from about 19 and 14 percent respectively in 1990 to 18 and 12 percent in 1997, whereas there had been an increase in the proportion of students enrolled in new programs full-time, including biotechnology, automatics and robotics, computer science, civil engineering and telecommunication. For

instance, in 1990 there were only some 590 students of biotechnology, while in 1997 their number had increased to almost 2,600 students. Similarly, the popularity of the automation and robotics study line and computer science increased significantly from 1,400 and 3,000 students, respectively, to more than 7,500 and 10,600. However, the most impressive growth was encountered in civil engineering, where student numbers grew almost ten-fold, from 1,200 students in 1990 to 11,000 in 1997, while its share grew from 1.3 percent to almost 10 percent.

The most important changes in the distribution of student enrolment by study lines are presented in the figure below. In accordance with the distribution of students by disciplines, we can see that the most popular study lines in 1997 were those related to economics, pedagogy and humanities. The participation in management and marketing studies has increased almost eight-fold on full-time courses and six-fold on part-time ones, which on average amounted to 10.4 percent of total enrolment in the state sector in 1997. A similar expansion in terms of student share was seen in administration and law. In terms of engineering study lines, the most popular ones were still construction and electrical engineering, but it was a civil engineering that witnessed the most significant growth.

Figure 13.1: Students enrolled in state higher education institutions by study fields (percentages)



Source: Own analysis based on National Yearbook for Higher Education (1990–1998)

As presented in previous sections, the new system of undergraduate education, leading to a bachelor diploma, was established in 1991. Since 1991, the degree structure in Polish higher education has consisted of two systems: a two-tier track and a uniform one. A two-tier track is formed with two levels: the first level is a licencjat (bachelor's) degree, and the second level lasts four semesters and leads to the magister (master's) degree. The second track is called a uniform Master's

degree program, which lasts nine or ten semesters and culminates in a master's diploma.

The table below shows the number of graduates per type of program in state higher education institutions. The large number of students enrolled in uniform master degree courses was still a remnant of the situation before the transformation process. In addition, it must be stressed that in the early 1990s, neither academics nor students had fully accepted the bachelor degree, and still needed to become accustomed to the idea of shorter programs after being used only to uniform, longer master programs over the recent decades. Similarly to the students in the private sector, undergraduate students in the public sector did not leave higher education after bachelor's programs and enrolled on the second level to obtain the master diplomas. Nevertheless, in state higher education institutions the share of undergraduate vocational degrees grew from 6 percent in 1990 to 25 percent in 1997.

However, during the period analyzed, in the state higher education institutions, the bachelor degree programs were initially and mostly introduced in evening and part-time fee-paying modes of studies. There has been much less interest in introducing the bachelor programs for full-time studies. Following the World Bank Report (2004), one can state that academics from many departments in state schools have been reluctant to introduce the bachelor degree because they did not accept the principles of vocational and professional education in their field. Yet institutions preferred graduates of bachelor degree programs to continue in fee-paying postgraduate part-time programs, as these provided a source of revenue. Therefore, in the academic year 1997/98 the share of part-time bachelor degree graduates accounted for about 80 percent of total bachelor graduates (see table below).

Table 13.10: State higher education graduates by type of program in public higher education

Year	MSc degrees*	Vocational degrees	Total number
1990	47 704	3 200	50 904
1991	50 788	4 179	54 967
1992	52 709	4 604	57 313
1993	56 258	7 178	63 436
1994	58 664	7 956	66 620
1995	68 398	14 294	82 692
1996	74 892	25 492	100 384
1997	87 861	32 937	120 798

Source: Own analysis based on National Yearbook for Higher Education (1990–1998)

* Graduates of uniform MSc studies and postgraduate (second level) studies

13.2.2 Study offer in the years 1997 – 2004

The breakdown by disciplines and study lines shows that there have been some significant shifts in the interests of students enrolled both on master and bachelor degree programs during the second period.

While, during the 1990s, the proportion of students in economics had been growing considerably, since the beginning of the 2000s, as demonstrated above, the demand for programs related to economics has been decreasing. The most important reason for this is probably (as there are no scientific analyses of the problem) the growing unemployment among the graduates of those programs.

Given the explosive expansion in these programs in the 1990s, and the large number of graduates, there are more candidates than jobs in these areas. Obviously, the share of graduates who land the available jobs are the graduates of the elite private and public higher education institutions. The remainder do find jobs, but they take up occupations that do not require a specific higher education diploma. These are usually positions in the service sector or in the service end of the manufacturing sector – the typical office occupations, dealing with buying, selling, etc.

According to Castro and Navarro (2003), this occupational drift is by no means a distortion in higher education. It happens in mature, well-developed economies, where a significant share of higher education graduates end up in these loosely defined occupations, regardless of the diploma they hold. However, the difference is that, in Anglo-Saxon countries, graduates of the liberal arts colleges are not even expected to find jobs corresponding to their major study. As such, the curricula are explicitly 'general education' by definition. The problem with other countries, including Poland, was twofold. First, some students were disappointed, as they cannot find jobs with a title having anything in common with their degree. Second, the more academically oriented courses offered by the growing number of private as well as public higher education institutions in these fields, were not ideal for some students, who did not have the appropriate academic profile required for a theoretical curriculum that lacks a direct connection to a job.

Table 13.11: Full-time and part-time students enrolled in state higher education institutions by discipline

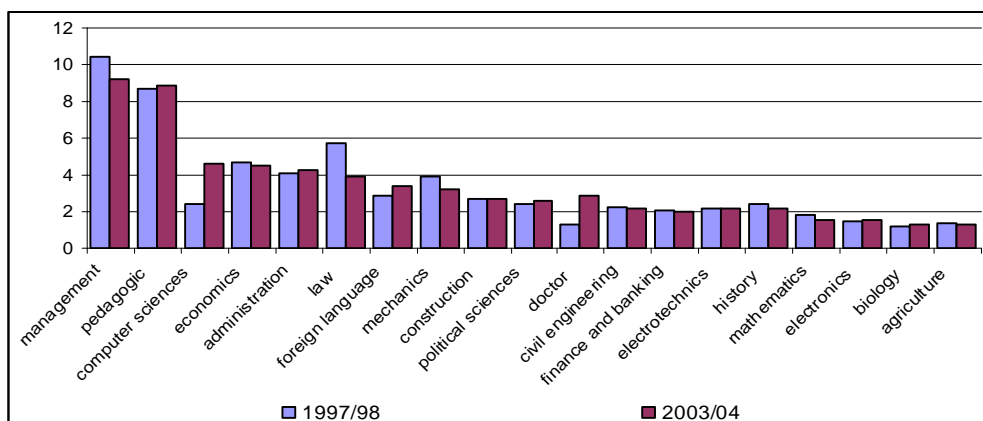
	1997/98	2000/01	2002/03	2004/05
Pedagogy	13,1 %	10,9 %	12,4 %	11,5 %
Humanities	16,2	18,2	16,7	18,1
Sciences	4,6	6,1	7,1	8,8
Engineering	19,6	21,7	19,7	17,9

	1997/98	2000/01	2002/03	2004/05
Agriculture	3,2	3,2	3,1	3,1
Medicine/Health	3,7	3,6	4,2	4,9
Economics	20,8	20,9	20,8	19,9
Law and administration	8,9	7,3	7,3	6,6
Various disciplines	9,1	8,1	8,7	9,6

Source: Own analysis based on National Yearbook for Higher Education (1997– 2005)

When looking at the table above, we can see that fewer students were enrolled on engineering related courses, economics, law and administration and teacher training. On the other hand, during the 2000s the most significant increase was witnessed on courses in the sciences, and medicine and health related programs. In fact, in the case of science, the share of students choosing these programs more than doubled in the state higher education sector over the years 1997 and 2004. This increase was mostly due to the rapidly growing popularity of courses related to computer sciences, the share of which increased from 2.2 percent in 1997 to almost 5 percent in 2004. In addition, study programs in environment protection and biology attracted more students than before. Since 2001, the Academies of Medicine have been increasing their quotas of student places on full-time courses. We are also witnessing a growing student demand for courses related to rehabilitation, as their share increased from negligible numbers to more than 1 percent in 2004 (see figure below).

Figure 13.2: Students enrolled in state higher education institutions by study fields (percentages)



Source: Own analysis based on National Yearbook for Higher Education (1999– 2004)

In summary, the positive development over the second period analyzed, which has resulted from the growing competition on higher education market, has been a significant diversification of the courses offered in public higher education institutions.

When it comes to the introduction of the two tier system of higher education with bachelor and master level, which is a part of an alignment of Polish higher education with the predominant European system, the process has been speeded up by the passage of the 1997 Vocational Higher Education Schools Act, which set up vocational higher education institutions offering only undergraduate, vocationally oriented courses. Yet, as mentioned before, neither the bachelor diplomas nor the vocational schools have really been accepted and legitimated as of equal value to traditional academic studies. The bachelor degree is perceived by students as well as academics as a requirement for the second degree of university education – master degree courses. The table below provides data on the graduates per type of program. We can see that the share of bachelor degree graduates increased from 27 percent in 1997 to 32 percent in 2004. Nevertheless, the great majority of students chose the 5-year conventional master programs.

Table 13.12: State higher education graduates by type of program

Year	MSc degrees*	Vocational degrees	Total number
1997	87 861	32 937	120 798
1998	96 916	43 153	140 069
1999	111 486	48 512	159 998
2000	124 837	55 738	180 575
2001	135 270	64 195	199 465
2002	150 019	71 340	221 359
2003	168 884	80 267	249 141

Source: Own analysis based on National Yearbook for Higher Education (1997– 2004)

* Graduates of uniform MSc studies and postgraduate (second level) studies

13.3 Enrolment in public sector

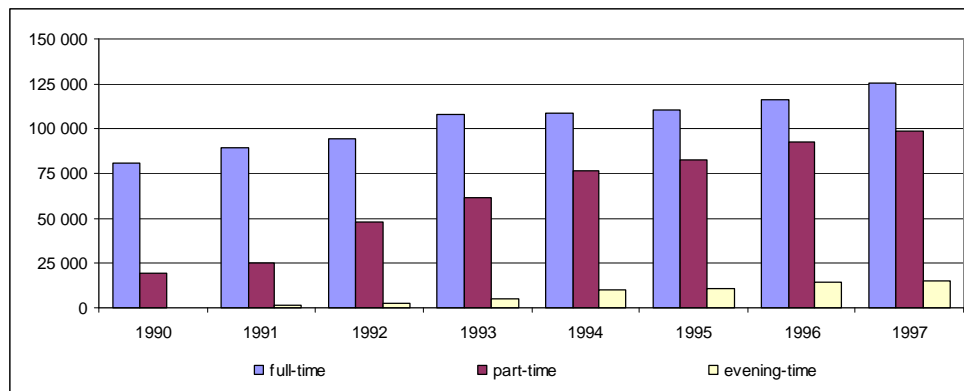
13.3.1 Enrolment in the years 1990 – 1997

During the first years of transformation, the public higher education sector responded to the growing needs of society for higher education in an active and entrepreneurial way. As table 8.1 indicates, the number of students increased from about 400 thousand in 1990 to 860 thousand in the academic year 1997/98. The number of new entrants in 1997 was 239 thousand students, which is considerably higher than in 1990, when public higher education institutions enrolled about 100 thousand students.

However, looking at the figure below we can see that the most impressive growth was encountered in part-time enrolment, with new entrants numbers increasing from 20 thousand students in 1990 to almost 100 thousand in 1997. This means

that public institutions expanded their part-time enrolment by 500 percent during the period analyzed. In addition, the evening-time mode of delivery also had grown substantially from 300 students in 1990 to more than 15,000 in 1997. On the other hand, the enrolment of full-time courses had experienced only slight growth from 80 thousand students in 1990 to 125 thousand in 1997. In summary, the share of full-time new entrants had declined from almost 80 percent to 52 in 1997.

Figure 13.3: New entrants in public higher education by mode of enrolment



Source: Own analysis based on National Yearbook for Higher Education (1990–1997)

In general, we may argue that the academic community has accepted the rapid expansion of student enrolment in state higher education institutions, as compared to the situation in 1990. Following Kurnik (2004), a Rector of Warsaw Polytechnic, although this expansion was well understood as an important factor in state policy and growing student demand for higher education, nevertheless, the most convincing argument for enlargement – especially of part-time study places – has been economic, given the nature of and changes in the mechanisms of state financing higher education. As presented in previous sections, the allocation of public funds to state higher education institutions to a great extent depends on the size of enrolment. A formula took into account the number of students (using discipline weights and allocating part-time students half the weight of regular students) and the number of highly ranked academics employed in the institutions. This new funding mechanism, applied for the first time in 1992, led to changes in the enrolment policy in most state higher education institutions. Under these regulations governing the distribution of budgetary funds, the expansion of student numbers implied a stabilization of an institution's financial situation and prospects for future development. So the managers of state higher education institutions supported the increase in enrolments.

On the other hand, institutions confronted with a freeze on state funds for higher education were not able to expand their offer of free full-time studies. Because of these government budgetary restrictions (see section on state support for higher education), in 1997, only 54 percent of the total of 860,000 students attended free-tuition programs in state higher education institutions. The remainder paid for their education. In summary, for these reasons, state institutions broadly offered a limited number of free-tuition places, while offering almost unlimited places on paid, part-time programs. To give a few examples we shall look at the changes in the differences in number of study places offered at the same faculty on full-time and part-time study programs during the period analyzed.

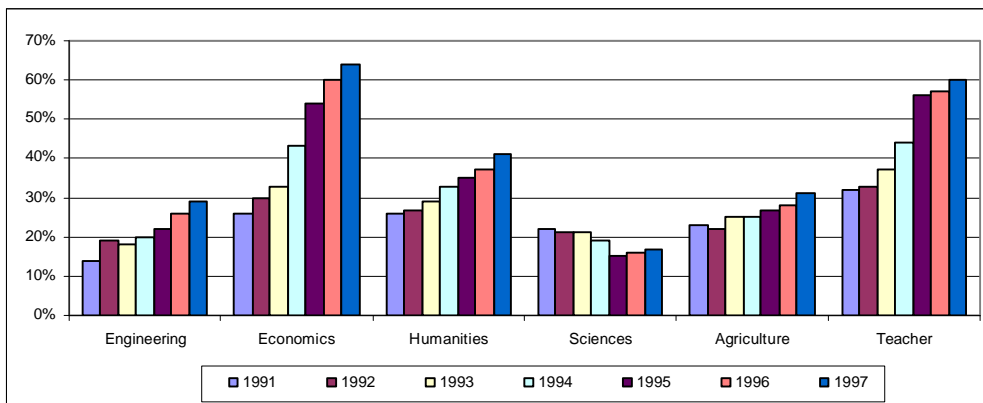
For instance, in 1993 the faculty of law and administration at Warsaw University offered 400 study places to full-time studies, with 800 part-time. However, in other faculties the number of full-time study places exceeded the part-time ones. The faculty of management developed 100 study places on full-time courses and 60 part-time, and the faculty of social sciences offered 120 study places in political science on full-time courses and 60 part-time. Other faculties offered part-time courses on average to about 50 to 60 percent of study places on full-time courses. In Warsaw Polytechnic this ratio was less than 50 percent. During the following years the number of study places on part-time courses was gradually but continuously increased. In 1997, the faculty of law and administration in Lodz University offered the same number of study places to both full-time and part-time students, while the faculty of management had 200 study places on the full-time course compared to 300 part-time. The share of part-time study places had also increased to more than 50 percent in Warsaw University. The faculty of law and administration enrolled 150 students on full-time courses in political science and 220 students part-time. Similarly, there were 150 new full-time entrants to economics and 220 part-time. On average, in other state higher education institutions the share of part-time enrolment also increased beyond 50 percent.

The expansion of part-time courses in the public sector was also caused by the change in their profile. During the socialist period, part-time and evening modes of studies were for adults. Applicants were required to have had a record of a vocational career. Students were usually awarded a diploma of undergraduate vocational or engineering studies. The theoretical part of the curriculum was reduced while the applied part, preparing students to take up their professional career, was expanded. A master's diploma could be obtained only by following supplementary studies. Part-time studies were particularly popular in the post-War years, when the shortage of trained staff was at its highest. The number of students on them was reduced in the 1980s. In the 1990s the profile of part-time studies changed. Since 1991, the profiles of part-time and full time studies have been the same in many fields, students often sharing the same lectures and seminars. Both modes of study lead to the same bachelor's or master's diploma. Despite the fact that the curricula for part-time studies are by definition reduced

in terms of study hours, the subjects offered are identical. A significant influx of young people to higher education resulted, unaccompanied by a corresponding increase in funding, leading to part-time studies becoming the channel to higher education not only for those in work but also for those without a previous vocational career who were not admitted to full-time study.

The figure below provides information about the changes in the structure of enrolment by disciplines. In general, as these statistics show, we find that the largest shares of part-time students were in economics and subjects related to teacher education and humanities. In economics the participation of part-time students increased from 27 percent in 1991 to almost 65 percent in 1997. On the other hand, the majority of full-time students were attending subjects related to mathematics and sciences, engineering and agriculture, with the share of part-time students in 1997 amounting to 17, 29 and 31 percent, respectively.

Figure 13.4: Distribution of part-time students by disciplines in public higher education



Source: Own analysis based on National Yearbook for Higher Education (1991–1997)

Looking at the figure above (13.4), we can see a clear relationship between the student demand and the structure of enrolment. In those disciplines where student demand increased significantly during the period analyzed, the share of part-time mode of delivery was the highest. On the other hand, study fields that faced a decline in student demand had retained the dominance of full-time students. Of course, it is important to note that some subjects were by definition restricted in size in terms of part-time offer. In particular, engineering related study lines were expensive and required extensive capital investments in order to enrol a great number of part-time students. By contrast, as already discussed, the so-called 'low cost' study programs in economics and humanities could be easily developed and launched on a part-time basis and brought higher margins for public institutions. To summarize, the distribution of students in the public sector

by modes of delivery was very similar to the situation in the private sector, with the majority of students enrolled in economics and humanities related subjects.

When it comes to our assumptions about the strategic responses of public institutions in terms of study offer, a mixed picture emerged. On one hand we envisaged the rapid expansion of part-time programs, which was confirmed by the analysis. On the other hand, we assumed an insignificant change in their full-time sphere of activity, whereas state higher education institutions were also active in launching new study fields on a full-time basis and had substantially diversified their free-tuition, full-time program offerings. However, when it comes to the study places available on full-time courses, their number did not increase as substantially as they did on part-time ones.

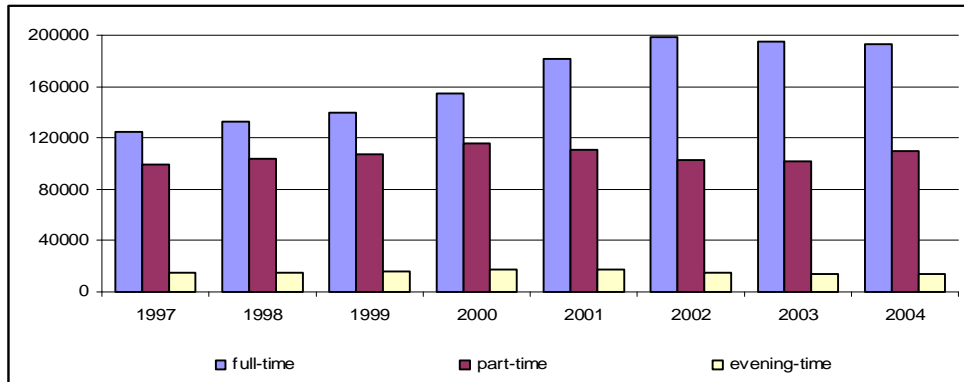
In the next sections we shall also look at the issues related to the admission policies on full-time courses, which will provide the additional information necessary to analyze our expectations.

13.3.2 Enrolment in the years 1997 – 2004

As described above, the general response to the rapid increase in student demand in the 1990s has been the creation of fee-paying forms of study in both public and private higher education institutions. As financing of state institutions from the state budget did not increase proportionally, and in fact decreased, public providers expanded their enrolment on part-time programs in order to find additional resources.

Yet, during the second transformation period, the trend in the structure of enrolment in public higher education changed. Confronted with attenuated student demand and increased competition from other public as well as private providers, which significantly expanded their study offer and shifted their attention somewhat to full-time students, public institutions changed their policy on full-time studies. According to the statistical data, the number of new entrants on full-time courses increased from about 125,000 students in 1997 to almost 200,000 students in 2004, which means an increase of almost 65 percent (see figure 13.5). On the other hand, enrolment on part-time programs experienced only a modest increase from 100,000 students in 1997 to 110,000 in 2004, which is 10 percent. Compared to the previous period, the situation has reversed, with a growing share of full-time students.

Figure 13.5: Number of new entrants in state higher education by mode of delivery in public higher education

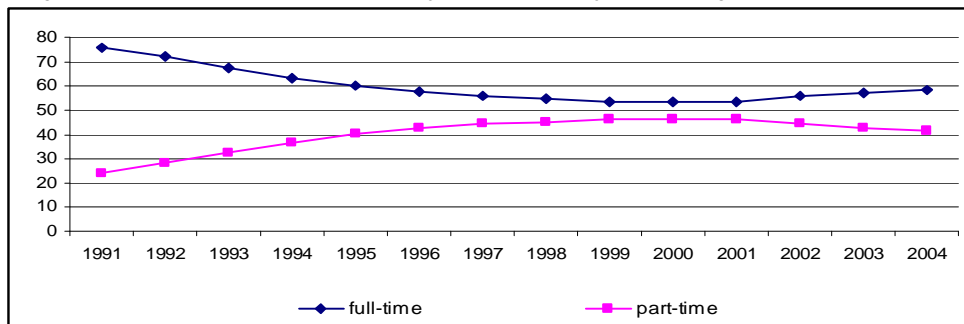


Source: Own analysis based on National Yearbook for Higher Education (1997–2004)

As a result, since the academic year 1999/2000, the share of full-time students as a proportion of total enrolment in state higher education began to increase, in 2004 reaching almost 60 percent (see figure 13.6).

It is important to indicate that during the second period, almost every state higher education institution had significantly increased the number of study places on full-time courses. The largest share of full-time students was in technical universities, and in agricultural and medical academies, whereas the lowest was found in academies of economics and universities, which enrolled the majority of students in subjects related to humanities, economics and teacher education, which by definition are the most common and popular among part-time courses.

Figure 13.6: Structure of total enrolment by mode of delivery in public higher education

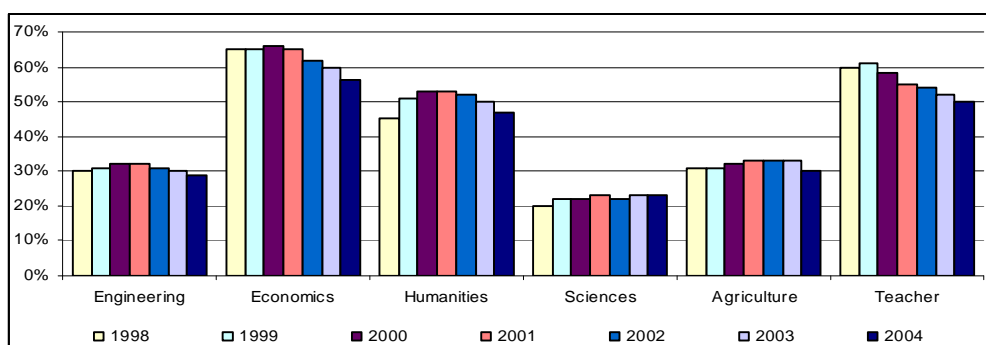


Source: Own analysis based on National Yearbook for Higher Education (1991–2004)

There was also another important reason why some public higher education institutions decided to increase their enrolment of full-time students. According to the law, all public higher education institutions were legally required to limit their intake of fee paying students to less than 50 percent of their total enrolment. However, many institutions ignored this regulation and as a result, in many public higher education institutions at the end of the 1990s the number of paying students exceeded the number of non-paying ones. However, since 2000 the Ministry of National Education modified the funding formula in order to compel state higher education institutions to obey the rule. As we have thoroughly described in previous chapters, public institutions receive state funds according to a formula that takes into account the number of students and academic faculty. In general, the formula promotes the expansion of enrolments in the state sector. However, as public higher education institutions received funds both for full-time and part-time students, they preferred to enrol more part-time students, as they received state appropriations as well as part-time student tuition fees. Therefore, to change this unfavourable pattern, the Ministry did not count the number of part-time students that exceeded the number of full-time students. For this reason, state institutions did not have the financial motivation to increase enrolment on part-time programs beyond the enrolment on full-time programs.

When it comes to the distribution of student across various disciplines by mode of delivery, there were minor changes compared to the previous period, with economics, humanities and teacher programs with highest share of part-time students (see figure 13.7). Yet their share has been decreasing in all disciplines since 2000.

Figure 13.7: Distribution of part-time students by disciplines in public higher education



Source: Own analysis based on National Yearbook for Higher Education (1998–2004)

13.4 Admission policy and level of tuition fees in public sector

13.4.1 Admission policy

In order to analyze our hypotheses about the initial transformation period and answer the question whether state higher education institutions stuck to the student market they were already serving with full-time studies, accepting only the best candidates, it is essential to analyze their admission policies and procedures.

With regard to the second period, with attenuated student demand and a high degree of rivalry on the higher education market, our hypotheses led us to expect that public institutions would decrease the entry requirements on full-time courses in order to attract new groups of students that were previously served by private institutions, namely those candidates who did not have the best academic qualifications and were not able to pass the strict entry requirements for free-tuition, full-time courses.

The admission system changed after 1990. Prior to that time, both the procedures and admission requirements were uniform and established by the Ministry, although they were liberalized to some extent by amendments to the Act of 1982. Admission quotas were also set centrally for each discipline in each state higher education institution. The 'numerus clausus' was abolished in 1991, except for medical academies. Both admission procedures and selection criteria were established by the Senate of the individual higher education institutions, although a secondary school graduation certificate is a universal requirement.

According to the general regulations, admission might be open or it might be based on additional entrance examinations. A candidate may be admitted following an interview, competition among holders of the best secondary school certificates, or an examination test; or sometimes a combination of all three. In general, the admission policies in state higher education institutions differed from those adopted in the private sector. However, we also found great variation within the public sector. The admission procedures differ not only between state higher education institutions and different fields of study within the same institutions but also within the same field, depending first of all on the number of candidates and the mode of study.

In the first years of the transformation process, most state providers required additional entrance examinations for the majority of full-time programs. Since there were more candidates than places for the majority of full-time study programs in state institutions, the institutions accepted students on the basis of highly competitive entry examinations. Universities, pedagogical and economic academies usually introduced examinations for most programs. In this system, a

young person in their graduation year first takes the matura examinations at secondary school, followed by the entrance examination within the next two months. Other institutions, including technical universities, enrolled candidates having the highest marks on their secondary school certificates without additional entrance tests. As the demand for higher education grew significantly over the 1990s, and the state was not able to provide additional funds to such a level that public institutions could accept all those candidates wishing and able to study, competition for state-funded, free-of-charge, full-time studies had become fierce in 1990s. As demand for study places was especially high in selected study areas, like economics, management, law, but also in social sciences, biotechnology and computer sciences, the competition between candidates for acceptance was most intense. On the other hand, there were less popular study fields, such as physics, chemistry and some engineering related subjects, which had fewer candidates than study places and in some cases accepted all candidates with the matura certificate, while in other cases candidates with the matura certificate were accepted after an interview. In these programs the selection process took place during the candidate's studies.

Two economic academies introduced examinations to admit students to the institution rather than to a particular program, but the great majority of institutions had examinations arranged for particular programs. In general, during the 1990s, on average only 50 percent of candidates were admitted to free-of-charge, full-time studies at public institutions, which allowed the institutions to apply strict entry requirements and choose only the best students.

Admission procedures and criteria for candidates applying for part-time courses were significantly less selective than full-time studies in the same program, although, in some more prestigious public higher education institutions entrance examinations were also required for the most popular part-time study programs, such as law, economics, journalism. For instance, during the period analyzed all economic academies introduced additional requirements for candidates for part-time courses. The Warsaw School of Economics accepted candidates on the basis of entrance examinations; a similar policy was adopted in the economic academies in Katowice, Kraków, and Wrocław. Only the academy in Poznań enrolled candidates with the highest marks for the secondary school certificate, without additional entrance tests. Most universities also required entrance examinations for part-time courses, but in those fields with lower student demand, all candidates with the matura were accepted. In general, at most prestigious public higher education institutions there were more part-time programs that required entrance examination than in other higher education institutions. Pedagogic and agricultural academies established in smaller cities usually accepted all candidates on to part-time programs.

The reason for a less selective admission policy for part-time programs was due to the insufficient funding received from the state budget. As expected in the theoretical part of the study, when state revenues for public higher education institutions are not high enough to allow institutions to offer study programs that cannot survive on their own, but which produce a 'value' for the institutions, those providers will have to generate profits on some other programs in order to cross-subsidize or provide discretionary spending to these mission-value programs. In our case, this implied expanding enrolment on part-time programs, as publics were allowed to charge tuition fees only for part-time studies. Therefore, to attract as many students as possible, they abandoned their strict entry requirements.

The empirical evidence points at support for the hypothesis on the strategic responses of state institutions in terms of admission policies and thus the type of students they serve. By applying strict entry requirements for full-time studies, state institutions focus their offer particularly on students from higher-socio economic backgrounds. On the other hand, less selective admission policies for part-time courses allowed more students from the lower classes to attend higher education, but only on fee-paying programs.

During the second period the situation with regard to admission policies in state higher education institutions changed considerably. As expected, most of the providers stopped conducting entrance examinations for full-time courses. They accepted those candidates with the highest marks on the secondary school certificates, without additional entrance tests. In 2004, only a few of the most prestigious public higher education institutions were still applying entrance tests, such as the Warsaw School of Economics, Academies of Economics in Poznań, Wrocław and Kraków, Universities in Warsaw, Poznań and Kraków and a few other institutions for selected study programs. In addition, many more courses required entrance examinations in the high-demand study fields, such as law, computer sciences, popular linguistic studies, architecture, psychology and economy. However, the general trend observed among state higher education institutions is a gradual decrease in entry requirements for all kinds of programs, both full-time and part-time.

Similarly to the previous period, the state higher education institutions introduced some forms of entry requirements for part-time courses, mostly in the form of competition among holders of the best secondary school certificates, yet during the last few years the access to part-time programs has opened up – applicants have to have a passed matura examinations and pay tuition fees. In general, except for the Warsaw School of Economics, no state higher education institution has additional entry requirements. WSE, which is still the best economic higher education institution in Poland, is using entrance examinations on both full-time and part-time studies. In addition, it worth indicating that,

because of increase in the study places and lowered entry requirements, a larger share of candidates were accepted for full-time courses. In 2003 and 2004, on average about 60 percent of candidates were enrolled, while this ratio in the 1990s did not exceed 50 percent.

Therefore we may safely argue that our hypothesis about the strategic responses of state providers on saturated higher education market with growing competition among providers is confirmed. Public institutions abandoned strict entry requirements and accepted more students on to full-time courses than previously.

13.4.2 Student body composition

There are no data available to provide a more detailed analysis of the student body composition in Polish higher education during the period analyzed. However, based on the available reports and studies (Świerzbowska-Kowalik, Gulczyńska, 2000; Rakowski, 1994, 1997, 2001; Molenda 1997; Skrzypczak, 1994) it can be argued that access to free-tuition, full-time courses for young people from lower-socio economic backgrounds and uneducated families was much more restricted than their peers from families with a tradition of higher education and those coming from large metropolitan areas.

The study of Świerzbowska-Kowalik and Gulczyńska of Warsaw University, done at the request of the Ministry of National Education, focused on the differences in the parents' social and educational background as between students on part-time and full-time courses. Their 1999 survey covered second year university students enrolled in the academic year 1997/98 and used a country-wide sample of 1842 students. The results show that students from families with a tradition of higher education had much better access to free-of-charge, full-time courses, especially master degree courses, than students whose parents did not have higher education. In addition, while 64 percent of all students paid tuition fees, fees were paid by 78 percent of students whose father had only primary education, and 49 percent of students whose father had higher education. According to the research only 9 percent of students whose father was working as a farmer were enrolled in higher education, and those coming from rural areas accounted for 23 percent, while the share of the population living in rural areas was 40 percent in the 1990s.

The studies conducted by Rakowski (1994; 1997; 2001) provide valuable and interesting data on the student body composition in different higher education institutions. The studies were conducted in several state and private higher education institutions, such as the Warsaw School of Economics, Warsaw Technical University, Radom Technical University, the Private Academy of Environment in Radom and the Academy of Local Development in Żyrardów.

The findings confirm our expectations: the share of full-time students at state institutions whose parents had higher education was significantly larger than students on part-time courses. The largest share was among students in the Warsaw School of Economics, which reached 61 percent in the academic year 1993/94 and 67.2 percent in 1997/98, increasing further to 75 percent in 2001. The share of parents with higher education who had full-time students in the Faculty of Economic in Radom Technical University was much lower at 21 percent, 25.9 and 29 percent in the same years, respectively. Unfortunately, there are no such data for full-time students in private higher education institutions.

On the other hand, full-time students from families who had only primary education or secondary vocational education accounted only for 3.9 percent and 2.6 percent in the Warsaw School of Economics in the academic years 1993/94 and 1997/98, while in Radom Technical University their share was higher, at 22.1 percent and 18.2 percent, respectively.

If one structures families of part-time students according to their educational achievements, one finds just the opposite of the full-time students. Students whose parents had primary and vocational secondary education accounted for 48.5 percent of total new part-time entrants to the Private Academy of Environment in Radom and 23.5 percent in the Warsaw School of Economics in the academic year 1997/98, while the students whose parents had higher education accounted for 9.1 and 26.1 percent, respectively. Similar results were reported in other research (Rakowski, 2004), with the over-representation of students from lower socio-economic classes in tuition-fee-paying, part-time programs. For example, their share amounted to 51, 55 and 54.5 percent in the Private Academy of Environment in Radom, Radom Technical University and Academy of Local Development in Żyrardów respectively, among the new part-time entrants in 2003.

Data on the student body composition collected from surveys conducted by the author in six higher education institutions also confirm our expectations about the paradox of public funds financing the education of the upper and middle classes in state universities, while low income students struggle to pay full tuition fees at private institutions or tuition-fee, part-time programs in public institutions¹⁰.

These results show that students from families with a tradition of higher education were significantly over-represented in full-time studies, especially in

¹⁰ The surveys were conducted in six HEIs; Opole University, Opole Technical University, Academy of Economics in Wrocław, Academy of Tourism in Częstochowa, Academy of Information Technology in Wrocław, and in Academy of Management and Administration in Opole. We used a sample of about 600 students, attending full-time and part-time courses, enrolled in the academic years 2002/03 and 2004/05.

state institutions, whereas the majority of part-time students in the private sector had parents with primary or vocational education. The study conducted by Rakowski at the request of the Polish Parliament (2000) provides a summary of his previous work. According to this report, on average more than 70 percent of full-time students on high demand study programs, with strict competitive admission procedures, such as psychology, medicine, architecture, law, computer sciences and economics, had parents with a higher education degree. By contrast, the share of those students on fee-paying programs in both public and private higher education institutions is significantly lower, on average not exceeding 10 to 15 percent, whereas the majority of students from lower socio-economic backgrounds study on fee-paying programs, mostly in private institutions.

We do not have any data on the student body composition in new state vocational higher education institutions, which are mostly situated in small cities outside the large urban areas and academic centres. We might expect that their student body composition would be more balanced, with a significant share of students from lower socio-economic classes. We cannot confirm this assumption, however.

13.4.3 Tuition fees

The analysis provided in the section on the financing of higher education from the state budget revealed the decrease in state spending on higher education. In fact, the real state financial expenditures on public higher education kept falling for almost a whole decade. In particular, when looking at the significant decline in state expenditures per student during the 1990s, one can state that state higher education institutions were insufficiently funded in the face of a rapid growth in student enrolment (see chapter 11.1.1). Therefore, public higher education institutions were forced to look for additional sources of income. By academic year 1993/94 all public institutions had introduced fee-paid, part-time programs. As presented above, the share of part-time students grew significantly, reaching 46 percent in 2000. Along with this growth, tuition fees became a substantial part of public higher education institutions budgets.

In general, public higher education institutions had four distinct sources of financial support, of which the revenue from the state budget for teaching activities constituted the largest share during the periods analyzed. Other sources include state subvention for research, cooperation with business, and tuition fees.

In 1991 the state subvention for teaching accounted for 78.5 percent of the total budget of public higher education institutions, state subvention for research amounted to 14 percent, income from cooperation with business entities to 7 percent, and tuition fees charged to part-time students to 0.4 percent. In 1992 the share of income from tuition fees increased to 1.7 percent, subvention for teaching

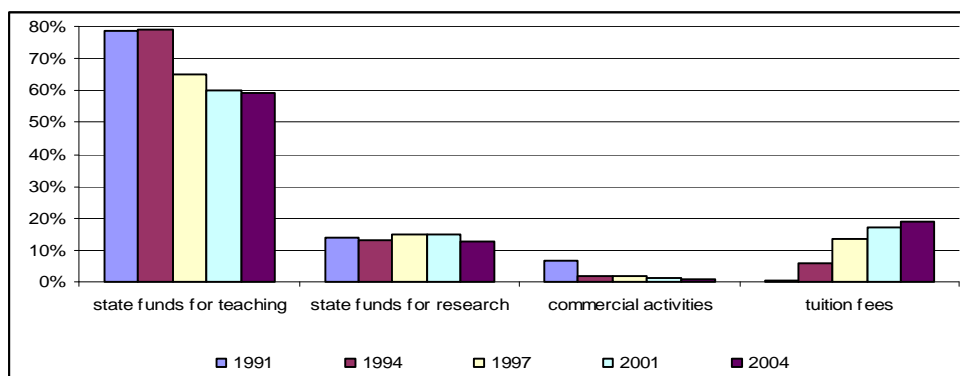
to 79 percent, while the income from business activities decreased to 4 percent. By 1993, the share of income from tuition fees increased to 4 percent, and in 1995 to 8 percent. On the other hand, income from cooperation with business entities decreased to 1.2 percent in 1995. This trend was continued in the following years. In 1997 the average state subvention for teaching in an average state higher education institution constituted 65 percent of the total budget. Income from tuition fees reached almost 12 percent, while income from various commercial activities decreased to only 0.8 percent. In addition, the average research budget represented about 15 percent. The remaining part of the budget came mostly from interest rates. The largest share of income derived from tuition fees was in economic academies, being about 28 percent of total budget. Universities' income from tuition amounted to 15 percent, while that of technical universities was 8 percent. The pedagogical academies also increased their income from tuition, which reached 23 percent. The lowest share was encountered in art and medicine academies at 3.7 and 4 percent, respectively.

During the 2000s the average state subvention for teaching decreased further to 59 percent in 2004. Tuition-fee bearing programs in state institutions brought in an average of about 19 percent of their total income, while income from cooperation with business decreased to 0.7 percent. Research funding constituted about 12 percent.

In summary, we may argue that in a rapidly changing environment and general slowdown in the nation's economy, the ability of public higher education institutions to engage in various income-generating activities with business companies was limited and did not provide an additional source of revenue. On the other hand, the revenue from fee-based types of studies represented a large part of public institutions' budgets and tended to grow (see figure below).

The level of tuition fees in state higher education institutions compared to the private sector was relatively homogeneous across various providers during the whole period analyzed, viz., from 1990 to 1997. However, it varied depending on the type of program. The lowest fees were set in most subjects related to the social and natural sciences, while the highest were in expensive engineering study fields related to information technology and in subjects related to economics and law, which were in high demand among the students. However, it must be noted that these differences were not significant, and on average the lowest fee levels were 80 percent of the highest ones.

Figure 13.8: Structure of income in public higher education institutions



Source: Own analysis based on National Yearbook for Higher Education (1991– 2004)

In addition, the fees were usually higher on postgraduate studies leading to master degrees and in some cases for evening courses, where fees amounted to 110 percent of those charged to part-time studies.

The differences between state providers of the same programs were significant. However, as in the private sector, there were a few state institutions, particularly the most prestigious ones, which charged the highest tuition fees, whereas the majority of providers set the average level of fees. In addition, we found considerable variations between providers from Warsaw and those outside the capital city. For instance, in the academic year 1993/94 the tuition fees charged to part-time students on subjects related to economics were highest in the Warsaw School of Economics and Warsaw University, at 700 USD per year of study, whereas the Academy of Economics in Wrocław charged 250 USD, and Radom Technical University charged almost 450 USD. In 1995 the Warsaw School of Economics charged 840 USD, Warsaw University 800 USD, the Academy of Economics in Wrocław about 480 USD and the Technical University in Radom 600 USD. In the next academic year the fees were set at similar levels: 890 in two Warsaw providers, and 580 and 620 USD in the other two, respectively. In the academic year 1997/98 the differences had increased, and the lowest fees charged by the Academy of Economics in Wrocław amounted only to 45 percent of those charged by the Warsaw School of Economics.

Yet, as mentioned before, on average students paid between 1500 ZL to 2000 ZL per year of study in the mid-1990s, which was between 600 USD and 800 USD. Only in a few most prestigious institutions, usually located in Warsaw and in some other metropolitan areas, did the fees amount to 1500 USD. Analogously to the private sector, state institutions increased tuition fees each year in order to

compensate for high inflation rates, although in many cases the rates at which tuition fees grew were higher than inflation.

When it comes to the few last years the differences between the level of tuition fees among various providers have been increasing, since the most prestigious state institutions were able to increase the level of their fees, even in times of attenuated student demand and high degree of rivalry, while the regional state institutions have kept their fees at similar levels as before.

The most expensive public providers were the most prestigious universities and academies of economics. In 2004, the Warsaw School of Economics charged about 1,700 USD (5,800 PLN) per year of study. The most expensive public institution, though, was Warsaw University. For instance in 2004, the University charged the following level of fees depending on program: 1,750 USD (6,000 PLN) on courses in journalism, political sciences; 2,000 USD (7,200 PLN) on subjects related to economics, law and foreign languages; 2,300 USD (8,000 PLN) on courses in psychology, and 2,500 USD (9,200 PLN) on courses in computer sciences.

Other reputable state universities outside Warsaw did not charge such high tuition fees. For instance, in 2004 Poznań University charged 1,150 USD (4,000 PLN) on courses in law, economics and administration, whereas the fees were higher in the computer sciences faculty, at 1,350 USD (4,600 PLN). The most expensive study courses were in psychology with fees of 1,550 USD (5,600 PLN). Fees at other universities were similar to those charged by Poznań University, and in a few cases lower. Thus, we can see a growing disparity between the level of fees charged in Warsaw and in other cities in Poland. The same pattern was observed among private institutions.

As mentioned before, less prestigious state higher education institutions, in particular the new vocational higher education institutions, charged much lower fees than those in Warsaw and large universities. For instance the Technical Universities in Opole and Radom charged only 750 USD (2,700 PLN) per year of study on courses delivered in the economic faculty. The Technical University in Poznań, situated in a larger city than Opole and Radom, set its fees at a slightly higher level at 1,050 USD (3,800 PLN) in all its faculties. The average fees charged by vocational schools amounted to 700 USD (2,600 PLN) per year of study.

Compared to the private sector, the average fees in the state sector were comparable, but those private institutions that adopted the high quality / high price strategy charged higher fees than the most reputable public institutions. For instance, in the academic year 1996/97, the Private Academy of Business and Administration charged about 1,300 USD on part-time courses, while the Warsaw School of Economics and Warsaw University charged about 900 USD per year of

study. But in the cases of regional higher education institutions, the fees were very much the same.

During the second period, the differences in the level of fees between the 'elite' private and public providers have been increasing, as in 2004 the average fees charged by the private providers adopting the high quality / high price strategy amounted to 1,400 USD (5,000 PLN) per year of study on part-time courses, while as presented above, in public 'elite' institutions the level of fees amounted to 2,000 USD (7,200 PLN).

In general, we may argue that in times of increasing student demand and relatively low degree of competition on the market between higher education providers, the institutions were able to increase the level of tuition fees without fear of losing students. Public institutions did not have to decrease the level of fees in order to attract more students. Privates followed their behaviour and, as presented in the previous section, also increased their prices as well as the number of students enrolled.

With regard to the second period analyzed, when the situation on the higher education market changed as student demand attenuated and competition between providers became fierce, we may observe the expected pricing policies adopted in state higher education institutions. We assumed that public institutions, faced with insufficient state funding and a slow down in student demand, in order to keep up students numbers on their part-time tuition-bearing programs, would not increase the level of tuition fees on those study programs in order to attract the less-well-off students from poorer socio-economic backgrounds that were previously served by the private sector. Therefore, publics will keep the tuition fees low, regardless of the decreasing marginal value of the part-time courses.

Our empirical analysis confirms our expectations, with low levels of tuition fees in most public providers during the second period analyzed, with only some few exceptions of 'elite' universities situated in Warsaw and other large metropolitan areas.

13.5 Strategic responses of selected public higher education institutions

In the methodological part of study we took a sample of 8 public providers established before 1990, and 3 after 1997, ruled by the 1997 Vocational Act. In the following section we provide an analysis of developments in the chosen providers. We can subdivide the institutions into four groups; 1) Academies of Economics, with such institutions as Warsaw School of Economics and Academy of Economics in Wrocław; 2) Universities and pedagogical academies represented

by Warsaw and Opole Universities and Academy of Pedagogic in Siedlce; 3) Technical universities with Opole, Warsaw and Radom Technical Universities, and; 4) Vocational Higher Education Institutions in Krosno, Nysa and Leszno.

13.5.1 Academies of Economics

Warsaw School of Economics

The Warsaw School of Economics was established in 1915 as a private higher education institution of commerce. After the Second World War the institution was nationalized and transformed into a state economics university, the main aim of which was to prepare students for work in the central planned economy. The government also renamed the school the Central School of Planning and Statistics. During the socialist period, the institution was viewed as one of the best economic higher education institutions in Poland.

In 1990 the school was given the name of Warsaw School of Economics (WSE). Under the new regulations in 1991 a new institutional statute was declared, which changed the internal structure of the institution. WSE became the first public institution without faculties. Lines of study were not offered by faculties but by the institution as a whole. For the first three semester students had to follow a compulsory line and then took courses within the line of study of their choice. Following this change, candidates were accepted not for the particular faculty and study line but for the institution. It should be noted that there were strict entry requirements. WSE introduced examination tests that consisted of four exams, in mathematics, geography or history, and two foreign languages.

In terms of study offer, in 1991 Warsaw School of Economics developed and launched a broad study offer that consisted of six study lines: economics, finance and banking, management and marketing, international trade relations, business administration and quantitative methods, and information systems. Among all public schools WSE had the most developed offer in subjects related to economics. In the same year, the institution had developed part-time courses offering the same study lines as the full-time ones. The school also adopted strict entry examinations for part-time courses. In 2003 WSE introduced a new study line in European Integration.

In terms of the expansion of student enrolment, Warsaw School of Economics consistently followed its path to become the best economics higher education institution in Poland, and did not experience an uncontrolled growth in student enrolment, mostly by adopting strict entry requirements. Its first-year enrolment increased from 1,700 students in 1991 to about 2,500 in 1997, which is 47 percent and is much lower than the average in the public sector, and in 2004 the number of new entrants was 2,100, which is a decrease of 16 percent from 1997.

The enrolment structure by mode of delivery resembled the average situation on the market, with an increasing share of part-time students during the 1990s. The highest participation of part-time students was in 1995, when their share amounted to 59 percent of all accepted students. In 1997 the share had decline to 48 percent. Nevertheless, compared to the average share of part-time students in economics related subjects, this ratio was significantly lower, as the average share amounted to more than 60 percent in the public sector, and more than 70 in the private one. Since the 1995, the share of full-time students has been stable, accounting for 53 percent, up to 2004.

The level of tuition fees in Warsaw School of Economics was one of the highest among both public and private institutions. In the academic year 1992/93 the fees amounted to 900 USD, while in the most expensive Private Academy of Business and Administration they were 1,300 USD. In the following years the policy of high prices did not change, and WSE become the most expensive public higher education institution and one of the most expensive one among all higher education providers in Poland. In 2004, Warsaw School of Economics charged about 1,700 USD (5,800 PLN) per year of study.

In terms of academics employed at WSE, we can see that the total employment had decreased from 837 academics in 1991 to 758 in 1997, to increase further to 810 in 2004. On the other hand, there was an increase in the number of professors appointed at the institution, as their share increased from 18 percent to 22. As there was no termination of employment as a direct consequence of the political changes in 1990, so the reduction in staff numbers was brought about mostly by the reduced state funding, requiring the institution to rationalize the numbers of positions and the employment structure.

Academy of Economics in Wrocław

This Academy was founded in 1947 as a private professional school with one faculty, that of National Economy. In 1950 the school was nationalized and the faculties of Industrial Engineering and Economics were added. Under the 1990 law on higher education, the Academy was given partial autonomy, since it did not employ enough highly ranked academics to possess full autonomy. In 1990 changes to align courses to the emerging market economy were at first confined to amendments to the study lines offered. According to these changes four study lines were to be eliminated by 1994 (Sorensen, 1997): Economic Planning and Finance, Social Economics, Economics and Organization of Trade and Services, Economics and Organization of Production. In 1991 three new lines were launched: Finance and Banking, Economics, Computer Sciences and Econometrics. One further study line, Marketing and Management, was added in 1994, with International Trade Relations following in 1996.

When it comes to entry requirements, the Academy introduced examination tests in mathematics and a foreign language. In addition, the marks from secondary school certificates were counted. Admission to part-time courses was also based on examinations. However, for a few years, admission to part-time programs was open. In contrast to the Warsaw School of Economics and other economic academies, the Academy in Wrocław did not charge tuition fees for part-time programs in 1991 and 1992. Significant changes were made in 1993 with the approval of fees for part-time and evening courses. The reason for relatively late implementation of tuition-bearing courses was related to the re-election in 1990 of the incumbent rector, a member of the Socialist party. Until 1993, when a new, reform-oriented rector was appointed, no major structural changes were undertaken and the functioning of the academy remained close to its pre-1990 configuration.

On the other hand, during the period without tuition fees for part-time programs, the intake of part-time students rose substantially from 470 students in 1991 to 700 in 1992. Yet the rapid expansion in student enrolment started in 1993, when all courses available in the Academy were offered as part-time studies. In 1993 the Academy enrolled about 1,300 part-time students, which was 48 percent of total new entrants, while in 1997 their number grew to 2,050 students or 65 percent, which was much higher than in the Warsaw School of Economics. Total enrolment had increased by 125 percent, from about 1,400 students in 1991 to 3,150 students in the academic year 1997/98. However, the most significant growth was encountered in part-time enrolment, which more than tripled.

Over the second period, the enrolment increase attenuated and reached 3,500 new entrants in 2004. The share of full-time new entrants increased to more than 55 percent in 2004 from 35 percent in 1997.

In terms of academic faculty, their number grew from 514 in 1991 to 616 in 1997 and further to 680 in 2004, and more importantly the number of highly ranked academics doubled from 75 to 112 in 1997 and 142 in 2004.

Again, in contrast to the Warsaw School of Economics, the levels of tuition fees in the Academy of Economics in Wrocław were relatively low at about 40 to 50 percent of those charged by WSE. In addition, the average fees in private sector were also higher by 10 to 20 percent, which was unique, as the Academy of Economics in Wrocław enjoyed a greater prestige and reputation than most private providers.

13.5.2 Universities and Pedagogic Academies

Warsaw University

The University of Warsaw was established in 1816, and at that time comprised five faculties: Law and Administration, Medicine, Philosophy, Theology, Art and Humanities. After 1918, in the independent Poland, the university for the first time in its history was able to freely develop its courses and class instruction without restrictions. However, just thirty years later, after the War, communist authorities eliminated the freedom of instruction, used ideological criteria in the selection of professors, and isolated the university from foreign contacts. Again in 1990 under the new higher education law the university received full autonomy and was free to introduce changes to the internal structure of the university as well as the courses offered.

Warsaw University was the largest higher education institution in Poland, and one of the most prestigious, which offered the highest quality education and has produced many outstanding scholars. In 1991 it offered the broadest range of study courses, comprising 22 faculties and 25 study lines. Most of study lines were offered as both full-time and part-time courses. Analogously to other state higher education institutions, Warsaw University introduced tuition fees in 1991 for part-time programs. By 1993 the University had launched 13 study lines on part-time courses. Up to the academic year 1997/98 this number had increased to 22. Similarly, the offer of full-time studies was expanded to 30 study lines. Over the second period analyzed, the university expanded its study offer even further, to 33 study lines on full-time courses and 29 part-time. The new programs were in European integration, and Environment protection.

The University, like the Warsaw School of Economics, adopted strict entry requirements consisting of both examinations and qualifying interviews. Only on a few part-time courses was admission based on the marks received on the matura certificate. Therefore, the mission of university did not change during the transformation process in terms of pursuing the highest academic values and providing high quality education. The admission policy did not change over the period analyzed.

Despite the highly competitive entry examinations, Warsaw University was the most popular higher education institution, with the largest number of candidates. On average during the period analyzed, Warsaw University could only admit about one in five applicants for a study place. In terms of student number the university substantially expanded its enrolment by 67 percent during the period analyzed. We found in the mission statement of the university that providing high-quality education will always be a top priority for the university, while an increase in the number of students must not result in a lowering of standards. The

increase in student numbers, in particular on part-time modes of delivery, with a 49 percent share of new entrants in 1997 and 43 percent in 2004, did not compromise the core mission of the university, but it did respond to the new social requirements.

The level of fees corresponded to the mission pursued by university. Together with those charged by Warsaw School of Economics they belonged among the highest of all public and private higher education institutions, depending on discipline. In the mid-1990s, the level of fees varied significantly within the university from 400 – 500 USD per year of study on subjects related to humanities, like history and social policy; through 600 – 700 USD per year of study on geography, philosophy, sociology, to 900 – 1000 USD on the following programs: journalism, political sciences, archaeology, ethnology, history of art, pedagogy, foreign languages and economics related subjects. The most expensive study fields were in psychology, law and computer sciences at about 1,200, 1,300 and 1,900 USD, respectively. Like other institutions, the University increased its tuition fees each year, even during the second period with its attenuated student demand. For instance, in 2004 the University charged the following level of fees depending on program: 1,750 USD (6,000 PLN) on courses in journalism, political sciences; 2,000 USD (7,200 PLN) on subjects related to economics, law and foreign languages; 2,300 USD (8,000 PLN) on courses in psychology and 2,500 USD (9,200 PLN) on courses in computer sciences.

The most stringent selectivity, in terms of strict entry requirements and high level of tuition fees at the University and Warsaw School of Economics made these two schools the most prestigious and the ones most young people wanted to be accepted by.

Opole University

The University was established in 1954 as a pedagogical academy. When the academy was launched it offered study programs related to pedagogy, humanities and teacher education. Programs in the sciences were founded in the next few years. In 1994 the academy was transformed into a university, as it offered several master and a few PhD degree programs.

Under the new higher education law, the academy had established a broad offer of tuition-fee-bearing, part-time programs. In the academic year 1993/94 the part-time study offer included economics, philology, history, mathematics, and pedagogy. By 1997 the institutions developed and launched additional part-time programs in administration, management and marketing, political sciences, theology, physics and environment protection. Alongside the development of part-time modes of delivery, the university also expanded its offer of full-time studies, adding to the existing ones the following study lines: administration, management and marketing, biology and theology. By 2004 the University had

launched the following new study lines: computer sciences, law, psychology, sociology, and European integration. Thus, in 2004 its program offering encompassed 24 study lines on full-time courses and 20 on part-time programs.

In order to be awarded the title of university, the institution developed several PhD programs, in such disciplines as economics, pedagogy, theology and chemistry; and acquired rights to confer habilitation degrees in three faculties: history, literature and linguistics.

The managers of the university adopted a stable growth policy in terms of student enrolment as compared to the average public institution. The number of new entrants increased by only 72 percent during the first period analyzed, and by a further 14 percent between 1997 and 2004. The share of part-time students was relatively high in 1991 at 35 percent. This was because of the teaching related subjects that prevailed in the academy during the 1980s, which entailed a high proportion of teachers studying part-time at the academy in order to upgrade their qualifications. Yet, in the consistent policy adopted by the university, which aimed to become a high quality, prestigious institution, the rapid expansion of part-time programs was viewed as a potential cause of deteriorating academic standards. Therefore, to prevent such deterioration, the academy and later on the university had introduced strict entry requirements for both full-time and part-time studies, with examination test. The share of part-time students did not exceed 50 percent during the whole period, and amounted to 45 percent in 1997 and 47 in 2004.

The selectivity of the university translated into a stable expansion of enrolment, allowing it to transform from an academy of pedagogy into a more prestigious university, in 1994. However, over the last few years, as was typical of public institutions, the University decreased entry requirements for both full-time and part-time courses, retaining only a few entrance examinations for full-time studies. The most popular study programs were economics, management and marketing, political science, pedagogy, English and Polish philology, but also sciences, such as biology, chemistry and mathematics.

Tuition fees charged by the university were average for the public and private sector, ranging between 500 to 600 USD per year of study, depending on discipline. Typically, the lowest fees were charged for subjects related to social sciences, while the highest were in foreign languages, economics and natural sciences. During the second transformation period the University did not increase its fees and kept them at a relatively low level, with 900 USD (3,200 PLN) per year of study on most popular courses.

When it comes to the number of academics appointed at the university, their total number grew by 26 percent and the number of professors by 81 percent from 1991

to 1997 and further by 12 and 34 percent respectively between the years 1997 and 2004. This means that growth in student numbers was accompanied by a growth particularly in the appointment of highly ranked academics.

Academy of Pedagogy in Siedlce

At the beginning of 1990s, the Academy offered a similar range of study programs as the Academy in Opole, but in the following years the two institutions developed in different directions. As presented above, the Academy in Opole provided a broad range of master and PhD degree study programs and became a university, while the Academy in Siedlce evolved into a regional-interest higher education institution offering only a few study lines in a very limited number of disciplines, with the majority of students enrolled part-time.

The only new study line launched during the initial transformation period was the management and marketing program in the academic year 1997/98. It is worth noting that most other pedagogy academies, and all universities and technical universities, had developed a broad range of study lines related to economics as early as the academic year 1995/96. During the second period the Academy launched three additional study lines, in administration, political sciences and philology. Nevertheless, its program offering with 13 courses full-time and 11 part-time studies, was limited compared to other public institutions, and even to some private ones.

The situation looked different in terms of part-time study offer. By the academic year 1993/94 institution introduced four tuition-bearing part-time study programs in mathematics, biology, agriculture and pedagogy. Two years later, in 1995, the following part-time programs were added: history, zootechnics and computer sciences, with management and marketing following in 1997. Computer sciences were offered only as part-time programs: a full-time undergraduate program was not opened because of the small number of potential candidates. The part-time program was successful, with high student demand. In effect, the academy offered more part-time courses than full-time ones, which was quite uncommon both in the public and private higher education sectors. In addition, the share of part-time students exceeded 50 percent, which was also unusual for state institutions. In fact, full-time new entrants amounted to only 41 percent of total enrolment in 1997, which was significantly below the average in the public sector with 52 percent. Yet, over the years 1997 and 2004, the academy managed to attract more students on to full-time courses and the share of full-time students increased to 52 percent in 2004.

On the selectivity side, we can see the further differentiation between these two institutions. While the Opole University introduced examination tests in all full-time programs and in the majority of part-time ones, the Academy in Siedlce abandoned examination tests and introduced qualifying interviews in most

programs, both full-time and part-time. Therefore, we may argue that in terms of admission policy the Academy resembled the private providers, being a relatively low selective institution. Since 2001, admission to part-time programs is free.

The tuition fees charged by the Pedagogy Academy in Siedlce were lower than the average in the public sector. They varied depending on discipline. As usual, in 1997 the two most expensive study fields were management and marketing and computer sciences. In those faculties the fees amounted to 540 USD per year of study on part-time programs. The fees for other programs were substantially lower and amounted to 360 USD per year of study, which was very low, being about two-thirds of levels in the private sector. In addition, it is important to note that the level of fees in US dollars decreased during the period analyzed, which again was unique in other higher education institutions. In 2004, the fees were also at a low level, and on average amounted to 750 USD (2,600 PLN) per year of study.

13.5.3 Technical Universities

Radom Technical University

The Radom Technical University is relatively young compared to its public counterparts. The roots of Radom University of Technology reach back to the year 1978. The institution was established as a Technical Academy and consisted of three Faculties: Mechanics, Economy and Teacher Education, with only a few study lines. In 1991 it offered seven study lines. In the next few years the base of material possessions and resources was systematically extended, and a number of increasingly better equipped laboratories came into being. By the end of the academic year 1996/1997 the Academy launched new study programs in economics, administration and physical arts. The systematically extended base of material possessions and resources along with the increasing number of highly-qualified research and teaching personnel finally resulted in converting the Technical Academy into Radom Technical University in 1996.

As we have noted, during the 1990s, technical universities were the most innovative in terms of establishing new study fields corresponding to the changed needs of the economy and society, among all types of state higher education institutions. As the traditional engineering subjects were losing students, technical universities were forced to modify their offer in subjects related to engineering and also attract students interested in economics and humanities, as well as those preferring to study part-time. Radom Technical University followed this route, but only to a degree. As other technical providers adjusted and expanded their offer both in engineering programs and economics and humanities, Radom Technical University focused mostly on the second types of programs, leaving the engineering study offer relatively unchanged during the period analyzed. The results of such a policy led to the uncontrolled expansion of

part-time students on programs related to economics, humanities and teaching disciplines. In addition, it is worth noting that the student numbers in faculties of economy and teacher education increased their share to more than 50 percent, which happened in no other technical higher education institution.

When it comes to part-time studies, its offer expanded significantly, and already by the academic year 1993/94 it was offering several part-time programs in different disciplines. The Institution was the only technical provider to offer administration and economics study lines, as others were offering only programs in management and marketing. The subjects related to teacher education were also expanded. Such a diversified study offer entailed a rapid expansion in student numbers. Total enrolment in the University expanded from 2,700 students in 1991 to more than 12,100 students in the academic year 1997/98 and to 17,000 students in 2004, which is a 650 percent increase. The number of part-time students skyrocketed, from 520 students to 7,000 in 1997 and almost 11,000 students in 2004. Therefore, the share of part-time students increased from 18 percent to more than 57 percent in 1997 and 59 in 2004. The largest share of part-time new entrants came in 1995 with 64 percent and 1997 with 59 percent.

The tuition fees charged by Radom Technical University varied depending on the discipline. In the academic year 1991/92 the fees were equal in all faculties at 450 USD. Since that academic year the level of fees were diversified, at 470 USD per year of study on economics and humanities related programs and 700 USD on engineering programs. However, in 1996 the institution changed its pricing policy and set the highest fees for economics at 600 USD per year of study, and de facto decreased the fees on engineering programs to about 550 USD.

The reasons for such a change can be found in our theoretical considerations. When the state appropriations are low and inadequate, higher education institutions look for additional sources of revenue in order to cross-subsidize those activities that cannot survive on their own, but that produce a 'value' for the institution. Cross subsidizing, or discretionary spending, means that a university is transferring profits generated from some programs to other activities. The latter boost the mission statement but their $MR < MC$. In the case of the Technical University the engineering programs are most valued, so the institution decided to cross-subsidize these programs. Cross subsidizing can be funded either from government appropriations or, if those are insufficient, from other activities' positive contribution margins. Here, the programs with positive contribution margins were those in the fields of economics, due to the low costs of delivery and the rapid increase in student demand. Thus institutions could easily increase the fees without the fear of losing enrolment and decrease fees on engineering programs in order to attract more students. In the following years the policy of low fees for engineering disciplines was continued.

In terms of admission policy, the institution benefited from its autonomy and applied its own selection criteria and procedures. These requirements depended first of all on the attractiveness of a field of study and followed the general policy adopted by the institution. This means that admission requirements were relaxed to meet the low demand study programs, mostly engineering programs, whereas more strict entry requirements were introduced for high demand study fields, such as economics. Up to the academic year 1993/94 the entrance requirements were equal for all full-time programs and consisted of examinations. However, since 1994 they have varied depending on the attractiveness of the program. The entrance tests were abandoned in favour of selection to be carried out during a course of study in all full-time programs except economics and administration, where examinations were still conducted. The University took account of the marks on the matura certificates, but when the number of candidates was lower than the study places available, all candidates were accepted. There were no entrance requirements and all candidates were accepted to part-time studies, except for the programs in economics and administration. Analogously to full-time studies, candidates had to pass the entrance examinations for those two programs.

In summary, one can state that because of the low student demand for engineering programs, the university encouraged potential candidates by relaxing entry requirements for both full-time and part-time programs, and by lowering the level of tuition fees for part-time programs. On high demand study programs such moves were unnecessary, because the demand exceeded the supply despite the strict entry requirements and high level of tuition fees.

Opole Technical University

The Technical Academy in Opole was founded on 1 June 1966. The institution consisted of Faculties of Mechanical Engineering, Electrical Engineering and Civil Engineering. Similarly to Radom Technical University, the Academy was transformed into a Technical University in 1996, as it developed a sufficient number of master and PhD degree courses. With regard to the study offer, in 1991 the institution developed and launched management and marketing programs. In the following years its study offer expanded as the institutions launched a new program in physical art. However, the study offer in subjects related to engineering did not expand. Part-time studies offered the same programs as full-time ones.

Since 1997 we can observe a substantial development of new study lines. New courses were introduced in, for instance: European integration, physiotherapy and tourism and recreation.

Admission requirements were similar to those adopted by Radom Technical University and candidates with the highest marks on their matura certificates

were accepted, both on to full-time studies and part-time ones. These procedures were also introduced in the management and marketing program. However, over the last few years, in fact, all candidates on part-time and full-time courses have been accepted.

In general, the Opole Technical University evolution model to a great extent resembled those of the Radom Technical University, in terms of study offer, admission requirements and expansion in student numbers. Total enrolment at the Technical University expanded from 1,100 students in 1991 to more than 5,700 students in 1997 and 12,000 students in 2004, while the share of part-time students increased from 18 percent to 41 percent in 1997 and to 46 percent in 2004. The tuition fees varied slightly depending on the program, with higher fees in economics and lower ones in engineering related programs. The level of fees during the period analyzed amounted on average to 600 USD per year of study, which was average for the public as well as the private sector. In 2004, the fees amounted to 750 USD (2,700 PLN) per year of study, which is rather low for public and private higher education institutions.

Warsaw Technical University

Warsaw Technical University was founded in 1826. In the beginning the University had three faculties: Mathematics, Chemistry and Engineering, and Construction. When Poland regained its independence, the university expanded its offer and to several courses given in seven faculties: Mechanics, Electrical Engineering, Chemistry, Architecture, Civil Engineering, Hydraulic Engineering, and finally, the Faculty of Surveying. The total number of students in the 20-year period between the Wars grew from 2,540 in the 1918/1919 academic year to 4,673 just before the outbreak of the World War II. The Warsaw University of Technology became the most important scientific centre of engineering in Poland and gained international prestige.

During the socialist period and into the 1990s, the Warsaw Technical University remained the largest and most important Polish Technical University. Operating in new circumstances and under the new higher education law, the University adopted its new statutes in 1991. As the university always offered a wide range of engineering programs, the transformation in 1989 did not change the academic options on offer. The increased autonomy of higher education institutions and the new requirements of the economy were the main factors that affected the diversity of educational offer (Kruk, 2000). Similarly to other prestigious universities, the Warsaw Technical University had retained all its traditional programs while extending its educational offerings with new programs both related to engineering and other fields of studies. New study programs were introduced in economics, administration, biotechnology, transport, information technology, environment protection, power engineering, and in surveying. The University also developed many unique specializations in engineering

disciplines. In 2004 the number of study lines offer increased to 22 on full-time and 16 on part-time programs.

In common with other institutions, Warsaw Technical University introduced tuition-bearing programs in 1991. Its offer of paid part-time programs was extensive and encompassed almost all programs offered free of charge on a full-time basis.

The admission procedures were equal for all programs delivered, both full-time and part-time. According to the instruction issued by the Senate of the University, admission was free on all courses if the number of candidates does not exceed the number of study places available. However, in reality examination tests were conducted in most cases. Only the following study lines had attracted fewer candidates than expected: chemical and process engineering, mechanics and machine design and heavy mechanical engineering, and all candidates were accepted.

In terms of the size and structure of enrolment, the university has accepted a twofold expansion of student enrolments as compared to 1990. The number of students grew from 12,000 students to more than 24,000, while new entrants increased from 2,813 in 1991 to more than 8,000 in 1997. However, the university did not decide to allow mass entry of part-time students, in order to protect the quality of instruction delivered, and expanded its enrolment foremost on free-of-charge, full-time studies. Therefore, the share of part-time students was one of the lowest among all higher education institutions in Poland (except academies of medicine and arts, where by definition studies were delivered full-time), amounting to 9 percent in 1991 and 23 percent in 1997. New entrants on part-time programs increased their participation from 6 percent in 1991 to 31 percent in 1997. Over the second period, enrolment increased further to 30,000 students in 2004, only 26 percent of them being part-time students.

During the first years the tuition fees were at average levels and were equal for all types of programs. For instance, in the academic year 1992/03 the fees were 500 USD. However, in the following years the level of fees was increased, and by the academic year 1997/98 it was much above average, at 900 USD and higher. The fees were also differentiated depending on the type of program. In opposition to the policy adopted by the two technical universities presented above, the fees were higher for engineering related subjects, while they were lowest in economics and administration. But, as mentioned before, despite the high costs, the broad, high quality offer of engineering programs attracted a great number of candidates. It is worth noting that Warsaw Technical University had the highest share of funds obtained from contracts with industry among all higher education institutions, and on the other hand one of the lowest shares from tuition fees.

In summary, one can state that, based on the above analysis, Warsaw Technical University in the face of competition from other state and private higher education institutions, has taken active steps to make itself a more attractive choice. These actions have involved the continuous improvement of teaching process and the introduction of new teaching programs and specialities. However, these actions did not compromise the responsibility for providing the highest quality of education with the expansion of student numbers. By adopting strict entry requirements both on full-time and part-time studies, the university protected its quality and accepted only the best students.

13.5.4 Vocational Higher Education Institutions

The selected higher education vocational institutions were established in the late of 1990s, as some of the first state vocational higher education institutions. Yet, being relatively young state providers, all three schools managed to develop a wide array of study courses in various disciplines. As analyzed before, the government passed the 1997 Act in order to boost the establishment of new higher education providers in small cities, which decreased the entry requirements for opening a new higher education provider, or to set up a new study line. Regional authorities used the new opportunities and under joint supervision with traditional mature state universities, they established almost 30 vocational state higher education institutions in just few years' time. What is even more important, 25 of those new establishments were situated in small cities outside large urban areas.

The selected providers had a quite extensive study offer. PWSZ in Leszno had launched 8 study lines in different fields, such as electrical technology, pedagogy, tourism and recreation, economics, physical culture, and agriculture. PWSZ in Krosno also developed an extensive study offer with 10 study lines: philology, computer sciences, civil engineering, mechanics, pedagogy, nursing, agriculture, tourism, and recreation and physical culture. Finally, PWSZ in Nysa provided 8 study lines: computer sciences, economics, finance and banking, architecture, monument renovation, public health, nursing, and philology.

As we can see, their study offer was extensive, compared to the program offerings in private higher education institutions during their first years on the market, with many study course in very different disciplines. Tuition fees were rather low: 600 USD at PWSZ in Krosno per year of study, and 750 USD in PWSZ in Nysa and Leszno.

In terms of the number of enrolments, these schools managed to attract many students. In 2004 the average enrolment of these 3 providers amounted to almost 5,000 students, which was much more than the average for private providers. What is also quite remarkable, the share of full-time students in those institutions

exceeded 70 percent, which is 13 percent higher than the average in public sector.

In general, empirical evidence points at support for the hypothesis about the new higher education institutions established on already saturated markets, as, in order to attract students, these schools had to develop a wide array of study courses in various disciplines, in a few cases relatively unique ones.

13.6 Summary – strategic responses of public higher education institutions

13.6.1 Summary – the first analyzed period

Hypotheses about the initial phase of the transformation process state that on the higher education market with increasing student demand, with low degree of rivalry, and free study places available only for full-time students in public higher education, most incumbent public higher education institutions will remain unchanged in terms of full-time free programs, but in the face of decreasing state appropriations they will expand their offer of part-time, tuition-fee-bearing programs.

We assumed that public providers in the face of low degree of competition from private providers for full-time students, caused by their advantage of free study places, will not significantly diversify their offer within this sphere of their activity. They will not increase their enrolment of full-time courses, and continue to apply strict entry requirements. In short – they will serve the student market they were already serving, i.e., students from middle and higher economic classes, mostly from urban areas, whose parents have usually received some form of higher or secondary education.

On the other hand, in accordance with the microeconomic theory of non-profit organizations, when the state appropriations for public institutions decrease and become inadequate to provide study programs that cannot survive on their own, but produce a 'value' for the institution, publics will have to generate profits on some other programs in order to cross-subsidize these mission value programs. Because of high and increasing student demand, the most convenient way to accumulate supplementary income is to increase enrolments on part-time, tuition-fee-bearing programs. Therefore, paid part-time programs in high demand study fields, such as business and economic courses, will be expanded in order to gain the resources necessary to cross-subsidize other important institutional activities.

Altogether, the results from the empirical analysis of strategic responses of state higher education institutions fit our theoretical models and support our hypotheses. An average state higher education institution developed an extensive

offer of paid part-time programs, in fact encompassing all programs offered free of charge on a full-time basis. Most public institutions within the first years after the changes in 1989 had launched high demand, part-time study programs. The most impressive development was witnessed in technical institutions, which began to lose students on traditional engineering programs and in order to be able to cross-subsidize those mission value programs opened courses in economics and even humanities and pedagogy. In total, in the public sector the part-time enrolment increased from 90,000 students in the academic year 1990/91 to more than 420,000 students in the academic year 1997/98, and their share skyrocketed from 22 percent to 49 percent. Similarly, the distribution of new entrants in public institutions changed in favour of part-time enrolments, the share of which increased from 23 percent to almost 50 percent. Some state institutions doubled the number of courses offered part-time. The admission policies adopted in the public sector also confirmed our expectations with decreasing entry requirements for part-time programs.

On the other hand, the strategic responses of public institutions with regard to full-time studies were more ambiguous, in terms of our hypothesis. We envisaged that public institutions would not significantly expand their enrolment on full-time courses and retain strict entry requirements and procedures in order to accept only the best students. And most state institutions followed that route, keeping the strict entry requirements for full-time courses with examinations tests. Therefore, we may safely argue that most of them were highly selective for their full-time programs. On the other hand, most of them increased the number of full-time student places, although at a much slower pace than part-time studies, as the number of new entrants to full-time courses grew by 45 percent, from about 85,000 students in the academic year 1990/91 to more than 120,000 in the academic year 1997/98. The other development has been the diversification of programs offered in state higher education institutions using the full-time mode of delivery. Looking at table 14.2, which provides data on the number of study fields offered in state higher education institutions on a free, full-time basis, we can see that their number grew significantly. For instance, universities increased their offer by 9 study lines, technical universities by 10, and pedagogical academies by 5.

On the other hand, the strict admission policies introduced for full-time courses in the public sector confirms our expectations that state institutions would focus on the student groups that already exist on the market, and would be less likely to expand their offer of full-time courses for new types of students, mostly from lower socio-economic backgrounds, who were less academically qualified. Studies of student socio-economic backgrounds supported our hypothesis about the over-representation of students from higher socio-economic classes in full-time, tuition-free studies.

13.6.2 Summary – the second analyzed period

The empirical evidence points at support for the hypothesis about the second period of transformation. We assumed that on the mature, stable and saturated market with higher industry concentration, most public higher education providers in order to adapt to the new external conditions would try to attract new groups of students. Public institutions would thus challenge the private institutions by entering their market niches, in particular by decreasing entry requirements for full-time students in order to attract new groups of less well-qualified students who previously were enrolled in the private sector. They would also significantly develop their program offerings, in particular on full-time courses. In seeking to adapt to new institutional arrangements and surroundings, new public providers will emerge in small, non-academic cities in order to attract new groups of students who were previously targeted by private institutions.

The empirical findings confirm our expectations. The majority of public institutions, over the years 1997 and 2004, abandoned additional entry requirements for full-time courses. They also increased the study places on full-time courses by almost 65 percent, compared to less than 45 percent over the first period. The study offer at public institutions increased significantly, with some higher education institutions almost doubling their program offerings. The pricing policy also fits our theoretical model. The 'elite' public providers were able to increase their fees without fear of losing enrolment, as other, mostly regionally oriented institutions kept their fees at the same level for a few years, in order to attract new groups of students.

Part V: Summary and conclusions

14 Summary, conclusions and reflections

14.1 Introduction

Private higher education currently ranks as a major force in higher education in many countries. The origins, growth and characteristics of the private higher education sector were discussed in chapter two of this thesis, along with a taxonomic and analytic description. The anatomy of private higher education displays a great variety in terms of the size and functions of private higher education. This variety depends in particular on the state higher education policy and the characteristics of the public higher education sector. While private higher education has been part of the higher education landscape for a long time already in the United States, Latin America, Asia and Western Europe, at the end of the 20th century it also became one of the central features of higher education in post-socialist Central and Eastern European countries. After the fall of socialism in 1989, and within the space of just a few years, most Central and Eastern European countries had gained a significant private higher education sector. In Poland, the country that is the central case in this thesis, private expansion began at the beginning of the 1990s, when new regulations allowed private higher education institutions to enter the market. In 2004, the private higher education sector accounted for about 30 percent of total enrolment, with more than 300 private higher education institutions. The rapid growth of private higher education in Poland raised questions about the role and functions of the private providers and about government policies on the private higher education sector. Questions also arose about the behaviour of private higher education institutions in terms of their programme offerings, the level of tuition fees, admission policies, the quality of the programs on offer and the effects the privates' behaviour had on the publicly funded higher education providers.

Private higher education has been widely explored in the literature (Levy 1980, 1986, Geiger, 1986, 1987; Altbach, 1999), the discussions relating especially to the relationships between private higher education and public policy on higher education. This study has sought to contribute to the existing literature by using an original theoretical approach that may serve as an interpretive framework to study the performance of private and public higher education institutions. This framework lays particular stress on the privates' strategic response to the government's higher education policy and the other (external) conditions that private providers face in the higher education market. The theoretical framework is based on two main theories: neo-institutional theory and industry analysis, adding to this some ingredients from the microeconomic theory of non-profit enterprises and business science. Based on these theories and concepts, this study investigates the influence of the Polish government's marketization policy on the

performance of both private and public higher education providers. It aims to gain a better understanding of the mechanisms that govern the relationships between behaviour of individual higher education institutions and the institutional arrangements (i.e. laws, regulations, and funding arrangements). The study also links this behaviour to the so-called external demand and supply forces, such as demographic trends, the macro-economic conditions, the degree of rivalry in the market, etc. For this issue we make use of the work of Michael Porter and his 'Five Forces' (Porter, 1982). In this chapter we reflect on the usefulness of our approach in understanding the developments of the private and public sectors in the Polish higher education system from 1989 to 2004.

Section 14.2 sets the stage for this. Based on chapter 2, it presents a review of the existing literature on private higher education. Section 14.3 lays out our theoretical framework. The section summarizes the various building blocks in the framework that were presented in chapters 3 through 6. The hypotheses and the methodology employed for guiding our empirical analysis are presented in section 14.4, respectively 14.5. Section 14.6 gives an overview of the main empirical results following from our study. In section 14.7, we wrap up our study, reflecting on what we have learned. The final section of this final chapter takes a few steps back and reflects on the results of the thesis from a Polish policy perspective.

14.2 Review of the literature on private higher education

Chapter 2 contains a survey of the private higher education literature. Internationally, private higher education is characterised by a large degree of differentiation. Some private higher education institutions are among the most prestigious in the world. Most of these are research universities, examples being Harvard and Yale in the United States, Waseda and Keio in Japan, or Javieriana University in Colombia. As Altbach (2005, p. 6) notes: 'These institutions serve as leaders in their own countries'. The second important segment in private higher education consists of institutions with a religious affiliation, in many cases co-funded by the state. Yet the most numerous private higher education institutions are found to be relatively specialised institutions, which do not offer a full range of academic subjects. In many cases they are vocationally oriented, offering only bachelor degree programs in specialized branches like management or information technology. In the public's opinion, the quality of these providers is regarded as low or average, and their main function is perceived to be to cater for an otherwise unmet demand for higher education.

Many studies across a wide range of countries have come to the conclusion that the role and functions that private higher education play is primarily determined by public policy on private higher education and the condition of the public

higher education providers. Tradition and history are also found to have an impact on the private higher education sector. Additionally, in recent years, an important factor fuelling the growth of private higher education is massification – a phenomenon that has placed enormous demands on higher education systems and on government as the main funder of the system. As such, we have identified in the higher education literature three main functions of private higher education: to provide more, better and different education. The performance of private higher education is perceived to be the implication of the function that the sector plays, which in turn is influenced to a large extent by the state's higher education policy as well as being shaped by external factors.

In terms of the relationships between state policy and private providers, higher education research has identified three possible policy stances, or postures towards private education (Zumeta, 1992, 1996). The first is *laissez-faire*, where the state decides to ignore private higher education. In the second posture, central-planning, private institutions are treated by the state much like the public ones and play planned roles in the higher education system. The third stance is the market-competitive approach, where the state injects market elements into the higher education system.

When it comes to the appropriate policy stance for private higher education, there is hardly any uniform, specific policy on which researchers and policymakers agree. Even if there is a growing consensus (Levy, 2005) among higher education researchers that public policy should place private providers of higher education on a level playing field with the public providers, it is hard to find rationales for such a policy and furthermore, there is little agreement on the shape such a policy should take. Again, following Levy (2005, p. 42) 'an apparent consensus for equitable treatment [of private and public higher education] dissolves when we note that some would operationalize equity as equal treatment of private and public sectors, while others advocate quite different treatment according to different characteristics of the sectors'. In general, those who find that private higher education, its mission, priorities and goals are in line with those in the public higher education sector, advocate an increased policy attention to the private sector, whereas those who find that the private sector is different from the public one advocate a different policy for the private sector, usually meaning a limited policy targeting the private sector. The approach to private higher education priorities is thus essential and affects the state's policy on the private sector.

However, in this thesis we argue that matters are actually the other way around. It is the state policy on the private sector that, together with Porter's five forces, determines the purposive activity embodied in the private higher education that will come into existence. This means that private providers are expected to evolve in those directions that are rewarded by institutional arrangements.

So far, only little theoretical work has been done on analyzing the relationships between the goals of the private sector and state higher education policy, nor on trying to understand why some policy attitudes towards private higher education have worked out as they have, or where other policies failed in the given circumstances. For these reasons, in order to understand the behaviour of private higher education institutions, we have reviewed the theoretical models that link the strategies and performance of private higher education, institutional arrangements (understood broadly as state higher education policy), and external conditions.

As chapter 2 shows, the literature on private higher education is usually descriptive and typological (i.e. Bowen et al., 1997; Cerych, 1995; Geiger, 1986, 1987). Although this kind of literature is empirically driven, it does not allow one to fully track the developments in the private sector, as it usually depicts the situation at a given point in time. The literature usually depicts the diversity between private and public sectors resulting from privatization. The other body of literature on private higher education, though, is essentially theoretical, attempting to identify, explain and predict developments within private higher education. This body of literature – the ‘new institutionalism’ – highlights isomorphism, a process of convergence that yields similarities among organizations (i.e. DiMaggio & Powell, 1983, 1991, Levy, 1999). Following Levy (1999), the contrast between these two types of literature is that the first more often depicts or assumes rational, free-choice dynamics in private higher education sectors, leading mostly to diversity, while the new institutionalism finds such dynamics exaggerated, inadequate, or otherwise misleading in depicting and explaining organizational configurations. The new institutionalism, centered but not limited to organizational sociology, stresses that organizations operate chiefly in routine, unreflective, constrained modes. These modes lead to extensive copying, that is: isomorphism (Levy, 1999). Levy, following DiMaggio and Powell (1983), identifies two implications when isomorphism relates to contemporary higher education institutions, in terms of inter-sectoral (private resembling public) and intra-sectoral (private emulating private) dynamics.

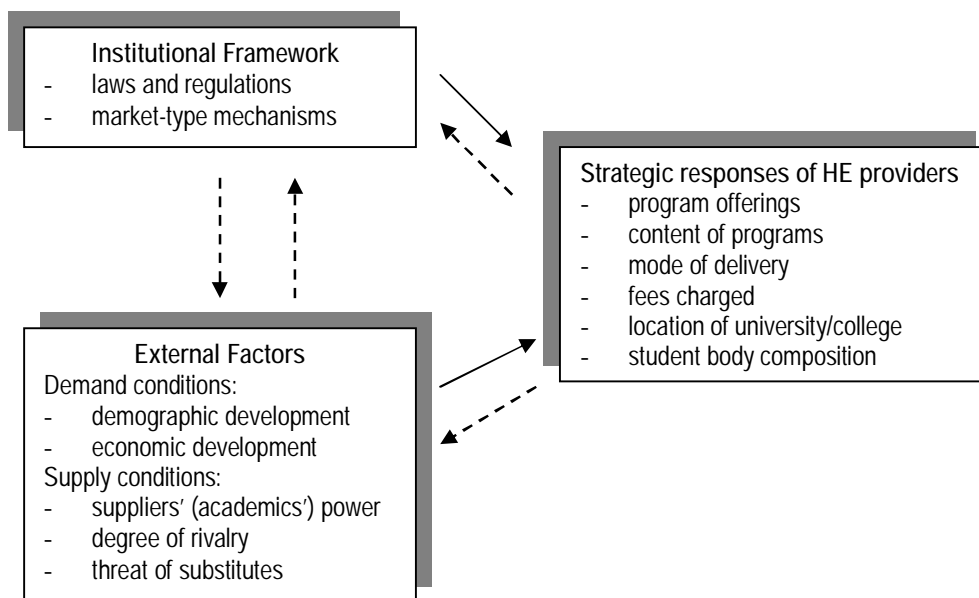
To provide a more rich explanation of the behaviour of higher education institutions that goes beyond merely descriptive analyses and observations that stress the copying behaviour of higher education providers, we will construct our own analytical framework based on institutional theory and business science. This analytical framework is summarised in the next section.

14.3 Theoretical approach

One of the objectives of this study is to apply an eclectic theoretical approach to serve as a framework for interpreting and understanding the behaviour of private

and public higher education institutions. Our approach is based on the work of North (1996) and Dill (1997, 2003) and makes use of institutional theory and industry analysis. Our focus lies on the interactions between higher education arrangements (say, the public policies affecting higher education), the basic external conditions (as identified by Porter in his 'Five Forces' diagram), and the responses of individual higher education providers. This is illustrated in the 'Interdependency model' shown below (figure 14.1). We are focussing on the solid arrows shown in the diagram. This means that, while we are aware that higher education providers can influence the institutional framework and basic conditions can shape the institutional arrangements (and the other way around), we will, for the purpose of this study, not take them into account. Thus, we have institutional arrangements and external basic conditions as independent variables, with the strategic responses of higher education providers as the dependent variable.

Figure 14.1: The research framework used for this study



Our analysis of the development of private higher education is based on different theories than those of new institutionalism that were touched upon briefly in the previous section. Our approach is very much inspired by economic theory. First of all, at the outset we did not assume either diversity or isomorphism between private and public higher education institutions. In this thesis we have tried to show how both the changes in private higher education and our understanding of them can be facilitated by the use of theories and concepts based on monopolistic

competition and the micro-economic theory of non-profit enterprises (see chapter 4). The theories used in this thesis explore the behaviour of higher education institutions as it depends on the implementation of new institutional arrangements (in short: marketization or privatization policies – see chapters 3 and 5) in higher education, and then, after developing some indicators and making them susceptible to investigation, we analyze this behaviour for the Polish higher education system.

The exploration starts from the realization that the behaviour – say, the strategic responses – of higher education institutions is essentially determined by institutional arrangements, mostly in the form of state higher education policy, as higher education comes to experience ‘market failures’, and by the external environment, just like any other industry. This is illustrated in figure 14.1.

Since our objective is to understand the effects of the injection of market forces into higher education policies, there is a need to define the concept of marketization policy, as well as the characteristics of the higher education market. Based on the literature reviewed in chapter 3 (section 3.5), we understand the concept of marketization as a process that takes place in several related higher education policy dimensions, including: barriers to the entry of new providers to the higher education market, regulations affecting various aspects of the providers’ autonomy, conditions for providers to receive state funding, availability of information on prices and quality (including laws and regulations affecting the transparency of the system), students’ freedom to choose the preferred educational provider, students’ freedom to have a say in the content of their curriculum, as well as their ability to qualify for government scholarships. We refer to chapter 3 (in particular table 3.3) and chapter 5 for a further discussion on elements of marketization.

Attention should be paid to the specific character of higher education as a service characterised by many market failures. To understand the higher education market and the positioning of providers on this market, we have looked in chapter 4 at monopolistic competition, which describes the market as an arena with many small and medium-sized providers, whose decisions have a relatively low impact on the market. The essential property for industries in a monopolistic competition situation is product differentiation. In the case of higher education, providers may base their differentiation on low costs and close distance to clients (i.e. students) or on program diversity and high quality.

Moving further, we used the theory of monopolistic competition as a framework to analyze the relationships between the implementation of marketization policy (operationalized along five dimensions) and the strategic responses of private and public higher education institutions in terms of tuition fees, program offering, location, student enrolment numbers, etc. In terms of the barriers to the entry of

new providers into the higher education market, the microeconomic theory of non-profit enterprises (such as higher education providers) suggest a decision rule that contains 'marginal value' when it comes to deciding on the programs to offer and tuition fees charged, given the mission to which they adhere (see section 4.3). Marginal value (MV) is defined as the 'incremental contribution to mission attainment, expressed in dollar equivalent units'. The decision rule is slightly adapted from the familiar rule that states that profit providers will adjust the quantity of their production until marginal cost (MC) equals marginal revenue (MR). It reads as follows: $MV+MR=MC$. Because of their 'non-distribution constraint', the non-profits cannot distribute any positive margins to their owners, which means they will spend the earned profits on cross-subsidies to maintain activities that cannot survive on their own but that produce a 'value' for the institution.

The analysis of public policies affecting private higher education providers in terms of their barriers to entry and their eligibility for state subsidies also leads to important hypotheses about their behaviour. We expect that, when the barriers to entry are low and there is an unmet demand for higher education, private providers will enter the market according to the fundamental rule of the free market – the laws of supply and demand. Yet, because of high fixed costs and the need to enrol a critical mass of students, private providers will offer mostly high-demand study courses in specialized fields, such as management, administration, computer sciences, political sciences, etc.

In terms of enrolment and level of tuition fees, chapter 4 has presented an interesting array of responses. First, the emergence of private providers will not automatically exert a downward pressure on the level of tuition fees. This is because of the so-called 'pricing umbrella effect'. Elite private institutions that receive large endowments, and state higher education providers that receive state funding, provide a strong pricing umbrella for the remainder of the higher education institutions. According to the micro-economic theory of non-profit enterprises, higher education institutions with access to non-tuition sources of revenue use the decision rule that contains 'marginal value', implying that universities do not expand their enrolment beyond the ideal size if they have no need to do so, up to the point where MV is zero and $MR=MC$. When those non-tuition sources of funding are high enough so that all programs and activities can be subsidized, then all marginal values can be positive or equal to zero. No program needs cross-subsidies and no program need cross-subsidize any other. The university has no incentives to expand the programs that can have $MR>MC$. This means that these subsidized universities could increase their enrolments, at lower levels of tuition fees. Yet, because of their decision rule $MV+MR=MC$, they are not willing to do so. Private providers, deprived of non-tuition sources of revenue, decide to enrol a large number of students. However, even if the private higher education institutions' marginal cost and average cost curves lie beneath

those in the public sector, private institutions will probably not change their prices and lower tuition fees. The public's marginal costs, and thus the level of tuition fees, provide a pricing umbrella for the rest of higher education. The privates will charge a similar level of tuition fees, while having lower costs. As a consequence they can enjoy a bigger contribution margin.

Second, this umbrella effect on pricing can have both a positive impact (as described above) and a negative effect on prices in the private sector. When the state subsidies for public higher education institutions are not adequate to allow institutions to offer study programs that cannot survive on their own but produce a 'value' for the institution, the public institutions have to generate profits on some programs in order to cross-subsidize or provide discretionary spending for these mission value programs. We have shown (in chapter 4) that non-profit institutions (including public ones) will start to act more like for-profit organizations once their state subsidies or other non-tuition sources of revenue start to diminish or vanish. Ultimately, when the state subsidies are low this will force public institutions to behave like for-profits and use the decision rule $MC=MR$. High-demand programs, such as business, management, humanities, etc., which have both positive marginal intrinsic value and a positive contribution margin, do not remain that way for long. In times of increasing student demand, higher education institutions can increase their enrolments without lowering their tuition fees. However, when the market is saturated and student demand is stable or decreasing, universities will have to cut their prices in order to attract more students, which means that, in order to increase their enrolments on such programs, public providers may lower the tuition fees regardless of the decreasing marginal value and losses. Non-selective and medium-selective private higher education institutions deprived of state support are forced to copy the behaviour of public institutions. Below some level of tuition fees, private institutions will no longer break even and will start to incur losses. In the long run, if such a situation continues, this means they will leave the market.

We therefore argue that higher education institutions must have sufficient financial strength in the form of non-tuition revenues to balance 'mission with market'. When such funds are insufficient, the mission-oriented universities and colleges have no capacity for discretionary spending on value-creating programs and are forced to respond only to supply and demand.

Theory also suggests interesting relations between other dimensions of marketization policy and the strategic responses of individual higher education institutions. An increase in the degree of institutional autonomy (see figure 5.2 in chapter 5) is supposed to make higher education institutions less dependent on government and allows them to generate a higher portion of their funds from private sources. Nevertheless, counter to expectations, empirical studies so far have not found significant cost reductions associated with more freedom from

state regulation. When it comes to the mechanisms by which state financial support is channelled to higher education providers, theory suggests that a more student-targeted funding mechanism will increase the participation of students from low-income families at a lower per-student cost to the state (see section 5.6). In addition, student-centred funding is expected to provide students with more choices of higher education institutions.

To link the institutional arrangements and external forces to the strategic (i.e. differentiation) responses of higher education institutions, we used a modification of Michael Porter's work, especially his 'Five Forces'. The five forces that shape the industry structure and the strategic behaviour of organizations (see section 3.6) are: (1) the degree of rivalry, (2) availability of substitute products, (3) demographic trends, (4) the economic situation and (5) the power of the professionals (i.e. academics) working in the institution. They are shown in figure 14.1 in the box containing the external factors. The strategic behaviour of higher education providers to the external forces is operationalized in terms of the type and range of programs offered, the fees charged, the location chosen, their admission policy, and the characteristics of the student group they target.

In chapter 6, we explored the main competitive strategies that are available to higher education institutions on a monopolistic competitive higher education market, given particular constellations of external conditions. Our analysis was inspired by the strategies identified by Porter (1999) and Dawes and Sharp (1996). Following Porter, we recognize two families of strategies: (1) product differentiation strategies; and (2) cost leadership strategies. These strategies may target either a broad market or specific market segments. The reinterpretation of Porter's strategies by Dawes and Sharp in particular paid attention to the constellation of demand and supply factors on the market. Starting with the two families of strategies presented by Porter and taking into consideration the question whether an organisation operates on an emerging market or a mature/saturated market, these authors identified five strategies.

In chapter 6, the five strategies were elaborated for the case of higher education institutions. The strategies are shown in figures 6.1 and 6.2 for the situation of a new, growing market, respectively a mature and saturated market. We argue that on a growing market with increasing student demand and a low degree of rivalry between higher education providers, new private institutions usually follow two types of strategies: focus-low cost strategy and focus-differentiation strategy. The first one, the most common, involves providers selecting a number of high demand 'standard products', of average quality, that will be offered to selected student segments for moderate prices or lower prices than the competitors. Because of monopolistic competition, the product differentiation for universities adopting this strategy is based mostly on location, price and convenience, and the providers will try first of all to attract students from the region. Universities

pursuing this strategy usually offer undergraduate vocationally oriented courses in low-cost study programs. In the focus-differentiation strategy, the universities base their competitive advantage on the uniqueness of the program and on its high quality. They offer more academically oriented courses, at master level, developing a wide array of study programs. Their fees are above the market average.

On a stable market, with attenuated student demand and a higher degree of rivalry, those private universities that followed the high-quality strategy will not change their position. If the university differentiates itself by supplying very high quality products, it risks undermining that quality if it seeks to become a cost leader in other student segments. On the other hand, when the market becomes saturated and demand stabilizes, low-cost private providers expand their offer of study programs and try to reach more prospective students groups. In fact, they emulate the behaviour of public providers, in terms of study offer, level of tuition fees, etc. Some private providers may adopt a different strategy, that is: a defender strategy. Here, the institutions reduce costs to maintain itself as low-cost producer, with the lowest fees on the market.

In general, we argue that in times of decreasing student demand and a high degree of rivalry on the market, most of the relatively new private institutions, which lack the venerability and claims to high academic status, in their quest for legitimacy emulate where they can the mature public institutions. Following Levy (1999), this leads to isomorphism. Private institutions may begin as distinctive organizations, but they move to become isomorphic to an increasingly wide environment beyond their initially narrow, focused niche.

14.4 Hypotheses

The considerations presented in the theoretical chapters of this thesis and as summarized in the previous section, suggest that different institutional arrangements and different constellations of external conditions provide a different set of options available to higher education institutions. In addition, the 'industry analysis' of external conditions provided a systematic framework for interpreting how the shifts in student demand, economic development, degree of rivalry, etc., will affect the behaviour of higher education providers and the nature of competition in the higher education industry. This interplay of institutional arrangements and external conditions on the one hand, and strategic responses on the other, is reflected in a set of hypotheses (or expectations) dealing with the behaviour of private and public higher education institutions in Poland. Institutional arrangements and external conditions are regarded as key independent variables explaining the strategic responses of higher education institutions.

Each hypothesis is formulated in terms of a set of institutional arrangements and external conditions that predict that under certain conditions, providers will act in a particular way. We distinguish two distinct periods: 1990 – 1997 and 1997 – 2004. The first period is characterized by a particular set of external conditions and institutional arrangements that, according to our theoretical framework, will have consequences for the options and opportunities available for higher education providers. These independent variables take into account the rapid demographic increase, accompanied by an increase in the demand for higher education, a low degree of rivalry between suppliers, a high degree of institutional autonomy, relatively immature accountability procedures and low barriers to entry for new providers, together with an absence of state financial support for private higher education institutions and their students. In short, the state policy for private higher education was strictly limited, and different from policies for the public sector, being in fact restricted to the licensing of new private providers. The period is one of a rapid, relatively uncontrolled expansion of private providers.

The second period is one when laws (institutional arrangements) have caught up with these developments. This is reflected in terms of accountability procedures and making students in private sector institutions eligible for state financial support in the form of government-subsidized credits from commercial banks and state means- and merit-based scholarships. Government also provides more accurate information on the performance of higher education institutions to students. In terms of the basic building blocks of our analytical model, this set of conditions relates to the institutional arrangements. In terms of the other building block, the external conditions, the second period is characterized by a demographic slowdown that slowly started to affect higher education, paralleled by a saturation of the higher education market. During both periods, state financial expenditures on public higher education fell steadily and continuously. In 1998, public universities and colleges received only 54 percent of state subsidies per single student compared to 1989, and in 2004 this ratio increased only to 60 percent.

An overview of the nine hypotheses is presented in table 7.1 (chapter 7). The first set of (five) hypotheses is built on two main ideas: the economic laws of demand and supply, as well as the microeconomic theory of non-profit organizations, which states that non-profit organizations will start to act like for-profit organizations once the non-tuition sources of revenue start to diminish.

The first and second hypothesis state that, when a demand for higher education exists and there are low barriers to entry, the supply of higher education will rise to meet unmet demand – new providers will enter the higher education market.

The third hypothesis predicts that private higher education providers, being totally tuition-dependent, are subjected to market mechanisms just as almost any other business, meaning that most of them will offer attractive, often low-cost study programs in high-demand areas to meet their critical intake of students. As such, most of the new private providers will be demand-absorbing institutions, offering popular study programs, supplying vocationally oriented courses in management and other social sciences, while at the same time being non-selective (or medium selective) in their admissions policies. The private providers will be located mostly in large metropolitan areas with a high population density and high student demand. They will focus mostly on underserved clients, such as mature students, students combining work and study, and students coming from lower socio-economic backgrounds who prefer to study part-time.

In contrast, public institutions, having an advantage in the sense of being able to offer tuition-free study places, will stick to the student market they were already serving, targeting students from middle and higher economic classes, from urban areas, whose parents have usually received some form of higher or secondary education. They will continue to apply strict entry requirements. This is the topic of the first part of hypothesis 4.

According to our theory of non-profit organizations, public institutions confronted with declining state subsidies have to find alternative sources of revenue in order to cross-subsidize or provide discretionary spending on the "mission value" programs, which, because of low student demand, cannot survive on their own. Because of that, we expect that public institutions will look for additional sources of revenue, mostly in the form of convenient ways to accumulate the supplementary income by increasing enrolments on cost-covering, paid tuition, part-time programs that bring in revenue. This is the phenomenon covered in the second part of hypothesis 4. Yet, because of the growing student demand, in line with the supply – demand rule, public institutions may increase both the level of tuition fees and the number of students enrolled. The pricing umbrella provided by more prestigious public institutions allowed the private ones to increase the level of tuition fees for a whole decade, regardless of a fear of losing students.

The fifth hypothesis that relates to an expanding higher education market, states that only a small number of private higher education institutions will choose a high-quality strategy, which implies that they base their differentiation on high-quality products, rather than on low prices and location compared to other institutions. They usually develop a wide array of study programs, usually at master level, and charge high levels of tuition fees. In addition, in contrast to the low-cost institutions, they may adopt some form of additional entry requirements.

In the second set of hypotheses, the period under analysis relates to the second stage of the transformation process in Poland, characterized by demographic decline and a high degree of rivalry between education providers. Thus, one may speak of a saturated market.

We hypothesise that, in order to adapt to the new external conditions, public and private higher education providers will try to attract new groups of students. Public institutions will challenge the private institutions by entering their market niches, by increasing enrolments in full-time courses and lowering entry requirements. This is hypothesis 7. On a similar note, private institutions will challenge the public institutions by offering more academic rather than vocationally oriented courses, increasing and diversifying their program offerings (hypothesis 6).

Hypothesis 8 states that the highly selective private and public institutions will not change their premium positioning strategy, basing their competitive advantage on the high quality of their products.

In the final hypothesis (number 9) we argue, based on our economic theories, that in order to differentiate the demand for their products from other institutions, most new private providers established during the second period analyzed will provide unique study courses, not previously offered by private institutions, and thus differentiate themselves from the competition.

In terms of the level of tuition fees, because of the high competition on the market, a slowdown in student demand and a further decrease in state subsidies for public higher education institutions, the pricing umbrella effect will probably begin to put downward pressure on the level of tuition fees in the private sector. In order to enrol a critical mass of students on paid programs, public institutions will be forced to decrease their prices. As analyzed previously, non- and medium-selective private providers will copy their price setting decisions so as not to lose their students. In the long run, many of them will probably be forced to leave the market, since their revenues will not cover the costs incurred, as long as they remain deprived of non-tuition sources of revenue.

14.5 Research methodology

As regards our research methodology, which was presented in detail in chapter 8, we start with the observation that our study combines both explorative and evaluative research. The purpose of our applied research is to answer practical questions, in particular concerning the effects of specific higher education policy in Poland after the collapse of the socialist system, with special emphasis on market-type elements in this policy.

In order to find empirical support (if any) for our hypotheses, we defined the units of analysis and what method can be used to describe and analyze these units. As presented, the empirical study (chapters 9 through 13) examines the impact of particular higher education institutional arrangements and new external conditions on the strategic responses of Polish higher education institutions after the changes in 1990. In general, the main goal is to study how the higher education institutions responded to these new conditions.

To explore our hypotheses we analyze the changes in three groups of variables: two independents – higher educational institutional arrangements and external conditions – and one dependent – the performance (i.e. the strategic responses) of higher education institutions in the period 1990-2004.

In this study, institutional arrangements are understood as state regulation, the state funding arrangements and other policies affecting higher education. In particular, as the interest of this study is to examine the impact of market-oriented policies, we have chosen to analyze the changes within the following spheres of state policy: barriers to entry, eligibility of private providers for state financial support, institutional autonomy, the mechanisms of state funding of higher education, information on higher education institutions available for students, and students' freedom to choose and specify the product (see table 3.3).

In terms of external demand and supply conditions, the re-interpretation of Porter's five forces impacting on higher education institutions provides the following list of external conditions, or forces: demographic trends (student power), macro-economic conditions, threat of substitutes for higher education, the academics' power, and the degree of rivalry between higher education providers.

In terms of our dependent variable – the responses of higher education institutions – we looked both at macro developments in the system of higher education in Poland, as well as at the level of individual higher education institutions. In the operationalization of the strategic responses of higher education institutions we focused on a subset of tangible teaching-related activities, such as: the changes in programs offered, the places made available to undergraduate and graduate students, the location of new providers, admission policies, the level of tuition fees, and the number of academics employed. Added to this was the socio-economic background of students.

To study the aggregate effect of the various individual providers' responses – on the (macro) level of the Polish higher education system – we divided the population of higher education institutions into a private and a public sector, whereas we used stratified random sampling to study the responses on the institutional level. For the latter, we use three criteria to obtain the strata:

ownership, location, and year of establishment. To summarize, we looked at 35 private and 10 public higher education institutions. Our choice of stratification criteria contributes to the efficiency with which our hypotheses can be explored.

To gather information on policies and institutional arrangements we performed an analysis of reports and documents. We focused first on the legislation implemented by the state, in particular the Ministry of National Education, and, second, on decisions by funding organizations like the Polish Academy of Science and the Committee for Scientific Research. This information was analysed in qualitative terms. To describe the changes in external conditions we also analysed documents, reports and the research literature. The data collected here is found in statistical offices, earlier research, and literature reviews.

The qualitative analysis of the responses of higher education institutions made use of data drawn from different sources – national organizations, in particular the database of the Main Statistical Office and Ministry of Education, previous research, higher education institutions' web pages, and data from our own survey, conducted among higher education providers (40 privates and 30 publics). We used questionnaires to gather information on the socio-economic background of students in a few higher education institutions, and on the level of tuition fees and admission policies in selected higher education institutions. This data was interpreted against the backdrop of historical information on the Polish higher education system.

14.6 Empirical results

In this section, we will present a summary of outcomes of our empirical research. The presentation of the findings is based on our research design; first the results for the period 1990-1997 are presented as far as they relate to our analysis of the institutional environment, external conditions and what those changes meant for the development of the higher education system as a whole and for the strategic responses of private and public higher education institutions. Secondly, we move to the period 1997-2004 where we follow the same approach.

During the initial stage of the transformation period, the power of the Ministry of National Education was considerably reduced compared to the situation before 1990; authority was delegated mostly to the elected bodies within higher education institutions. Under the provisions of the new law, higher education institutions had the right to create or transform individual organizational units, create or eliminate fields of study, set their own admission procedures and the number of student places, decide on curricula and study plans, obtain funds from outside the state budget, appoint new faculty members and elect their rectors. The important change in the regulatory framework was the permission for public

institutions to charge tuition fees to students in part-time programs. This shift of responsibilities represented an increased autonomy of higher education providers and reflected the main characteristics of a new market-oriented legislation concerning higher education in Poland at the beginning of 1990s (Duczmal, 2006).

In addition, private higher education institutions were allowed to enter the market, conditional on meeting some state requirements set by the Ministry of Education, addressing issues such as the number of high-ranked academics, curricula and infrastructure. For the first three years, private providers could offer only bachelor's degrees in a particular field of study. In order to offer courses on the bachelor's level, institutions should employ at least four professors (although such employment could be part-time), develop the curricula according to the ministry's requirements, and own (or provide) the appropriate equipment and facilities. After this 3-year initial period, institutions were able to apply for the right to offer programs at the master's degree level. The standards for master's level programs are more demanding – a minimum of eight full-time professors as well as relevant curricula and infrastructure. Institutions also had to conduct scientific research.

In terms of the institutional arrangements, we may argue that, despite having a huge private higher education sector, Poland was still removed in important ways from a truly competitive higher education system. Out of the five dimensions of marketization policy that we identified, two of them (institutional autonomy and barriers to entry) were met to some extent, while this was hardly the case for the other (three) dimensions. Recognized private higher education institutions were not eligible for state subsidies, students in private higher education institutions were excluded from state scholarships, and laws and regulations affecting the transparency of the system, thus ensuring quality and dissemination of information, were largely absent. In the beginning of the 1990s, the priority of policymakers was to allow more autonomy to the providers and increase the number of higher education providers to meet the rapid increase in demand for higher education, without increasing state spending on higher education.

When it comes to the external conditions for higher education, the situation saw drastic changes after the year 1989. The economic crisis caused a decline in industrial production, an enormous inflation rate, and soaring unemployment. Against this economic downturn, Poland implemented a series of economic reforms, which included, among others, the privatization of state-owned enterprises, elimination of barriers to entry for new private companies in almost all sectors of economy, and the introduction of competitive mechanisms into the economy. This led to changes in the labour market and paved the way for higher education to become one of the most important determinants of an individual's employment options. To just give one fact: the average unemployment rate for

individuals that had not gone through secondary school was 40 %, while for higher education graduates it was less than 5 %. Earnings were also the highest for higher education graduates.

A strong correlation between higher education and future work and remuneration motivated secondary school graduates as well as older, less qualified people to participate in higher education. Never before has higher education in Poland gained such high social and economic importance (Lewartowska-Zychowicz, 2004). Increased demand for higher education was also caused by a significant increase in the number of young people within the age group 18-24.

The next important aspect of external conditions relates to the degree of rivalry. During the early 1990s, the degree of rivalry for higher education market was low. The rapid growth of private providers was offset by a surge in applicants for higher education. For instance, the average number of students in a private higher education institution increased by 300%, from 400 in 1992 to 1,600 students in 1997, while the average for public higher education institutions increased by 110 percent, from 4,220 to 8,820 students in 1997.

Yet, there were two problematic consequences: an insufficient number of academic staff and a decline in state support for higher education. Academic work was not regarded as an interesting career for young higher education graduates. They preferred to work in other sectors of the economy where highly qualified work was better paid and offered more opportunities for future promotions. During the 1990s, the debate about the attractiveness of the academic workplace – which includes such issues as reforming the structure of academic staff, new staff roles and career patterns, differentiation in remuneration, recruitment of younger graduates for an academic career, working conditions – was absent among policymakers. The sharp growth in student numbers, accompanied by a decline in state support for public higher education, a centralized system of employment and working conditions of academic staff greatly affected the academic workplace. Expenditure on higher education in Poland declined from 1.1% of GDP in 1990 to 0.86% in 1997. The state expenditure per student showed an even more dramatic decline over the period. One of the results of such a policy was an insufficient number of academic staff. Full-time employment in all higher education institutions in 1997 accounted for 70 224 academics, including 13 007 full- and associate professors, 41,993 assistant professors (who are required to have a PhD) and 15,224 senior and junior lectures (who have master's degree). The number of high-ranked professors was relatively small in relation to student enrolments. Where student numbers increased 2.7 times since 1990, the number of full-time employed academics increased from 61,143 in 1990 to 70,224, which is slightly over 1.1 times.

Increased demand for higher education was followed by significant growth in the supply of higher education during the 1990s. Enrolment in Polish higher education increased almost 3 times, from some 428,200 students in 1991 to 1,086,000 students in 1997. Full-time enrolment increased from 326,600 students in 1991 to 534,800 students in 1997. Part-time enrolment grew even more dramatically, from 101,600 in 1991 to 551,600 in 1997. While in 1989, only 8 percent of the relevant age cohort was enrolled in higher education, in the academic year 1997/1998 this ratio had reached 22.2 percent.

In order to satisfy the demand for a high-qualified workforce, public higher education institutions offered new study modes and programs. In particular, they established paid part-time studies in all kinds of fields, and they were offered in the form of weekend, evening, and individual study tracks. Public institutions introduced an open-door policy and allowed admission to part-time studies for all secondary school graduates holding the matura, without entrance examination, while still maintaining strict entrance examinations for zero-tuition full-time places.

One of the most visible and radical results of the new institutional arrangements and external conditions was the emergence of a huge private higher education sector in Poland. A rapid expansion of private higher education began in 1991. During the early 1990s, the number of private providers rose from one in 1990 to 128 in the academic year 1997/98, while student enrolment rose from around 500 to around 205,000 in 1997. For the first few years under the 1990 Higher Education Act, due to a limited number of professors available, private institutions offered mostly bachelor's programs. However, in the academic year 1997, 12 private providers had received rights to confer master's diplomas. Private providers, deprived of almost any state support, developed mainly high-demand 'low-cost' study programs (as in the case in most of the Central and Eastern European region and other places in the world), and attracted mostly part-time students. In 1997, approximately 75 percent of the private institutions' enrolments were part-time, usually combining study and work in order to pay for higher education.

In 1997, there were nearly 3500 academic staff in private higher education institutions, which constituted only 5 percent of all academic staff of the country, while the students in the private sector made up 21 percent of the total. The expansion of private higher education's staff in the 1990s was based mostly on academics drawn from public institutions, which held a position in both a public and a private institution. In 1997, about 80 percent of staff employed in the private sector was also employed in public higher education institutions. For many of these, their work in a private higher education institution was a second job. The student / staff ratio in the private sector increased during the entire period, and in 1997 it was 56 students per academic faculty member, while in the

public sector there were fewer than 13 students per academic staff member. This high ratio has contributed to the notion that the rapid expansion of private higher education contributed to a dilution of quality. The unprecedented growth in student numbers had resulted in large staff workload increases and a decline in research activity for most staff in the private sector.

When it comes to our hypotheses related to the private higher education institutions in the period 1990-1997 – a period of expansion and a low degree of rivalry between providers, coupled with an absence of state financial support for privates – we conclude that they are largely supported by the empirical facts.

A rapid expansion of the private higher education sector began in 1991, with the new state regulations allowing private institutions to enter the market. Private institutions started to play an important role in meeting the demand for higher education. This underpins hypotheses 1 and 2. In the academic year 1992/93, the share of students enrolled in the private sector accounted only for 0.9 % of all students, while in 1998 it had jumped to almost 19 %. Most private providers adopted an aggressive growth strategy.

When it comes to hypothesis 3, the growth in private student enrolment was mostly concentrated in part-time programs, with almost eight out of every ten students enrolled in the mid-1990s on a part-time basis. This disparity between the numbers of full-time and part-time students was increasing during the entire period 1990-1997. Interestingly, private higher education institutions that adopted a strategy of high academic quality standards showed an enrolment structure that was balanced in favour of full-time students; they did not expand their enrolments at such a rapid pace as other private institutions.

Continuing our hypothesis 3 exploration, we saw the majority of the new private providers founded in particular in metropolitan areas and in larger cities. In general, the regional distribution of private higher education providers across Poland was in accordance with the distribution of economic prosperity as well as with population density. Private institutions did not much take root in the poorer regions with a lower population density. In 1997/98, of 128 private providers, 34 were established in Warsaw, 34 in large cities, and only 28 in small cities without any academic traditions. Additionally, in the four densest regions, a territory that accounts for 26 % of Polish territory and 41 % of the population, there were 76 private providers in 1997/98, which represented 60 % of all privates.

In line with hypothesis 3, the new private higher education institutions based their product differentiation either on location and low-price programs, where a few adopted a high-quality strategy. As expected, the great majority of new providers followed the first strategy. These are the 'demand absorbing' institutions, catering primarily to students from lower socio-economic classes,

offering low-cost study programs in popular subjects, especially economics and management. In 1997, the share of students enrolled in disciplines within these fields was between 60 and 70 percent. The overwhelming majority of these private institutions were single discipline, vocationally oriented institutions, offering only bachelor degree programs. In addition, the great majority of them were non-selective institutions that imposed no entry requirements.

In contrast, and as stated in hypothesis 5, only a few private providers, usually located in 'academic' cities, adopted the high-quality / high-price strategy and developed a relatively wide array of programs, awarded master degrees, and introduced some form of entry requirement. Yet, as expected, they were strictly limited in number, with only a few private providers, mostly the oldest, established in the early 1990s.

To address hypotheses 3 and 5 a little further, we also analysed the determinants of the tuition fees charged by the private higher education providers. The bottom value was usually set on the basis of costs incurred, while the top level was calculated on the basis of tuition fees charged by similar public and private higher education providers situated in the region. Only a few high-quality private providers set tuition fees regardless of the level of tuition fees charged by competitive providers. They mostly offered master level courses and were perceived as high-quality institutions. The fees they charged were much higher than for the average private provider. On the other hand, during the period 1990-1997, the level of tuition fees in all private higher education institutions increased annually, at a rate in line with or exceeding the rate of inflation. This was made possible because of the unprecedented growth in student demand, and the increase of the fees in the public sector, which provided a 'pricing umbrella' for the private sector.

The data on the student body composition found both in our survey and in investigations by other researchers in Poland, confirmed our expectations about the "paradox of public fund financing". That is: students from the upper and middle classes enjoy free education in public institutions, while low-income students are more often found in private providers where they pay full-cost tuition fees. During the period 1990-1997, public institutions continued to focus on the student groups that they already served on the market. This in accordance with hypothesis 4, which states that on an emerging market with increasing student demand and a low degree of rivalry, the public providers are less likely to expand their program offer in tuition-free full-time courses or in programs for low-income students, that are less academically qualified and that have not passed the strict entrance examinations. On the other hand, the public institutions significantly expanded their offer in tuition-bearing part-time programs, where they abandoned entrance examinations and offered more study places. In hypothesis 4, we argued that this will be caused by the decrease in state subsidies.

This in accordance with our theoretical model, which predicts that public institutions facing diminishing state subsidies will be forced to generate surplus revenues from popular programs in order to cross-subsidize their mission-oriented programs. Therefore, part-time programs in high-demand study fields, such as business and economics, were expanded in order to gain the resources necessary to maintain other activities that are important in achieving the institution's mission. The number of new part-time entrants increased from fewer than 20,000 students in 1990 to more than 100,000 in 1997. The most popular study programs in 1997 were those related to economics, pedagogy and humanities. Student numbers in the management and marketing study lines increased almost eight-fold for full-time courses and six-fold for part-time courses over the period analyzed, constituting almost 11 percent of total enrolment in the state sector in 1997.

The second period (1997-2004) for which we analyzed a number of hypotheses may be characterized as a period when state regulations caught up with the rapid expansion of private higher education. In this period, student enrolment further increased, from 1,091,000 in the academic year 1997/98 to 1,926,100 students in the academic year 2004/05. In 2004, students in the private institutions accounted for 30 percent of all students, compared to 21 percent in 1997. In this second stage of the transformation period, the contribution of the private sector was acknowledged, because from 2001, full-time students in private institutions became eligible for state support in the form of means-tested and merit-based scholarships. In 2004, part-time students in private higher education institutions became eligible as well, but the effects of this policy fall outside our period of analysis. From 2001, the share of full-time students in the private sector has been increasing, to reach its peak in 2004 at 25 percent.

Additionally, the attention of policymakers shifted slowly to the transparency of the system and to quality issues. The State Accreditation Commission was established in 2001. Its purpose was to systematically evaluate the quality of teaching in all higher education institutions and to disseminate information about the outcomes of the evaluation to students and academics. The information on quality enables students to make better-informed choices about which (public or private) university to attend.

However, one of the most far-reaching elements of marketization policy, that is: to make state subsidies available to recognized and accredited private higher education institutions, was still absent. Therefore, public institutions still had an advantage in terms of tuition-free full-time study courses, while private institutions charged their students full fees. In 1997, the government passed the Vocational Higher Education Schools Act, in order to increase the number of public and private higher education institutions – especially those located in small cities – and to expand the free tuition capacity in full-time study programs.

Under the new regulations, it became much easier to open a new higher education institution. Since then, the standards for the bachelor's level programs are less demanding than for providers operating under the 1990 Higher Education Act. As an example, only two professors are necessary for a study program. The new public higher education institutions established after 1997 were all registered as vocational higher education schools and can offer only bachelor's degree programs; they cannot apply for master's level courses. New private vocational higher education institutions, in contrast to public vocational schools, can offer master's degrees, although in order to do so they must first change their status and operate under the 1990 Higher Education Act.

In terms of the external conditions for higher education, the situation changed in a number of ways. First, compared to secondary school graduates, the wage premium and employment opportunities for higher education graduates further increased between 1997 and 2004. This encouraged individuals to upgrade their qualifications by attending higher education. Secondly, there was a moderate increase in state expenditures on public higher education institutions from 0.77 percent of GDP in 1997 to almost 1 percent in 2004. However, with reference to OECD benchmarks, the state spending on higher education in Poland was still well-below the OECD average. Poland has the lowest per-student outlays in the OECD countries for which data are available (OECD, 2004).

Third, in terms of the demographic developments, the size of the school-age population (2 – 24) started to decline from the beginning of the 1990s, and decreased by 13 percent from 1989 to 2004. This demographic low reached higher education in the year 2000, when, for the first time since 1989, the size of the higher education population age cohorts decreased compared to the previous year. In short, compared to the years before, the demographic trend for higher education was reversed. From 1999 onwards the size of the age cohorts relevant for higher education was stable and, from 2004 is decreasing substantially.

Fourth, the degree of rivalry between providers on the higher education market changed. Contrary to the beginning of the 1990s, the number of public higher education institutions grew from 98 in 1997 to 128 in 2004, due to the passage of the 1997 Vocational Higher Education Schools Act. Combined with the growth in the number of private providers, there were 427 higher education institutions in 2004, compared to 245 in 1997. Due to the extensive increase in number of higher education institutions and the demographic decline, the degree of rivalry on the higher education market increased substantially compared to the first period in the post-1989 transformation process.

In terms of the academic staff in the private sector during the period 1997-2004, the situation looked much better than before. First of all, the number of academics employed in the private sector increased significantly (from 3,500 to 13,000). In

2004, academic staff in the private sector constituted almost 13 percent of the total academic community, compared to 5 percent in 1997. Secondly, the distinctive feature of the private sector was a decrease in the number of professors who had concurrent teaching commitments in other higher education institutions, as their share decreased to about 50 percent, compared to more than 70 in 1997.

The new institutional arrangements and the changing external conditions obviously had an impact on the development of higher education system. This is where, once again, we turn to our hypotheses. The increased degree of rivalry and the slow-down in student demand made both public and private higher education institutions intensify their efforts to attract students. Both the privates (hypothesis 6) and the publics (hypothesis 7) decided to capture students from student segments which were not previously targeted by them, by offering more diversified study programs in terms of study fields, quality, type, mode of delivery and price.

Private institutions offered new study programs, covering also fields like engineering, medicine/health, information technology, and sciences. Many private providers developed a wide array of programs in various disciplines. The distribution of students across disciplines changed considerably over the period 1997-2004. While in 1997 the students in economics-related programs exceeded 55 percent, their share decreased to 36 percent in 2004. The most significant growth was in sciences, engineering and health-related subjects. In 2004, more than 100 private providers had received rights to confer master's degrees and a few were allowed to confer doctoral degrees. In 2004, more than 20 percent of students in the private institutions were attending master's degree courses. On this master's level, 56 courses were offered in economics-related subjects, 53 in humanities, 20 in pedagogy and teacher training, 15 in sciences and arts. Over the period, the share of students on postgraduate courses in the private sector increased by 17 percent. Many private higher education institutions evolved from single-discipline undergraduate institutions into multidisciplinary providers with a wide range of study programs in various disciplines. As a result, the private higher education sector managed to attract more full-time students. The full-time share increased from about 17 percent in 1998 to about 25 percent in 2004.

Despite the growth of students in the private sector, the average number of students per private institution decreased by almost 10 percent. In line with hypothesis 6, we may conclude that the private providers in many ways (but not in terms of receiving public funding) started to become like public institutions.

Turning to hypothesis 7, in the public sector, the 1997 higher education law made it possible for new public higher education institutions to emerge. This took place primarily in small and medium-sized non-academic locations. Other public providers had further developed their study offer, in order to compete with

private higher education institutions. In contrast to the previous period, the significant increase in study places was concentrated in full-time studies. The number of new entrants on full-time courses increased from about 125,000 students in 1997 to almost 200,000 students in 2004 (an increase of almost 65 percent), while the enrolment in part-time programs experienced only a modest increase (from 100,000 students in 1997 to 110,000 in 2004). So, we can find support for hypothesis 7, that sketched an increase in the full-time program capacity offered by public institutions and that predicted an increase in the part-time programs located in the 'private arms' of public providers. Public higher education providers attempted to challenge the position of private institutions by entering their market niches. They lowered the entry requirements for full-time students and decreased the level of tuition fees on popular study programs in order to attract new groups of academically less-qualified and less well-off-students that were previously served by the private sector. In addition, public institutions almost doubled their study offer and launched new study courses in disciplines previously reserved for other public institutions. For instance, universities developed courses in engineering, health, agriculture, and music-related subjects. On the other hand, technical universities established courses in humanities, pedagogy and health.

Among other things, hypothesis 9 stated that in a monopolistic competition situation, new private institutions that emerge on a mature and saturated market will often locate themselves in small, non-academic locations in order to attract new groups of students. This proved to be the case, and, in the period 1997-2004, private higher education institutions proliferated more evenly across the regions. Compared to 1997, private higher education providers in 2004 had been established in places without academic traditions, in economically less developed areas. When compared to the privates already established in the early 1990s, the new private providers offered much more diversified programmes. Students in economics and management fields accounted only for less than 25 percent of total enrolment, while those enrolled in programs in sciences, medicine and health amounted to 16 and 10 percent, respectively. Moreover, a number of engineering related subjects were developed by new private vocational higher education institutions.

Interestingly, however in accordance to our hypotheses, the level of tuition fees over the period 1997-2004 was stable, and fees even decreased towards the end of this period. Despite inflation, which on average amounted to 3-4 percent, and the rising salaries of academic staff, private higher education institutions were forced to lower tuition fees, copying the behaviour of public institutions. The latter also decreased tuition fees in order to enrol a critical mass of students on their part-time paid programs to combat the diminishing state subsidies and student demand.

Finally, hypothesis 8, that addresses the strategic responses of elite private and public higher education institutions on a mature and saturated market, was largely confirmed. The institutions that adopted a high-quality strategy during times of rapid market expansion did not change their 'premium positioning strategy' over time, and continued to base their competitive advantage on the high quality of their products. The private and public higher education institutions that from the very beginning pursued a 'high quality / high price' strategy continued their development over the second period in terms of study offer and prices. They acquired rights to confer doctoral degrees and in the case of Koźmiński Academy even gained rights to confer the habilitated doctor degree. In terms of academic staff, 'elite' private institutions had a faculty comparable in quality and quantity to the traditional public higher education sector. All 'elite' institutions charge high tuition fees to reinforce their 'elite' character and superior quality.

To conclude, we may say that our empirical analysis generally found support for our hypotheses about the coexistence of private and public higher education providers.

14.7 Reflections: the research findings in a Polish perspective

Most of the findings in this study fit the general picture we know from the literature on private higher education. However, hitherto only a few studies have conducted analyses of the strategies of individual private and public higher education institutions over time, responding to new institutional arrangements and changing external conditions. To fill this gap, this study hopes to provide some new theoretical and empirical insights into private as well as public higher education. In doing so, our study has shed some new light on the concept of marketization in higher education. We have extended the theoretical models that provide a much needed rationale for the implementation of market mechanisms into a higher education system, using the 'microeconomic theory of non-profit enterprises'. To build up our theoretical model, we have linked this non-profit theory to some strands from business science. This allows us to analyze the decisions taken by higher education institutions, in particular their strategies for price setting, courses offered, admission policies, etc.

Our empirical analysis confirmed that higher education institutions, being non-profit organizations, will start to act like for-profit organizations once the state subsidies or other non-tuition sources of revenue start to decline. Most private higher education institutions in Poland are vocationally and commercially oriented colleges. They try to succeed primarily in the marketplace rather than trying to boost the broader public good. The problem faced by private institutions is that if they try to provide services that include elements of a public good, such

as basic research, or high-cost study programs in low demand areas that are socially important, the institution will have to rely on donations or state subsidies, in the absence of which, the equilibrium market price for these services will not cover the average costs. In Poland, private higher education institutions are almost totally dependent on tuition fees. Therefore, as may be expected, their study offer is oriented towards low-cost study programs in high-demand disciplines. However, over recent years some changes can be observed, with an increased variety of private programs.

So when can private higher education institutions further the public good? Our empirical analysis of the behaviour of private providers confirmed the assumption made by Massy (2004) about the way higher education institutions discharge their public mission. He argues 'the distinction between non-profit and for-profit entities is most important where a degree of public subsidy is involved'. This means that the distinction decreases where public subsidies are low or organizations do not receive any state subsidies, and vanishes when the organization's financial sources come only from its sales to consumers – which in the case of Poland applies to the great majority of private higher education institutions.

Using industrial economics, we provided a systematic framework for interpreting how, *inter alia*, shifts in demand, economic conditions, and degree of rivalry affect the structure of the higher education market and the nature of competition in the higher education industry. The advantage of such a framework is that it allows one to interpret the effects of marketization policies in a setting that, apart from the policy environment, includes the broader market setting of individual higher education providers. This approach allows us to better understand the providers' reactions – or strategic responses – to the changes in their environment. In doing this, we hope to contribute also to finding ways for improving policy-making in higher education.

Altogether, our empirical research led to the following conclusions. First, we showed that our theoretical framework proved very useful in understanding developments in Polish higher education. To a large extent the reactions of public and private higher education providers in terms of their price (fee) setting, their decisions on the subjects taught, the modes of delivery, and their admission policies, may be well-understood in the light of our interpretation framework. When the institutional arrangements and external conditions change, this has an impact on the institutions' strategies. Secondly, the public policy stance towards private higher education, as identified by various researchers (Zumeta, 1992, 1996, 1997; Jones, 1992; Altbach, 1999, Levy, 1986a, 1986b), can also be found in Poland. Following the work of Jones (1992), when the state interest in private education is a result of the high cost of higher education, increased demand for education, and a tightly constrained public budget, then government allows

private providers to enter the market in order to expand higher education at the same cost to the state. On the other hand, when governments are stressing the potential of market mechanisms and allowing private entities to become recognized higher education institutions, then private institutions will have more options to situate themselves on the market. In this case, government will usually implement a national accreditation system and provide some financial subsidies for recognized and accredited private higher education institutions – such as competitive funds for research. It will also seek to gather and disseminate accurate information to students, narrow the ‘tuition gap’ between private and public providers, and provide state scholarships for students in the private sector (Levy, 2005).

During the first years after the collapse of the communist system, the Polish government’s main concern was to provide more higher education at no additional cost to the state. The new private sector was largely left to its own devices. This meant that, with a few exceptions, the private institutions performed a demand-absorbing function, implying a narrow study offer in high-demand fields, part-time programs, vocationally oriented curricula, a lack of involvement in graduate programs and research, and the employment of part-time academic staff. Despite some recent policy changes, e.g. making students in private institutions eligible for state support and merit-based scholarships, and providing more information to students, the main function of the private sector remained unchanged: to provide *more* higher education.

Therefore, we find that the Polish higher education system resembles to a large extent the first case described by Jones, using marketization policies as a means for meeting the increased student demand for higher education. The policy’s main concerns did not go any further. Marketization was not seen as a means to achieve other potential goals from the injection of competition elements into the system. We will now provide some more reflections on the Polish case, paying some attention the relevance of our findings for policy-making in Poland.

Higher education in Poland went through a major transformation process during the 1990s. After the “iron curtain” fell in 1989, government and academic staff insisted on a high degree of institutional autonomy, and new regulations were introduced, involving the devolution of authority from the central authorities to the institutional level and eliminating barriers to the entry of new providers to the higher education market. Over the period, the most developed system of private higher education in Europe was created, and within a few years the number of students in the private sector had jumped from zero to 30% of the country’s ever expanding student population.

The rapid massification of higher education and the emergence of more than 300 new private providers naturally gave rise to concerns about the quality of

Poland's higher education system, leading to a considerable criticism of private higher education. Has the system created healthy competition or was it plagued by many ethical and quality problems? Some observers of private higher education in Poland (e.g. Filip, 2001a, 2001b; Tadeusiewicz, 2003) emphasized that most of the private providers were not established according to proper educational and managerial concepts, but were introduced within the old higher education system, mostly for financial reasons. In addition, they often disseminated the popular beliefs about private higher education that in today's settings may not hold truth anymore. For instance, they argue that most of the academic faculty in the private sector is employed part-time, and does not have formal employee status but teaches on commission, and that the great majority is still simultaneously employed permanently in public higher education as the first job. Moreover, they do not acknowledge the diversification of study offer in the private sector, both in terms of disciplines and types of programs, such as bachelor and master and doctoral levels. To simplify their arguments, all private institutions are single discipline, vocationally oriented, with courses leading only to the bachelor degree in the most popular study lines, such as management, finance, political sciences, etc.

Our empirical study has shown, however, that private higher education in Poland has contributed to what has been called the 'Polish higher education miracle'. In times of state financial stringency and increasing demand for higher education, private higher education may provide greater access to higher education for low-income students. Moreover, increased competition from private providers has also forced public providers to 'open up', expand their study offer and increase their quality. We may argue that, without private higher education and the competition that emerged on the market with the private providers, Poland would not have experienced the five-fold increase in student enrolment, the increasing participation of students from lower socioeconomic backgrounds, and the diversification of study offer in the public sector. Without all this, public higher education institutions would have continued to operate in a collusive monopoly, remaining elitist institutions and enrolling only the best candidates, as was the case during the socialist period.

Our study has charted the rapid development of the private higher education sector over the 15 year period that has led to its coming of age, to today's 'state of maturity'. More than 100 institutions now have postgraduate courses leading to a master degree. They offer a wide range of study courses in many disciplines, employ increasing numbers of highly-ranked academics, and conduct basic and applied research. Private higher education institutions were the first to introduce the bachelor degree, which is in part an alignment of Polish higher education with the European system of higher education that has facilitated the development of professional education. In addition, thanks to private higher education, much has been accomplished to orient the Polish higher education

system to the human capital needs of a competitive, market-driven economy. In addition, new private higher education institutions are often established in locations away from large cities. In 2004, more than 100 private providers were situated outside the large metropolitan areas. Such colleges often became engines of economic development for these towns and provided higher education opportunities for those that were unable to afford to study in a large city.

Moreover, improvements in the management of private higher education institutions clearly limited their costs, especially the administrative and fixed costs (Kozmiński, 2004). Fixed costs per student are lower than for public institutions that offer similar study programs. Such savings and efficiency improvements allowed private providers to significantly develop their infrastructure and equipment.

Some voices have expressed concern about the massification process in higher education, the freedom of student choice, the rationales for implementing market-type elements into higher education and even the concept of competition between higher education providers. Some even expressed doubts about whether the private higher education sector should be a part of the higher education system in Poland (World Bank, 2004). These commentators take it as given that public and private higher education are different, having different goals and priorities. They assume that private higher education cannot by definition fulfil any public goals. In his article on private higher education, Filipek (2001a) stresses that private institutions were founded not to disseminate knowledge and provide higher education, but mostly to earn money for their founders.

These opinions make clear that there is still a lack of understanding of the phenomenon of private higher education. So far, research has paid little attention to the effects of policies affecting private higher education. This is also part of the motivation for our study. Such a study is all the more challenging if the development of private higher education takes place during a period of rapid economic transformation.

In the case of Poland – and in many other countries as well – the state treats private higher education differently from public higher education. The policy does not explicitly advocate the development of a private sector and does not establish an equal playing field for both sectors, because accredited and recognized private providers are deprived of state subsidies for their basic operations. They are not allowed to compete for many sources of state funding, so a true market for higher education still does not exist. Such a policy stance is based on the belief that the supply of ‘public goods’ (i.e. goods that create positive spill-overs to society, such as higher education), will suffer in a pure market economy. Those who oppose market forces in higher education argue that competition and deregulation will threaten the production of high quality

teaching and research. On the other hand, the advocates of a market-competitive approach argue that competition and student choice will weed out low quality higher education institutions and drive up enrolments. However, in this thesis we have argued that the development and achievements of the higher education providers depend to a large extent on the contextual factors, that is: the institutional conditions that come mostly in form of state regulation constraining, or otherwise influencing the responses of higher education providers. Governments affect market outcomes in many ways.

Based on the findings presented in this thesis, we claim that an 'administered' free market in higher education can work better than a system where the state lets the market rule in one part of the system and heavily controls another part. Objectives like equitable access, increasing enrolments, guarding the quality of teaching and raising efficiency can be achieved in a 'controlled market' approach, without sacrificing the public good. One of the outcomes of our study has been that, if the state decides to treat private higher education on an equal basis as the public sector (creating a 'level playing field' for both sectors), then the private sector will be able to fulfil a public mission. The private sector can contribute to enhancing academic quality, as well as increasing accessibility to higher education. We have shown that, in a proper constellation of institutional arrangements, private higher education providers can serve broader social goals in the same way as public providers do. This constellation can be established by means of a state higher education policy that promotes autonomy, transparency and a level playing field for public and private providers. If Polish private higher education is to make a greater contribution to the system, the government will have to look carefully at ways to combine regulation with even more market forces, implementing student-oriented mechanisms to guide the allocation of resources to providers, re-regulating tuition fee setting and safeguarding program quality and diversity.

Clearly, there is no 'right' or simple answer to the question of what the policy for private and public higher education should look like. There are many options, depending on principles, beliefs, and lessons from elsewhere. Scholarly analyses of the consequences of different policies will need to continue still. We will end our reflections on the outcomes of this study by giving a few policy recommendations.

First, one should treat similarly what is essentially similar. Many private institutions provide programs of sufficient or sometimes admirable academic quality. They provide for expanded access opportunities, especially for underserved social groups. They serve the labour market. They contribute to local development. For these reasons, the state should try to put in place a 'healthy degree of competition' between private and public providers, allowing them to co-exist, interact and compete.

Second, the future of private higher education in Poland depends in particular on the political decisions regarding the methods of funding. The question is, whether the competitive advantage of public institutions in terms of access to public funds and ability to offer free study places should remain. The availability of free full-time study places at public higher education institutions clearly benefits a selected, privileged group of students, mostly from the middle and upper classes. If all students pay for higher education this would improve efficiency and bring in resources that can be spent elsewhere, for instance on providing means-tested scholarships for the most needy students. Another option is to have public funds for higher education following the student, regardless of the institution where the student decides to study. If such funds could flow to (accredited, recognized) public and private providers, this would increase the capacity and diversity in higher education provision. This competition may also have a positive effect on program quality and the representation of students from the various socio-economic backgrounds.

Such a package of policies amounts to the market-competitive policy posture identified by Zumeta (1996). It implies that public institutions operate in an environment deliberately designed to be similar to that faced by the privates. The state introduces well-designed market elements into the higher education system, seeks to create a competitive, open market structure, and stresses the importance of individual student choice by allocating 'portable' student grants that enable students to 'vote with their feet'.

If the status quo in Polish higher education policy continues, some potential negative effects may appear. In times of decreasing student demand and diminishing state subsidies for public higher education institutions, the medium quality private providers may suffer the worst. In line with our 'pricing umbrella' argument, one may expect a further decline of tuition fees. Due to the continuing demographic decline, the number of higher education applicants has stopped growing. The medium quality private providers are competing directly with the majority of public institutions. They offer comparable services. Now that the public institutions will start to lower their fees, the privates will have to follow. They can only do so to a limited extent because of the absence of state subsidies and therefore will risk incurring deficits. Since the low-cost private providers target a different student group than the public providers, they experience less direct competition from the publics. The low-cost privates will not have to adjust their fees that much, because their costs are low already. The position of the (private and public) high-quality providers will also be relatively unaffected, because they also are targeting a different student segment.

Summarizing, this study has shown that the behaviour of private and public higher education institutions may be understood better if this behaviour is analysed using the approach advocated in this thesis. A better understanding of

the strategic responses of providers to changes in their policy and market environment can improve policy-making in higher education. Given the fact that the Polish higher education sector is going to face some important future challenges, there is a need to rethink the policy stance to – in particular – the private higher education sector. If this private sector is to keep playing its important role in the system, the government will have to adjust its current policy stance to the sector. Only in this way can the Polish higher education miracle really come true.

15 Nederlandstalige samenvatting

15.1 Inleiding

In 1989 werd Polen bevrijd van zijn communistische dwangbuis en werd een start gemaakt met het introduceren van marktwerking in vrijwel alle sectoren van de economie. Zo vond ook in het hoger onderwijs een ingrijpende hervorming plaats die kan worden getypeerd met de termen liberalisering, marktwerking en privatisering. De nieuwe Wet op het Hoger Onderwijs, in 1990 door het Poolse parlement aangenomen, legde de basis voor een groot aantal verstrekkende veranderingen in het Poolse hoger onderwijs.

Een van de meest in het oog springende en radicale veranderingen was de opkomst van een omvangrijke private sector in het hoger onderwijs; de grootste in Europa. Het aantal private aanbieders van hoger onderwijs groeide explosief: van 3 in het jaar 1990 tot meer dan 300 in het jaar 2005. Zowel de capaciteit als de deelname aan het hoger onderwijs groeiden daardoor enorm. Het aantal studenten aan private instellingen bedroeg in 2005 bijna 30%. Deze snelle massificatie van het hoger onderwijs in de jaren 90 leidde uiteraard tot vragen en zorgen over de kwaliteit van het onderwijs. Leidde de nieuwe private sector wel tot gezonde concurrentie en stelde het winststreven van private aanbieders de bestuurders ervan niet voor ethische dilemma's? Sommigen (o.a. Filip, 2001a, 2001b; Tadeusiewicz, 2003) beweerden zelfs dat de meeste private instellingen niet waren gebaseerd op gezonde onderwijskundige en bedrijfsmatige principes, maar enkel en alleen waren opgericht vanuit korte termijn financiële motieven. Andere critici spraken hun zorg uit over de massificatie en ongebreidelde keuzevrijheid in het hoger onderwijs, en betwijfelden de noodzaak van marktwerking en concurrentie in een maatschappelijk zo belangrijke sector als het hoger onderwijs. Weer anderen betwijfelden zelfs of de diensten aangeboden in de private sector wel als hoger onderwijs mochten worden aangemerkt (World Bank, 2004).

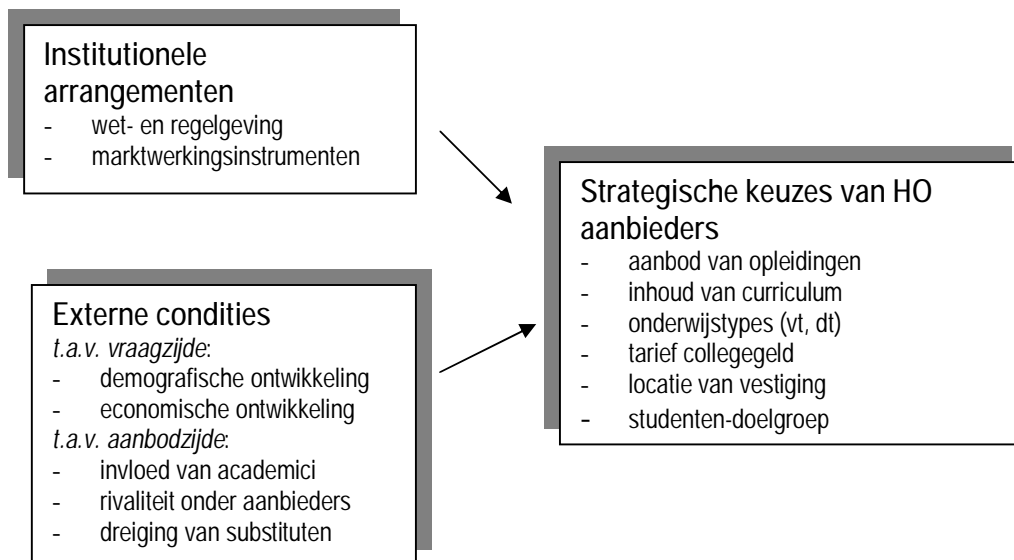
De snelle omslag naar marktwerking en private aanbieders in het hoger onderwijs riep vele vragen op die tot op heden zelden op een theoretisch verantwoorde wijze zijn benaderd. Dit proefschrift wil daarom, uitgaand van de economische theorie, trachten het gedrag van de publieke en – vooral – private universiteiten beter te begrijpen. Er is duidelijk behoefte aan een exploratieve studie naar de relaties tussen strategie en gedrag van de onderwijsaanbieders enerzijds en de introductie van marktwerking in het hoger onderwijs anderzijds.

15.2 Theoretische onderbouwing

Een van de doelstellingen van dit proefschrift is na te gaan of een theoretische aanpak die is gebaseerd op elementen vanuit verschillende theorieën ons kan helpen bij het interpreteren en begrijpen van het gedrag van private en publieke onderwijsaanbieders. De theoretische onderbouwing van onze exploratieve studie is te vinden in de institutionele economie (North, 1996) en de industriële economie (Scherer & Ross, 1990, Dill, 1997, 2003). Onze focus ligt op de interactie tussen institutionele arrangementen – met name die elementen daarbinnen die een grotere marktwerking induceren – en de gedragingen van hoger onderwijsinstellingen. Bij het onderzoeken van de interacties tussen instituties en kenmerken van het gedrag van hoger onderwijsaanbieders, nemen we expliciet ook de externe omgeving en de veranderingen daarin mee. De externe condities zijn immers eveneens van invloed op het gedrag van hoger onderwijsinstellingen. Net als institutionele arrangementen, leggen de externe condities beperkingen op aan, c.q. bieden ruimte aan, de keuzes die onderwijsaanbieders kunnen maken. De institutionele arrangementen (of instituties) omvatten zaken als de wet- en regelgevingsystemen, de inrichting van het openbaar bestuur, andere organisatiegegevenheden en bestuurlijke en administratieve routines en tradities die menselijke (en organisatie-) gedragingen beïnvloeden. Wat betreft de institutionele arrangementen in het Poolse hoger onderwijs besteden we vooral aandacht aan het overheidsbeleid dat erop is gericht de marktwerking (concurrentie, autonomie, keuzevrijheid) te vergroten. Wat betreft de externe condities richten we ons op het vijf krachten (*'five competitive forces'*) model dat door Michael Porter is opgesteld om de competitieve krachten in een sector te beschrijven (Porter, 1980) en de bedrijfsstrategie mee te kunnen analyseren.

Het conceptuele model dat we gebruiken voor onze analyse van de samenhang tussen instituties, externe condities en keuzes van onderwijsaanbieders is weergegeven in figuur A.

Figuur A: Belangrijkste variabelen en hun samenhang



We onderkennen dat er wederkerige relaties zijn tussen het institutionele kader en de externe condities en dat de strategische keuzes zowel de externe als institutionele condities (kunnen) beïnvloeden. In dit proefschrift beperkt het onderwerp van studie zich echter tot de door de beide pijlen aangegeven relaties. Zo beschouwen we het blok linksboven, de institutionele arrangementen, als een onafhankelijke variabele. Daarbij beperken we ons verder tot de regelgeving en het marktwerkingsbeleid ten aanzien van hoger onderwijs. Instrumenten van marktwerkingsbeleid grijpen aan op diverse terreinen. We onderscheiden vijf dimensies van marktwerkingsbeleid: (1) de toetredingsbarrières voor nieuwkomers op de hoger onderwijsmarkt, (2) regelgeving die grenzen stelt aan de autonomie van aanbieders, (3) bekostigingsvoorwaarden bij het aanspraak maken op overheidssubsidies, (4) de beschikbaarheid van informatie over prijzen en kwaliteit van onderwijsaanbod, en (5) de ruimte voor studenten bij zaken als de keuze van de onderwijsinstelling, de samenstelling van het curriculum en de condities bij het aanspraak maken op studiefinanciering.

Het blok linksonder bevat de tweede set van onafhankelijke variabelen, de externe condities. In navolging van auteurs als Scherer & Ross (1990), Dill (1997, 2003), Collis (1997) en Porter (1998), veronderstellen we dat de keuzeruimte van onderwijsaanbieders wordt bepaald door vijf competitieve krachten. Van de vijf zijn drie gebaseerd op het werk van Porter: dreiging van substituten, onderhandelingspositie van aanbieders (hier: invloed van academici) en rivaliteit onder aanbieders. De factor die Porter de 'onderhandelingspositie van consumenten' noemt is door ons opgenomen onder de vraagfactoren en

verbijzonderd via de variabelen 'economische ontwikkeling' en 'demografische ontwikkeling'. De vijfde kracht, 'toetreding van nieuwe aanbieders', is door ons onder de instituties geschaard omdat ze direct onder invloed staat van het overheidsbeleid.

De afhankelijke variabele – de rechter box in figuur A – is in deze studie nader verbijzonderd tot een aantal belangrijke keuzes die met programma, prijs en doelgroep van de onderwijsaanbieders hebben te maken. We veronderstellen dat deze keuzes sterk zijn bepaald door de instituties en externe omgeving. Dit is onderzocht voor zowel een representatieve steekproef van private en publieke hoger onderwijsaanbieders als voor deze populaties als geheel. Om de strategische keuzes nog beter te kunnen duiden maken we, behalve van de industriële economie, de institutionele economie en het vijf krachten model, tevens gebruik van de klassieke micro economie van de prijsvorming op markten met monopolistische concurrentie en de micro economie van non-profit organisaties (Massy, 1996). De theorie van de monopolistische concurrentie helpt ons bij het analyseren van de relaties tussen instrumenten van marktwerking enerzijds en strategische keuzes van private en publieke onderwijsaanbieders anderzijds. Massy (1996) heeft in zijn model van de non-profit organisatie laten zien dat de strategische keuzes van hoger onderwijsaanbieders wat betreft de vaststelling van de capaciteit van de instelling, de diversificatie van het opleidingsaanbod en de tariefstelling, niet op basis van de klassieke micro-economische beslisregel 'marginale kosten = marginale baten' zijn af te leiden, maar uit een aangepaste regel, die naast de financiële baten tevens de bijdrage aan ideële doelen in aanmerking neemt. Uit de theorie van de non-profit organisatie kunnen we afleiden dat hoger onderwijsinstellingen de beschikking dienen te hebben over voldoende financiële middelen c.q. reserves om hun ideële doelstellingen (hun 'missie') met de meer bedrijfseconomische doelstellingen (de markt) te kunnen combineren. Bij dit balanceren van 'missie en markt' spelen inkomsten niet verkregen uit collegegelden een belangrijke rol. Als deze niet-collegegeldinkomsten tekortschieten (of helemaal wegvallen) beschikken de missiegeoriënteerde hoger onderwijsinstellingen geen vrije ruimte meer om hun missiegeoriënteerde programma's te kunnen blijven aanbieden. Met andere woorden, als bijvoorbeeld de overheidssubsidies wegvallen, zullen de mogelijkheden om de (in bedrijfseconomische zin) verlieslijdende opleidingen te ondersteunen met interne kruissubsidies verminderen. Hoe minder de overheidsinkomsten, des te meer gedragen hoger onderwijsaanbieders zich als for-profitinstellingen die (moeten) reageren op de wetten van vraag en aanbod.

Al met al is het conceptuele model dat we gebruiken voor onze empirische analyses sterk eclecticisch van aard. Het is in de empirische analyses gebruikt om de differentiatiestrategieën van de Poolse hoger onderwijsinstellingen vanaf het jaar 1989 te interpreteren. Ons baserend op de herinterpretatie van de drie generieke concurrentiestrategieën van Porter (algemeen kosten leiderschap,

focus, en differentiatie) door Dawes & Sharp (1996), komen we tot vijf typen keuzes voor de differentiatiestrategieën.

15.3 Hypotheses

De verschillende typen strategische keuzes waaruit op grond van ons theoretisch raamwerk hoger onderwijsinstellingen kunnen kiezen hebben we terug laten komen in de negen hypotheses die we voorafgaand aan het empirisch onderzoek hebben opgesteld. De hypotheses zijn geïnspireerd door de theorie en vooral gekozen om ons empirisch onderzoek nader te stroomlijnen. Ze zijn op te vatten als uitspraken ten aanzien van wat we in de empirie verwachten aan te treffen en moeten niet worden gezien als verbanden die met behulp van statistische technieken worden getoetst.

De hypotheses leggen een verband tussen de institutionele arrangementen, externe condities en strategische keuzes van hoger onderwijsaanbieders. De hypotheses zijn uitspraken ten aanzien van de strategieën die de publieke en private instellingen kiezen onder een gegeven set van omstandigheden. We onderscheiden twee perioden: 1990-1997 en 1997-2004. De eerste periode, volgend op het jaar 1989 waarin belangrijke veranderingen in de Poolse Wet op het Hoger Onderwijs werden doorgevoerd, kan worden gekenschetst als een periode van een snelle bevolkingsgroei die gepaard ging met een sterke toename van de vraag naar hoger onderwijs, een relatief lage rivaliteit tussen onderwijsaanbieders, een grote mate van autonomie voor de aanbieders, relatief onderontwikkelde publieke verantwoordingsmechanismen voor onderwijsaanbieders en lage toetredingsbarrières voor nieuwe (private) aanbieders van hoger onderwijs. Gedurende deze periode waren er geen overheidssubsidies beschikbaar voor private aanbieders of hun studenten.

De tweede onderzoeksperiode is er een waarin de wetgeving (de institutionele arrangementen) als het ware meer in de pas ging lopen met de snelle veranderingen in de economie en de hoger onderwijssector. Dit uitte zich in meer aandacht voor publieke verantwoording door de onderwijsinstellingen (informatievoorziening, aandacht voor kwaliteit) en het gegeven dat studenten aan private instellingen in aanmerking kwamen voor studiefinanciering in de vorm van gesubsidieerde leningen en inkomens- dan wel talent-gebonden studiebeurzen. In termen van onze tweede onafhankelijke variabele, de externe condities, merken we op dat in deze tweede periode sprake was van een afvlakking van de demografische ontwikkeling. Deze kreeg geleidelijk steeds meer impact op het hoger onderwijs en droeg mede bij aan een verzadiging van de hoger onderwijsmarkt. Net als in de eerste periode was er in de tweede periode sprake van een afname van de subsidies aan publieke hoger onderwijsinstellingen.

De hypothesen zijn gebaseerd op de economische wetten van vraag en aanbod en de micro-economische theorie van de non-profitorganisatie en spreken de verwachting uit dat non-profitorganisaties zich zullen gaan gedragen als for-profit organisaties zodra de niet-collegegeld inkomsten gaan afnemen. De eerste en de tweede hypothese stellen dat, wanneer er een grote vraag is naar hoger onderwijs en lage toetredingsbarrières, er zich nieuwe aanbieders zullen aandienen op de markt voor hoger onderwijs. De derde hypothese voorspelt dat private hoger onderwijsaanbieders die volledig afhankelijk zijn van collegegeldinkomsten van studenten vooral populaire en goedkope opleidingen zullen aanbieden om hun minimale instroom van studenten te behalen. De meeste van dergelijke aanbieders zijn vraagabsorberende instellingen die vooral beroepsgerichte opleidingen in management en andere sociale wetenschappen aanbieden. Deze instellingen passen geen strenge selectie toe bij de toelating van studenten; ze zijn niet-selectief of gemiddeld selectief. De publieke hoger onderwijsinstellingen echter bezitten ten opzichte van de private aanbieders een aanzienlijk voordeel vanwege het feit dat ze studieplaatsen kunnen aanbieden waarvoor studenten (d.i. de toegelaten *voltijdse* studenten) geen collegegeld verschuldigd zijn. Hypothese 4 stelt dat ze hun traditionele studentenmarkt zullen blijven bedienen en zich zullen richten op studenten uit de middelbare en hogere inkomensklassen. Dit zijn veelal studenten uit stedelijke gebieden waarvan de ouders een hogere of middelbare opleiding hebben genoten.

Volgens de theorie van de non-profitorganisaties, dienen publiek bekostigde instellingen die met dalende subsidies worden geconfronteerd alternatieve bronnen van inkomsten te vinden om hun missiegedreven programma's te kunnen blijven aanbieden. Alleen met behulp van dergelijke discretionaire inkomsten ('kruissubsidies') kunnen deze programma's waar slechts weinig vraag naar is blijven voortbestaan. Om deze reden zullen publieke instellingen op zoek gaan naar additionele middelen die ze vinden in de part-time programma's waarvoor een kostendekkend collegegeld mag worden gevraagd. Deze strategische keuze is het onderwerp van de tweede helft van hypothese 4. De vijfde hypothese heeft betrekking op de situatie van een groeiende hoger onderwijsmarkt en stelt dat slechts een klein deel van de private aanbieders een strategie kiest waarin ze kwalitatief hoogwaardige programma's aanbieden. Deze groep selectieve aanbieders baseert zijn differentiatie strategie daarom op hoge kwaliteit.

De tweede groep hypothesen adresseert de tweede onderzoeksperiode in het transformatieproces van het Poolse hoger onderwijs. In deze periode (1997-2004) is er sprake van een afname van de bevolkingsgroei en verzadiging van de onderwijsmarkt. De rivaliteit onder de onderwijsaanbieders is groot. In deze periode verwachten we dat de publieke en private hoger onderwijsinstellingen nieuwe groepen studenten zullen proberen aan te boren om zich aan de externe

omstandigheden aan te passen. De publieke aanbieders zullen de private uitdagen door zich op marktsegmenten te begeven die eerder door private werden bediend. Ze zullen de inschrijvingen in de voltijdse programma's proberen te verhogen en inschrijfbeperkingen wegnemen (hypothese 7). De private instellingen zullen op hun beurt de publieke uitdagen door meer academische programma's aan te bieden naast de beroepsgerichte opleidingen. Ze zullen hun onderwijsaanbod vergroten en meer divers maken (hypothese 6). Hypothese 8 stelt dat de private en publieke aanbieders die er een selectief toelatingsbeleid op na houden hun strategie niet zullen wijzigen. Ze zullen zich blijven positioneren door hun selectieve programma's van hoge kwaliteit.

In de laatste hypothese (nummer 9) beargumenteren we dat de meeste nieuwe private aanbieders, om zich te onderscheiden van andere instellingen, zullen trachten unieke programma's aan te bieden die niet eerder door anderen zijn aangeboden. Aldus proberen zij een comparatief voordeel te behalen.

15.4 Empirische resultaten

In de eerste onderzoeksperiode (1990-1997) hebben we te maken met aangepaste instituties en een omvangrijke private sector in het Poolse hoger onderwijs. Hoewel er sprake is van meer marktwerking is er echter nog geen echte *markt* in het hoger onderwijs. Van de vijf condities voor marktwerking die we onderscheiden, zijn er twee (institutionele autonomie en toetredingsbarrières) die in redelijke mate zijn vervuld, maar dat is voor de andere drie nog vrijwel niet het geval. De erkende private hoger onderwijsinstellingen komen niet in aanmerking voor overheidssubsidies, hun studenten zijn uitgesloten van studiefinanciering, en regelgeving die een betrouwbaar beeld van de inhoud en kwaliteit van het onderwijsaanbod moet garanderen bestaat vrijwel niet. In het begin van de jaren 90 lag de prioriteit van de beleidsmakers bij het vergroten van de autonomie van de aanbieders en het vergroten van de capaciteit van het hoger onderwijssysteem. Dit om aan een sterk stijgende vraag naar hoger onderwijs tegemoet te komen en tegelijk geen extra overheidsuitgaven voor hoger onderwijs te veroorzaken.

Wat betreft de externe condities voor het Poolse hoger onderwijs in de periode 1990-1997 wijzen we op de ingrijpende veranderingen die de Poolse economie en samenleving ondergaan. In het begin van deze periode was er een sterke economische teruggang, bedrijven werden geprivatiseerd, economische hervormingen werden doorgevoerd en toetredingsbelemmeringen voor alle typen private bedrijven werden opgeheven in vrijwel alle sectoren van de economie. Dit leidde tot hervormingen op de arbeidsmarkt en een introductie van concurrentie in de economie. Burgers zagen een hogere opleiding als een belangrijke determinant van hun kansen op de arbeidsmarkt. Ter illustratie: de gemiddelde werkloosheid voor individuen zonder afgesloten voortgezette

opleiding bedroeg 40%, terwijl dit percentage voor gediplomeerden van universiteiten lager was dan 5%. De gemiddelde salarissen van hoger opgeleiden waren het hoogste van alle opleidingscategorieën.

De toename van de vraag naar hoger onderwijs begin jaren 90 werd gevolgd door een sterke toename van het aanbod van hoger onderwijs. De deelname aan hoger onderwijs verdrievoudigde, van 428.200 studenten in het jaar 1991 tot 1.086.000 studenten in 1997. Voltijdse inschrijvingen namen toe van 326.600 studenten in 1991 tot 534.800 in 1997. Deeltijd inschrijvingen namen nog sneller toe: van 101.600 in 1991 tot 551.600 in 1997. Terwijl in 1989 slechts 8% van een cohort leerlingen uit het secundair onderwijs zich inschreef voor een hogere opleiding is in het academisch jaar 1997/98 dit percentage opgelopen tot 22%.

Geconcludeerd kan worden dat met betrekking tot het gedrag van private hoger onderwijsinstellingen in de periode 1990-1997 de empirie in overeenstemming is met de hypothesen. De snelle uitbreiding van het private hoger onderwijs begon in 1991, het jaar waarin het voor deze instellingen voor het eerst was toegestaan zich op de markt te begeven. De private instellingen vingen een groot deel van de toegenomen vraag naar hoger onderwijs op (hypothesen 1 en 2). In het academisch jaar 1992/93 was 0,9% van alle studenten ingeschreven aan private instellingen. In 1998 was dit percentage opgelopen tot bijna 19%. De meeste private aanbieders hanteerden een agressieve groeistrategie. Wat betreft hypothese 3 kunnen we vaststellen dat de groei in het private aanbod zich vooral voordeed in de deeltijdopleidingen; 80% van de private studenten studeerde medio jaren 90 in deeltijd. In verhouding gingen in de jaren 1990-1997 steeds meer studenten in deeltijd studeren. De meeste nieuwe private aanbieders hanteerden een strategie gebaseerd op locatie en lage kosten (de vraagabsorberende instellingen). Daarnaast hanteerden slechts enkele een focusstrategie, gericht op programma's van hoge kwaliteit. De eerstgenoemde groep richtte zich voornamelijk op studenten uit de lagere sociaaleconomische klassen met goedkope programma's in populaire gebieden als economie en management.

De gegevens over de samenstelling van de studenteninstroom die in het kader van deze studie zijn verzameld bevestigen het beeld dat ook al uit eerdere studies naar boven was gekomen. Er is sprake van een paradox rondom de bekostiging uit publieke middelen. Terwijl studenten vanuit de hogere en middelhoge sociaaleconomische klassen genieten van gratis hoger onderwijs in publieke instellingen, vinden we de studenten uit de lagere inkomensgroepen veelal terug in de private instellingen, waar zij een kostendekkend collegegeld betalen.

Gedurende de periode 1990-1997 bleven de publieke aanbieders zich richten op de studenten uit de traditionele doelgroepen; iets wat ook vóór deze periode al het geval was. Dit is in overeenstemming met hypothese 4, die stelt dat in een

opkomende markt met sterk toenemende vraag en een lage mate van rivaliteit onder de aanbieders, de publieke instellingen minder genegen zullen zijn hun capaciteit te verhogen in de voltijdse programma's (zonder collegegeld) en de programma's gericht op studenten uit de lagere sociaaleconomische klassen. Ze zullen daarentegen eerder genegen zijn hun aanbod in de deeltijdprogramma's te verhogen. Dit zijn programma's waar een kostendekkend tarief voor moet worden betaald maar waar de toegangseisen minder hoog liggen.

De tweede onderzoeksperiode (1997-2004) kan worden gekenschetst als een periode waarin de wet- en regelgeving werd aangepast aan de nieuw ontstane situatie met een groot aantal private aanbieders. In deze periode nam het aantal ingeschreven studenten verder toe, van 1.091.000 in het academisch jaar 1997/98 tot 1.926.100 in het academisch jaar 2004/05. In 2004 studeerde 30% van alle ingeschreven studenten aan private instellingen, tegenover 21% in 1997. In deze tweede periode nam de publieke waardering voor het private hoger onderwijs toe. Vanaf het jaar 2001 kwamen voltijdse studenten aan private instellingen in aanmerking voor inkomens- en talentafhankelijke studiefinanciering. In het jaar 2004 werd dit uitgebreid tot de deeltijdstudenten aan private instellingen, maar het effect van deze maatregel valt buiten het bestek van deze studie. Vanaf het jaar 2001 nam het aandeel voltijdse studenten aan private instellingen gestaag toe, om in 2004 zijn piek te bereiken: een percentage van 25%.

In de tweede onderzoeksperiode verschoof de aandacht van de beleidsmakers langzamerhand naar de transparantie van het systeem en kwam het kwaliteitsvraagstuk in beeld. In 2001 werd de Staats Accrediterings Commissie opgericht met als opdracht de kwaliteit van het onderwijs in alle hoger onderwijsinstellingen systematisch te evalueren en de resultaten daarvan richting studenten en academici te verspreiden. De informatie dient studenten in staat te stellen beter onderbouwde keuzes te maken ten aanzien van instelling (publiek dan wel privaat) en opleiding. Een van de meest vergaande elementen van marktwerkingsbeleid werd echter nog niet ingevoerd: erkende en geaccrediteerde private instellingen ontvangen geen overheidssubsidies. De publieke instellingen behielden dus hun comparatieve voordeel ten opzichte van de private instellingen; ze konden gratis (voltijds) hoger onderwijs aan blijven bieden terwijl aan de private instellingen de studenten kostendekkende tarieven bleven betalen.

In termen van de externe condities voor hoger onderwijsinstellingen veranderde er eveneens het nodige. Allereerst nam de bevolkingsgroei af. De omvang van de bevolking in de leeftijd van 2 tot 24 jaar begon te dalen vanaf begin jaren 90: de daling was 13% van 1989 tot 2004. Deze demografische dip bereikte het hoger onderwijs vanaf het jaar 2000, waarin voor de eerste keer de omvang van het cohort afnam dat zich voor hoger onderwijs had gekwalificeerd. Ten tweede nam ook de rivaliteit tussen aanbieders op de hoger onderwijsmarkt toe. In tegenstelling tot de situatie begin jaren 90, nam het aantal publieke aanbieders

toe: van 98 in 1997 tot 128 in 2004. De oorzaak was de Wet op het Beroepsgerichte Hoger Onderwijs die in 1997 van kracht werd. Gecombineerd met de groei in het aantal private aanbieders betekende dit dat er 427 hoger onderwijsinstellingen waren in het jaar 2004, tegenover 245 in 1997. Door de groei van het aantal aanbieders en de afname in de bevolking nam de mate van rivaliteit op de hoger onderwijsmarkt substantieel toe vergeleken met de eerste onderzoeksperiode.

De nieuwe institutionele arrangementen en de veranderende externe condities hadden uiteraard hun weerslag op het hoger onderwijssysteem. De mogelijke effecten zijn in hypothesen verwoord. De toenemende rivaliteit en de afname van de vraag naar hoger onderwijs betekenden dat zowel de publieke als de private aanbieders hun inspanningen gaan vergroten om studenten aan te trekken. Zowel de private (hypothese 6) als de publieke aanbieders (hypothese 7) besloten om studenten weg te lokken uit segmenten die nog niet eerder door hen werden bediend. Ze boden een meer gedifferentieerd opleidingsaanbod in termen van disciplines, kwaliteit, aanbodsvorm, type en prijs. Private instellingen boden nieuwe opleidingen in de techniek, gezondheidszorg, informatietechnologie en natuurwetenschappen. De samenstelling van de studentenaantallen gedurende de periode 1997-2004 verschoof aanzienlijk. Terwijl in 1997 de studenten in de economiegerelateerde opleidingen meer dan 55% van het totaal uitmaakten, daalde hun aandeel naar 36% in 2004. De meest in het oog springende groei deed zich voor bij de opleidingen in de techniek, natuurwetenschappen en de gezondheidszorg. In 2004 hadden meer dan 100 private instellingen het recht gekregen om master's graden te verstrekken. Enkele kregen zelfs de mogelijkheid om het doctoraat te verstrekken.

Ons richtend op hypothese 7, stellen we vast dat het vanaf 1997 mogelijk werd voor lokale overheden om nieuwe publieke hoger onderwijsinstellingen te starten. Dit vond voornamelijk plaats in de relatief kleine en middelgrote steden – de locaties zonder academisch verleden. Andere publieke aanbieders breidden hun opleidingsaanbod uit om met de private instellingen te kunnen concurreren. In tegenstelling tot de vorige onderzoeksperiode deed deze uitbreiding zich voornamelijk voor in de voltijdse opleidingen. Het aantal nieuw instromende studenten in voltijdse opleidingen steeg van 125.000 in 1997 tot ongeveer 200.000 in het jaar 2004 – een stijging van ongeveer 65%. Dit terwijl de inschrijvingen in de deeltijdprogramma's slechts een bescheiden stijging lieten zien: van 100.000 studenten in 1997 tot 110.000 in 2004. We kunnen derhalve stellen dat hypothese 7, die een stijging in de voltijdse programmacapaciteit van publieke aanbieders en een uitbreiding van de deeltijdprogramma's in hun private onderdelen deed verwachten, grotendeels door de empirie wordt ondersteund.

Hypothese 8, waarin een verwachting is geformuleerd over de strategische keuzes van de selectieve private en publieke onderwijsinstellingen in een

verzadigde markt, vindt eveneens ondersteuning in de empirie. De instellingen waar het hier om gaat kiezen een strategie gericht op hoge kwaliteit tijdens een periode van groeiende afzetmarkten. Van deze strategie wijken ze niet af op het moment dat de markt een krimp laat zien. Ze blijven zich onderscheiden via hun hoogwaardige kwaliteit en halen hun comparatief voordeel uit deze positionering. Hypothese 9 stelt dat in een situatie van monopolistische concurrentie de nieuwe private aanbieders die zich aandienen op een verzadigde en krimpende markt zich vooral zullen vestigen in niet-academische locaties met relatief minder omvangrijke bevolkingsconcentraties. Dit doen ze om nieuwe klanten aan te trekken. Ook hier kunnen we vaststellen dat in de periode 1997-2004 de private instellingen zich steeds meer gelijkmatig over de regio's verspreiden. Vergeleken met het jaar 1997 hadden zich op het eind van de onderzoeksperiode private aanbieders gevestigd in locaties zonder academische traditie en locaties die in economische zin minder sterk op de kaart stonden. Vergeleken met de al bestaande private instellingen bieden deze nieuwe private instellingen een meer divers aanbod aan opleidingen.

15.5 Reflecties

Onze empirische analyses geven ondersteuning aan de uitspraak dat hoger onderwijsinstellingen, zijnde non-profitorganisaties, zich zullen gedragen als for-profitorganisaties zodra de staat zijn subsidiëring vermindert of wanneer andere vrij beschikbare middelen beginnen af te nemen. De meeste private hoger onderwijsinstellingen in Polen zijn beroepgerichte en op winst gerichte instellingen. Ze zijn er vooral op gericht om succes te boeken op de hoger onderwijsmarkt en niet zozeer om een publiek belang na te streven. Als private instellingen diensten willen voortbrengen met een publiek goed karakter, zoals fundamenteel onderzoek of dure opleidingen op terreinen met weinig vraag van de kant van studenten, dient de instelling te kunnen beschikken over donaties of bijdragen van de overheid. Als dat laatste niet het geval is zal de prijs die de markt voor dergelijke activiteiten over heeft niet opwegen tegen de gemiddelde kosten. In Polen zijn de private hoger onderwijsinstellingen vrijwel geheel afhankelijk van de inkomsten uit collegegelden. Daarom mag worden verwacht dat hun aanbod zich vooral zal concentreren op de relatief goedkope opleidingen in de populaire disciplines. Toch is in recente jaren een kentering te bespeuren en bieden private aanbieders een meer gevarieerd aanbod aan.

Ons empirisch onderzoek leidt tot de volgende conclusies. Allereerst kunnen we vaststellen dat het theoretisch raamwerk, gebaseerd op een divers scala van theorieën, bewezen heeft een erg nuttig hulpmiddel te zijn bij het interpreteren van de ontwikkelingen in het Poolse hoger onderwijs. De keuzes van publieke en private aanbieders wat betreft de vaststelling van collegegelden, de aangeboden opleidingen, de opleidingscapaciteit, de vorm van het aanbod, en de

toelatingscriteria kunnen goed worden verklaard in het licht van dit raamwerk. Gebleken is dat als institutionele arrangementen en externe condities veranderen, dit gevolgen heeft voor de strategische keuzes van de hoger onderwijsinstellingen. De verschillende houdingen die beleidsmakers innemen ten aanzien van de private sector, en die zijn onderscheiden door auteurs als Zumeta (1992, 1996, 1997), Jones (1992), Altbach (1999) en Levy (1986a, 1986b), kunnen eveneens worden teruggevonden in Polen. In aansluiting op het werk van Jones (1992), kunnen we stellen dat, wanneer de aandacht van de staat voor de private sector het resultaat is van de hoge kosten van hoger onderwijs, de toenemende vraag naar hoger onderwijs en de wens om het overheidsbudget te beheersen, de overheid private aanbieders zal toestaan op de markt. Op deze manier kan het hoger onderwijs groeien zonder al te veel extra beslag op publieke middelen. Wanneer echter de overheid verwacht dat marktwerking een verrijking van het hoger onderwijs zal betekenen, zal zij private instellingen meer ruimte geven om zich op een gelijk speelveld met publieke aanbieders te begeven. In dit geval zal de overheid een nationaal accreditatie-orgaan in het leven roepen en financiële ondersteuning geven aan erkende en geaccrediteerde private instellingen en hun studenten. De overheid zal eveneens meer aandacht schenken aan het ter beschikking stellen van betrouwbare informatie voor studenten en maatregelen nemen om een eventueel verschil in het collegegeldtarief tussen private en publieke instellingen weg te nemen (Levy, 2005).

Gedurende de eerste jaren volgend op de omwenteling van 1989 was het doel van de Poolse overheid vooral het vergroten van de capaciteit van het systeem zonder de inzet van extra publieke middelen. De staat wenste vrijwel geen bemoeienis met de nieuwe private sector. Dit betekende dat de private sector een rol van vraagabsorberende sector vervulde en zich ging toeleggen op een relatief beperkt aantal opleidingen – in deeltijd en in populaire studierichtingen veelal met het karakter van beroepsopleidingen. De private instellingen boden geen voortgezette (Master's, PhD) opleidingen en bedreven geen wetenschappelijk onderzoek. Het personeel bestond vooral uit part-time docenten. Hoewel er recent enkele veranderingen in de houding van de Poolse overheid ten aanzien van de private sector zijn te bespeuren, is het niettemin toch zo dat in de ogen van de overheid de belangrijkste functie van het private hoger onderwijs dezelfde blijft: het leveren van *meer* hoger onderwijs. Marktwerkingsbeleid wordt gezien als een middel om aan de gestegen vraag naar hoger onderwijs tegemoet te komen. De beleidsopvatting van de Poolse overheid evolueerde niet naar een houding waarin marktwerking werd gezien als een middel om andere potentiële doelen en (wellicht) heilzame effecten van concurrentie te bewerkstelligen.

Ondanks deze houding van de Poolse overheid heeft onze empirische studie laten zien dat het private hoger onderwijs in Polen met recht door sommigen is omschreven als het Poolse 'hoger onderwijsmirakel'. In tijden van budgettaire

krapte en een toenemende vraag naar hoger onderwijs heeft de private sector gezorgd voor een grotere toegankelijkheid van hoger onderwijs voor (vooral) studenten uit de lagere inkomensgroepen. Bovendien heeft de toegenomen concurrentie van de private instellingen de publieke instellingen gedwongen zich meer 'open te stellen', een meer divers aanbod te leveren, en meer klantgericht te gaan werken.

In het geval van Polen – en tevens in andere landen – behandelt de staat het private hoger onderwijs op een andere wijze dan de publieke sector. Het beleid streeft niet expliciet naar de ontwikkeling van een private sector en de bewerkstelling van een gelijk speelveld voor beide sectoren. Zo krijgen erkende, geaccrediteerde private aanbieders geen toegang tot publieke middelen. Ze kunnen niet meedingen naar diverse staatssubsidies. Een echte markt bestaat daarom niet in het Poolse hoger onderwijs. Een dergelijke beleidsopvatting is gebaseerd op de aanname dat het voorzien in diensten met een *publiek goed* karakter (dat wil zeggen, goederen met positieve externe effecten voor de samenleving) in een pure markt in de verdrukking zal komen. Op basis van de uitkomsten van ons empirisch onderzoek beweren we echter dat een gereguleerde markt in het hoger onderwijs beter is dan een systeem waarin de staat de markt zijn gang laat gaan in één deel van de sector en een strak regelsysteem hanteert in het andere deel. De Poolse case laat zien dat doelen als gelijke deelnamekansen, grotere capaciteit, betrouwbare kwaliteit en verantwoord middelengebruik in een gereguleerde markt kunnen worden gerealiseerd zonder dat de publieke goederenvoorziening in het geding komt. Een van de uitkomsten van onze studie is dat, als de staat de private sector zoveel mogelijk op gelijke wijze behandelt als de publieke sector, de private sector eveneens een publieke missie kan vervullen. Een private sector kan bijdragen aan meer variëteit en capaciteit in het hoger onderwijs.

Samengevat laat deze studie zien dat het gedrag van private en publieke hoger onderwijsinstellingen beter begrepen kan worden als dat gedrag wordt geanalyseerd met een analytisch kader als hier gepresenteerd. Een beter begrip van de strategische keuzes van onderwijsaanbieders in reactie op veranderende beleidskaders en externe omgeving kan bijdragen aan het verbeteren van het hoger onderwijsbeleid. Gelet op het gegeven dat het Poolse onderwijs in de nabije toekomst voor grote uitdagingen komt te staan is het van het grootste belang om de beleidsopvattingen ten aanzien van, met name, de private sector goed te doordenken. Wil de private sector haar waardevolle rol in het Poolse hoger onderwijs kunnen blijven vervullen dan zal de Poolse overheid haar houding ten aanzien van de private sector moeten bijstellen. Alleen langs deze weg kan het Poolse hoger onderwijsmirakel blijven voortduren.

REFERENCES

- Aaviksoo, J. (1997). Priorities for Higher Education in Central and Eastern European Countries. *Higher Education Management*. 9. (2): 19 – 25.
- Alchian, A. A. (1968). The Economic and Social Impact of Free Tuition. *New Individualist Review*. 5. (1): 42 – 52.
- Alexander, F. K. (1993). The Value of an Education. In: D. W. Breneman, L. L. Leslie, and R. E. Anderson (eds.). *ASHE Reader on Finance in Higher Education*. Needham Heights: Simon & Schuster Custom Publishing: 85 – 113.
- Alexander, F. K. (1998). Direct Student Aid and College Tuition. *Policy Forum*. 12. (2): 1 – 8.
- Altbach, P. G. (1974). *Students politics in America. A historical analysis*. New York: McGraw-Hill.
- Altbach, P. G. (1991). The Academic Profession. In: P. G. Altbach (ed.). *International Higher Education. An Encyclopedia*. New York. London: Garland Publishing, Inc: 23 – 47.
- Altbach, P. G. (1993). Students: Interests, culture and activism. In: A. Levin (ed.). *Higher Learning in America 1980 – 2000*. Baltimore MD: John Hopkins University Press: 203 – 221.
- Altbach, P. G. (1998). *Comparative Higher Education*. Norwood, NJ: Ablex.
- Altbach, P. G. (1999). Comparative Perspective on Private Higher Education. In: P. G. Altbach (ed.). *Private Prometheus: Private Higher Education and Development in the 21st Century*. Westport: Greenwood: 1 – 15.
- Altbach, P. G. (2006). Student Politics: Activism and Culture. In: P. G. Altbach (ed.). *International Handbook of Higher Education*. Dordrecht: Springer: 329 – 427.
- Anderson, D. S., Vervoorn, A. E. (1983). *Access to Privilege: Patterns in Participation in Australian Post – Secondary Education*. Canberra: Australian National University.
- Andrews, L. (1997). *The Effects of HECS on Interest in Undertaking Higher Education*. Canberra: Higher Education Division, Department of Employment, Education, Training and Youth Affairs.
- Andrews, L. (1999). *Does HECS Deter? Factors affecting university participation by low SES groups*. Canberra: Higher Education Division, Department of Employment, Education, Training and Youth Affairs. Available on line:
<http://www.dest.gov.au/archive/highered/occpaper/99F/does.pdf/>
- Apple, M. W. (1999). Rhetorical Reforms; Markets, Standards and Inequality. *Current Issues in Comparative Education*. 1. (2): 1 – 13.
- Apps, P. F., Rees, R. (1996). Labour supply, household production and intra-family welfare distribution. *Journal of Public Economy*. 60. (2): 199 – 219.
- Ashby, E. (1966). *Universities: British, Indian and African*. Massachusetts: Harvard University Press.
- Ashford, N. (1993). The Ideas of the New Right. In: G. Jordan, N. Ashford. (eds.). *Public Policy and the Impact of the New Right*. London and New York: Pinter Publishers.
- Astin, A. W., Inouye, C. J. (1988). How public policy at the state level affects private higher education institutions. *Economics of Education Review*. 7. (1): 47 – 63.

- Barr, N. (1998). *The Economics of the Welfare State*. Oxford: Oxford University Press.
- Barry, N. (1989). *Ideas and Interest: The Problems Considered*. In: A. Gamble (ed.). *Ideas, Interests and Consequences*. London: Institute of Economic Affairs.
- Bartlese, J., Goedegebuure, L. (1999). Institutional change in doctoral education; The graduate school. In: B. Jongbloed, P. Maassen and G. Neave (eds.). *From the Eye of the Storm; Higher Education's Changing Institution*. Dordrecht – Boston – London: CHEPS, Kluwer Academic Publishers: 235 – 260.
- Baumol, W. J. (1982). Contestable Markets: An Uprising in the Theory of Industry Structure. *American Economic Review*. 72: 1 – 15.
- Baumol, W. J., Panzar, J. C., Willig, R. D. (1982). *Contestable Markets and Theory of Industry Structure*. New York: Harcourt, Brace, Jovanovich.
- Baumol, W. J., Blackman, S. A. B., Wolff, E. N. (1989). *Productivity and American Leadership*. Cambridge, MA: M. I. T. Press.
- Begg, D., Fischer, S., Dornbusch, R. (1991). *Economics. (3rd edition)* London: McGraw-Hill.
- Berdahl, R. (1990). Academic freedom, autonomy and accountability in British universities. *Studies on Higher Education*. 15. (2): 169 – 180.
- Biffi, G., Isaac, J. (2002). Should Higher Education Students Pay Tuition Fees?. *European Journal of Higher Education*. 37. (4): 433 – 456.
- Bird, R. (1994). Reflections on the British Government and Higher Education in the 1980s. *Higher Education Quarterly*. 48. (2): 75 – 91.
- Blair, R., Harrison, J. L. (1993). *Monopsony: Economic Theory and Antitrust Policy*. Princeton: Princeton University Press.
- Blöndal, S., Girouard, N. (2001). *Investment in human capital through post-compulsory education and training*. Paris: OECD Paper prepared for the Working Party Nr. 1. ECO/CPE/WP1 12.
- Blossfield, H. P., Shavit, Y. (eds.). (1993). *Persisting Inequality: Changing Educational Attainment in Thirteen Countries*. Oxford: Westview Press.
- Bowen, H. R. (1980). *The Cost of Higher Education: How Much Do Colleges and Universities Spend Per Semester and How Much Should They Spend?* San Francisco: Carnegie Foundation for the Advancement of Teaching and Jossey-Bay Inc. Publishers.
- Bowen, F. M. et. al. (1997). *State structures for the governance of higher education: A comparative study*. San Jose: California Higher Education Policy Centre. Draft.
- Buchanan, J., Tullock, G. (1962). *The Calculus of Consent*. Ann Arbor: University of Michigan Press.
- Burchardt, T., Hills, J. and Proper, C. (1999). *Private Welfare and Public Policy*. York: Joseph Rowntree Foundation.
- California Postsecondary Education Commission (1980). *The Price of Admission: An Assessment of the Impact of Student Charges on Enrolments and Revenues in California Public Higher Education*. Sacramento, CA.
- Canton, E., Venniker, R. (2001). Economics of higher education. In: *Higher Education Reform: Getting the Incentives Right*, Den Haag: Sdu Uitgevers: 32 – 51.
- Capron, W. (1971). *Technological Change in Regulated Industries*. Washington, D. C.: Brooking Institution.

- Carnoy, M. (1995). Rates of return to education. In: M. Carnoy (ed.). *International Encyclopedia of Economics of Education*. Cambridge: Pergamon Press.
- Carnegie Foundation for the Advancement of Teaching (1975). *More than Survival: Prospects for Higher Education in a Period of Uncertainty*. San Francisco: Jossey Bass Publishers.
- Carnegie Foundation for the Advancement of Teaching (1985). *The Control of the Campus: A report on the Governance of Higher Education*. Princeton – New York: Princeton University Press.
- Cartter, A. M. (1965). Economics of the university. *American Economic Review Papers and Proceedings*. 55. (2): 481 – 494.
- Caruthers, J. K., Lott, G. B. (1981). *Mission Review: Founding for Strategic Planning*. Boulder, CO: National Center for Higher Education Management Systems.
- Castro, C., Navarro, J. C. (2003). Will the invisible hand fix private higher education?. In: P. G. Altbach (ed.). *Private Prometheus: Private Higher Education and Development in the 21st Century*. Chestnut Hill: Boston College Centre for International Higher Education: 45 – 65.
- Cave, M., Hanney, S., Henkel, M., and Kogan, M., (1997). *The Use of Performance Indicators in Higher Education; The Challenge of the Quality Movement*. London and Bristol, Pennsylvania: Jessica Kingsley Publishers.
- Cerych, L. (1995). Educational reform in Central and Eastern Europe. *European Journal of Education*. 30. (4): 423 – 435.
- Chevallier, T. (2003). Strategic Indicators for Higher Education Systems: Lessons from the French Experience. In: A. Yonezawa, F. Kaiser (eds.). *System Level and Strategic Indicators for Monitoring Higher Education in the Twenty First Century*. Bucharest: UNESCO – CEPES: 101 – 108.
- Chlipała, P., Remi, M. (2001). Wpływ WSB – NLU na rozwój Nowego Sacza w opinii studentów – wyniki badań. *Studia Regionalne i Lokalne*. 6. (2 – 3).
- Clark, B. R. (1983). *The Higher Education System. Academic Organization in Cross-National Perspective*. Berkeley, California: University of California Press.
- Clark, B. R. (1996). Leadership and innovation in universities: From theory to practice. *Tertiary Education and Management*. 1. (1): 7 – 11.
- Clark, B. R. (1998). *Creating Entrepreneurial Universities: Organizational Pathways of Transformation*. Oxford: Pergamon.
- Clotfelter, Ch. T. (1996). *Buying the best: Cost escalation in the elite higher education*. Princeton: Princeton University Press.
- Coaldrake, P. (2001). Responding to Changing Student Expectations. *Higher Education Management*. 13. (2): 75 – 92.
- Cochran, D. S., David, F. R. (1986). Communication effectiveness of organization mission statements. *Journal of Applied Communication Research*. 14. (2): 108 – 118.
- Cohen, M. D., March, J. C. (1974). *Leadership and Ambiguity*. New York: McGraw-Hill.
- Collis, D. J., Montgomery, C. A. (1997). *Corporate Strategy*. New York: McGraw-Hill.
- Cool, K. O., Schendel, D. (1987). Strategic Group Formation and Performance: The Case of U.S. Pharmaceutical Industry, 1963 – 1982. *Management Science*. 33. (9): 1102 – 1124.
- Creedy, J. (ed.). (1996). *The Economics of Higher Education: An Analysis of Taxes vs. Fees*. Aldershot: Edward Elgar.

- Curry, D. J., Fischer, N. M. (1986). *Public higher education and the state: Models for financing, budgeting and accountability*. Paper presented at annual meeting of ASHE, San Antonio.
- Cuthbert, R. (1987). Efficiency and the market mechanism. In: H. Thomas, and T. Simkins, (eds.). *Economics and the Management of Education: Emerging Themes*. London: Falmer Press.
- Dawes, J., Sharp, B. (1996a). Independent Empirical Support for Porter's Generic Marketing Strategies? A Re-analysis using Correspondence Analysis. *Journal of Empirical Generalisations in Marketing Science*. 1: 36 – 53.
- Dawes, J., Sharp, B. (1996b). Is Differentiation Optional? A Critique of Porter's Generic Strategy Typology. In: P. Earl (ed.). *Management, Marketing and the Competitive Process*. Edward Elgar: London.
- De Groot, H., McMahon, W. W., Volkwein, J. F. (1991). The cost structures of American research universities. *The Review of Economics and Statistics*. 73: 424 – 431.
- DES Green Paper, (1985). *The Development of Higher Education into the 1990s*. London: HMSO.
- DiMaggio, P., Powell, W. (1991). Introduction. In: P. DiMaggio, W. Powell (eds.). *The new institutionalism in organizational analysis*. Chicago: Chicago University Press.
- Dill, D. (1997). Higher education markets and public policy. *Higher Education Policy*. 10. (3 – 4): 167 – 185.
- Dill, D., Teixeira, P. (2000). Program Diversity in Higher Education: An Economic Perspective. *Higher Education Policy*. 13. (1): 99 – 117.
- Dill, D. (2003). Allowing the Market to Rule: The Case of the United States. *Higher Education Quarterly*. 57. (2): 136 – 158.
- Dill, D., Soo, M. (2004). *Transparency and Quality in Higher Education Markets*. In: P. Teixeira, B. Jongbloed, D. Dill, and A. Amaral (eds.). *Markets in Higher Education – Rhetoric or Reality?* London: Kluwer Academic Publishers: 61 – 86.
- Douvan, E., Kay, C. (1962). Motivational Factors in College Entrance. In: N. Sanford (ed.). *The American College*. New York: John Wiley and Sons: 193 – 224.
- Drucker, P. F. (1973). *Management: Task, Responsibilities and Practices*. London: Heinemann.
- Duczmal, W. (2005). Access and Private Higher Education in Poland. *International Higher Education*. 38 (winter): 11 – 12.
- Duczmal, W. (2006). Poland. In: P. G. Altbach (ed.). *International Handbook of Higher Education*. Dordrecht: Springer: 935 – 951.
- Dundar, H., Lewis, D. R. (1995). Departmental Productivity in American Universities: Economies of Scale and Scope. *Economics of Education Review*. 14. (2): 119 – 144.
- Ekelund, R. B., Tollison, R. D. (1991). *Economics. Third Edition*. New York: HarperCollins Publishers.
- Eicher, J. C., Chevillier, T. (2002). Rethinking the Financing of Post – Compulsory Education. *Higher Education in Europe*. 27. (1 – 2): 69 – 88.
- Etzioni, A. (1968). *Nykyajan organisaatiot*. New Jersey: Prentice-Hall.
- Eurydice / European Commission (1999). Key Topics in Education. Luxemburg.

- Fenton, R. J., Gardner, J. and Singh, S. (2001). Rethinking Cuts in Public Higher Education: An American Example. *Education Economics*. 9. (1): 53 – 68.
- Filip, G. (2001a). Uniwersytet w potrzasku. *Rzeczpospolita*. 155: 9.
- Filip, G. (2001b). Autonomia pod presją. *Forum Akademickie*. 6.
- Filip, G. (2002). Wyznania nieprzystosowanego. *Forum Akademickie*. 3.
- Frazer, M. (1997). Report on the Modalities of External Evaluation of Higher Education in Europe: 1995 – 1997. *Higher Education in Europe*. 22. (3): 349 – 402.
- Friedman, M., (1960). *A Program for Monetary Stability*. Harmondsworth: Penguin.
- Friedman, M., Friedman, R. (1980). *Free to Choose: A Personal Statement*. New York: Avon Publications.
- Geiger, R. L. (1986). *Private Sectors in Higher Education: Structure, Function, and Change in Eight Countries*. Ann Arbor, Michigan: University of Michigan Press.
- Geiger, R. L. (1988a). *Privatization of higher education: International trends and issues*. Princeton, NJ: International Council for Educational Development.
- Geiger, R. L. (1988b). Public and Private Sectors in Higher Education: A Comparison of International Patterns. *Higher Education*. 17. (6): 699 – 711.
- Geiger, R. L. (1991). Private Higher Education. In: P. G. Altbach (ed.). *International Higher Education. An Encyclopedia*. New York, London: Gerland Publishing, Inc.
- Geiger, R. L. (1996). Diversification in U.S. Higher Education: Historical Patterns and Current Trends. In: V. Lynn Meek et al. (eds.). *The Mockers and the Mocked: Comparative Perspectives on Differentiation, Convergence, and Diversity in Higher Education*. Oxford: Pergamon: 188-203.
- Glennerster, H. (1998). Education: Reaping in Harvard' In: H. Glennerster and J. Hills (eds.). *The State of Welfare II: The Economics of Social Spending*. Oxford: Oxford University Press.
- Gornitzka A., Maassen, P. (2000). Hybrid steering approaches with respect to European higher education. *Higher Education Policy*. 13. (3): 267 – 287.
- Gumport, P. J., Sporn, B. (1999). Institutional Adaptation: Demands for Management Reform and University Administration. In: J. C. Smart (ed.). *Higher Education: Handbook of Theory and Research*. Vol. XIV. New York: Agathon Press: 103 – 145.
- Gumport, P. J., Pusser, B. (1999). University Restructuring: The Role of Economic and Political Context. In: J. C. Smart (ed.). *Higher Education: Handbook of Theory and Research*. Vol. XIV. New York: Agathon Press: 146 – 200.

- Hanoch, G. (1967). An Economic Analysis of Earning and Schooling. *The Journal of Human Resources*. 2. (3): 310 – 329.
- Hansen, L. W., Weisbrod, B. A. (1969a). The Search for Equity in the Provision and Finance of Higher Education. In: Joint Economic Committee, U. S. Congress. *The Economics and Financing of Higher Education in United States*. Washington DC: Government Printing Office.
- Hansen, L. W., Weisbrod, B. A. (1969b). *Benefits, Costs and Finance of Public Higher Education*. Chicago: Markham Publishing Company.
- Hansmann, H. (1980). The rationale for exempting nonprofits organizations from corporate Income Taxation. *Yale law journal*. 91. November: 54 – 100.
- Hearn, J. C., Longanecker, D. (1985). Enrollment Effects of Alternative Postsecondary Pricing Policies. *Journal of Higher Education*. 56. (5): 485 – 508.
- Heller, D. E. (1997). Student price response in higher education: An update to Leslie and Brinkman. *The journal of higher education*. 68. (6): 624 – 659.
- Hines, F., Tweeten, L. and Redfern, M. (1970). Social and Private Rate of Return to Investment in Schooling by Race-Sex Groups and Regions. *The Journal of Human Resources*. 5. (3): 318 – 340.
- Hoenack, S. A. (1971). The Efficient Allocation of Subsidies to College Education. *The American Economic Review*. 61. (3): 302 – 311.
- Hoenack, S. A., Weiler, W. C. (1975). Cost related tuition policies and university enrollments. *Journal of Human Resources*. 10. (3): 332 – 360.
- Hooley, G. J., Lynch, J. E., Jobber, D. (1992). Generic Marketing Strategies. *International Journal of Research in Marketing*. 9. (1): 75 – 89.
- Hopkins, D. S. P., Massy, W. F. (1981). *Planning Models for Colleges and Universities*. Stanford, CA: Stanford University Press.
- Hoxby, C. M. (1997). *The changing market structure of U.S. Higher education*. Harvard University, mimeo.
- Hoxby, C. M. (2002). *The effects of geographic integration and increasing competition on the market for college education*. Harvard University, mimeo.
- Hoyle, R. H., Harris, M. J., Judd, C. M. (2002). *Research Methods in Social Sciences. Seventh Edition*. Wadsworth: Thomson Learning.
- Hüfner, K. (1992). Economics. In: B. C. Clark and G. Neave (eds.). *The Encyclopedia of Higher Education*. Oxford. New York. Seoul. Tokyo: Pergamon Press: 1797 – 1810.
- Jablecka, J. (1998). Higher Education in Poland. In: G. Neave, B. Clark (eds.). *Education: The Complete Encyclopedia*. Oxford: Elsevier Science.
- Jackson, G. A. (1982). Public Efficiency and Private Choice in Higher Education. *Educational Evaluation and Policy Analysis*. 4. (2): 237 – 247.
- Jacukowicz, Z. (2000). *Praca i jej opłacanie*. Gdańsk: ODDK.
- James, E., Neuberger, E. (1981). The University Department as a Nonprofit Labour Cooperative. *Public Choice* 36: 585 – 612.
- James, E. (1986). How Nonprofits Growth: A Model. In: S. Rose-Ackerman (ed.). *The Economics of Nonprofit Institutions*. New York: Oxford University Press: 185 – 195.

- Jones, L. (1978). Fiscal Strategies to Stimulate Instructional Innovation and Change. *Journal of Higher Education*. 49. (6): 588 – 607.
- Jones, D. R. (1992). Privatization. In: B. C. Clark and G. Neave (eds.). *The Encyclopedia of Higher Education*. Oxford. New York. Seoul. Tokyo: Pergamon Press: 1445 – 1453.
- Jongbloed, B., Salerno, C. S. (2002). *Funding and Recognition: A Comparative Study of Funded versus Non-funded Higher Education in Eight Countries*. The Hague: Ministry of Education, Culture and Science/SDU.
- Jongbloed, B. (2003a). Marketization in higher education, Clark's triangle and the essential ingredients of markets. *Higher Education Quarterly*. 57. (2): 110 – 135.
- Jongbloed, B. (2003b). Institutional funding and institutional change. In: J. File, L. Goedegebuure (eds.). *Real-time Systems: Reflections on Higher Education in the Czech Republic, Hungary, Poland and Slovenia*. Enschede: CHEPS: 115 – 147.
- Jongbloed, B., Dill, D., Amaral, A., Teixeira, P. (eds.). (2004). *Markets in higher education – Rhetoric or Reality?* Dordrecht. Boston. London: Kluwer Academic Publishers.
- Johnstone, H. (1974). The University and the social welfare: A taxonomic exercise. In: K. G. Lumsden (ed.). *Efficiency in Universities: The La Paz Papers*. Amsterdam: Elsevier.
- Johnstone, D. B., Bain, O. (2001). *Universities in Transition: Privatization, Decentralization, and Institutional Autonomy as National Policy with Special reference to the Russian Federation*. New York: ICHEFAP, State University of New York at Buffalo.
- Johnstone, D. B. (2002). Privatization. In: J. F. Forest and K. Kinser (eds.). *Higher Education in the United States: An Encyclopedia. Vol. II*. Santa Barbara: ABC-Clio: 487 – 489.
- Jordan, G. (1993). The New Right and the public policy: a preliminary overview. In: G. Jordan, N. Ashford, (eds.). *Public Policy and the Impact of the New Right*. London and New York: Pinter Publishers: 1 – 18.
- Kaiser, F., Wach, P. (2003). Poland. In: J. File, L. Goedegebuure (eds.). *Real-time Systems: Reflections on Higher Education in the Czech Republic, Hungary, Poland and Slovenia*. Enschede: CHEPS: 77 – 95.
- Kaufer, E. (1988). *The Economics of Patent System*. Harwood: Chur.
- Kaysen, C. (1960). Some general observations on the pricing of higher education. *The Review of Economics and Statistics*. 42. (3): 55 – 60.
- Kerr, C. (1994). Expanding access and changing missions: The federal role in U.S. higher education. *Educational Record*. (Fall).
- Klees, S. J. (1999). Privatization and Neo – liberalism: Ideology and Evidence in Rhetoric Reforms. *Current Issues in Comparative Education*. 1. (2):
- Kohn, M. G., Manski, C. F., Mundel, D. (1976). An empirical analysis of factors which influence college-going behavior. *Annals of Economic and Social Measurement*. 5. (4): 391 – 419.
- Kohtamäki, V. (2003). *Financial autonomy of professional higher education institutions. Comparison between Finland and some European countries*. Paper presented at CHEPS Summer school 2003. Maribor.
- Kolasiński, M., Lisiecki, P. (2004a). Cena na rynku edukacji wyższej. In: G. Nowaczyk, M. Kolasiński (eds.). *Marketing szkół wyższych*. Poznań: WSB: 233 – 243.

- Kolasiński, M., Lisiecki, P. (2004b). Strategia cen w szkołach wyższych. In: G. Nowaczyk, M. Kolasiński (eds.). *Marketing szkół wyższych*. Poznań: WSB: 243 – 261.
- Koźmiński, A. K. (2000). Poland: the Leon Koźmiński Academy of Entrepreneurship and Management. In: L. C. Barrows (ed.). *Studies on Higher Education: Ten Years Ahead and looking Ahead: A Review of the Transformations of Higher Education in Central and Eastern Europe*. Bucharest: UNESCO – CEPES: 164 – 185.
- Krugman, P. Kuttner, R. (1996). Of Economists and Liberals. *American Prospect*. 7. (29).
- Kruk, W. (2000). Poland: the Warsaw University of Technology. In: L. C. Barrows (ed.). *Studies on Higher Education: Ten Years Ahead and looking Ahead: A Review of the Transformations of Higher Education in Central and Eastern Europe*. Bucharest: UNESCO – CEPES: 185 – 211.
- Kryński, A. (2002). *Niepaństwowe Szkolnictwo w Polsce w latach 1990 – 2000*. Częstochowa: Akademia Polonijna.
- Kudrycka, I., Radziukiewicz, M. (1999). Wykształcenie jako czynnik różnicujący dochody. *Studia i Praca*. Warszawa: GUS: 35 – 44.
- Kulig, A. (2004). Rynek usług edukacyjnych w Polsce na poziomie wyższym. In: G. Nowaczyk, M. Kolasiński (eds.). *Marketing szkół wyższych*. Poznań: WSB: 97 – 111.
- Kwiek, M. (2003). The State, the Market, and Higher Education. Challenges for the New Century. In: M. Kwiek (ed.). *The University, Globalization, Central Europe*, Frankfurt a/Main and New York: Peter Lang: 71 – 114.
- Kwong, J. (2000). Introduction: marketization and privatization in education. *International Journal of Educational Development*. 20: 87 – 92.
- Leslie, L. L., Johnson, G. P. (1974). The Market Model and Higher Education. *Journal of Higher Education*. 45. (1): 1-20.
- Leslie, L. L., Brinkman, P. T. (1987). Student Price Response in Higher Education – The Student Demand Studies. *Journal of Higher Education*. 58. (2): 181 – 204.
- Leslie, L. L., Brinkman, P. T. (1988). *The economic value of higher education*. New York, N.Y.: Macmillan Publishing Company.
- Lewartowska – Zychowicz, M. (2004). Masowy student – Elitarny uniwersytet. *Forum Akademickie*. 7 – 8.
- Levy, D. C. (1980). *University and Government in Mexico: Autonomy in an Authoritarian System*. New York: Prager.
- Levy, D. C. (1992). Private Institutions of Higher Education. In: B. Clark, G. Neave (eds.). *The Encyclopedia of Higher Education*. New York: Pergamon Press: 1183 – 1195.
- Levy, D. C. (1986a). Private and Public: Analysis Amid Ambiguity in Higher Education. In: D. C. Levy (ed.). *Private Education: Studies in Choice and Public Policy*. Oxford, New York: Oxford University Press: 170 – 194.
- Levy, D. C. (1986b). Alternative Private-Public Blends in Higher Education Finance: International Patterns. In: D. C. Levy (ed.). *Private Education: Studies in Choice and Public Policy*. Oxford, New York: Oxford University Press: 195 – 213.
- Levy, D. C. (1999). When private higher education does not bring organizational diversity. In P. G. Altbach (ed.). *Private Prometheus: Private higher education and development in the 21st century*. Westport CT: Greenwood Press: 15 – 45.

- Levy, D. C. (2002). *Unanticipated development: Perspectives on private higher education's emerging roles*. Program for Research On Private Higher Education (PROPHE). Available on line: <http://www.albany.edu/~prophe/>
- Levy, D. C. (2005a). Legitimacy in Central and Eastern European Private Higher Education. *International Higher Education*. Winter 2005.
- Levy, D. C. (2005b). Public Policy and Private Higher Education. In: P. G. Altbach, D. C. Levy (eds.). *Private Higher Education: A Global Revolution*. Chestnut Hill, Albany: Boston College & PROPHE: 41 – 47.
- Levy, D. C. (2006). The Private Fit in the Higher Education Landscape. In: P. G. Altbach, J. J. F. Forest (eds.). *International Handbook of Higher Education*. Dordrecht: Springer: 281 – 293.
- Long, M., Carpenter, P. and Hayden, M. (1999). Longitudinal Surveys of Australian Youth, Participation in Education and Training 1980 – 1994. *Australian Council of Education Research*. Research Report No. 13.
- Lumina Foundation (2002). *Unequal Opportunity: Disparities in College Access among the 50 States*. Available online: <http://www.luminafoundation.org/>
- Lundquist, L. (1987). *Implementation Steering. An Actor-Structure Approach*. Lund: Studentlitteratur.
- Mace, J., Lambropoulos, H., Karadjia, E. (2000). *Markets, Values and Education*. Paper presented on the Conference: Education for social democracies, London.
- Mansfield, E. (1971). *Research and Innovation in the Modern Corporation*. New York: Norton & Company.
- Mansfield, E., Wagner, S. (1977). *The Production and Application of New Industrial Technology*. New York: Norton & Company.
- Mansfield, E. (1991) *Microeconomics. Seventh Edition*. New York, London: W. W. Norton & Company.
- Marginson, S. (1993). *Education and Public Policy in Australia*. Cambridge: Cambridge University Press.
- Marginson, S. (1997). *Markets in Higher Education*. Sydney: Allen & Unwin.
- Marks, D. (1998). Is the University a Firm. *Tertiary Education and Management*. 4. (4): 245 – 254.
- Mason, E. S. (1939). Price and Production Policies of Large-Scale Enterprise. *American Economic Review*. 29: 61 – 74.
- Massy, W. F. (ed.). (1996). *Resource Allocation in Higher Education*. Ann Arbor, Michigan: University of Michigan Press.
- Massy, W. F. (1999). Productivity Issues in Higher Education. In: W. F. Massy (ed.). *Resource Allocation in Higher Education*. Ann Arbor: University of Michigan Press: 49 – 86.
- Massy, W. F. (2003). *Honoring the Trust. Quality and Cost Containment in Higher Education*. Bolton: Anker Publishing Company, Inc.
- Massy, W. F. (2004). Markets in Higher Education: Do They Promote Internal Efficiency. In: P. Teixeira, B. Jongbloed, D. Dill, A. Amaral (eds.). *Markets in Higher Education – Rhetoric or Reality?* London: Kluwer Academics Publishers: 13 – 36.

- Maynard, J. (1971). *Some Microeconomics of Higher Education*. Lincoln: University of Nebraska Press.
- McClain, D., Vance, B., Wood, E. (1984). Understanding and predicting the yield in the MBA admissions process. *Research in Higher Education*. 20. (1): 55 – 76.
- McPherson, M. S., Winston, G. C. (1997). The economics of cost, price, and quality in U.S. higher education. In: M. S. McPherson, M. O. Schapiro and G. C. Winston (eds.). *Paying the Piper: Productivity, Incentives, and Financing in U.S. Higher Education*. Ann Arbor: University of Michigan Press: 69 – 108.
- McPherson, M., Schapiro, M. O. (1991). *Keeping College Affordable, Government and Educational Opportunity*. Washington DC: The Brookings Institution.
- McPherson, M., Schapiro, M. O. (1998). *The student aid game*. Princeton, NJ: Princeton University Press.
- Milgrom, P., Roberts, J. (1992). *Economics, Organization and Management*. New Jersey: Prentice-Hall Inc.
- Molenda, M. (1996). Pochodzenie terytorialne studentów studiów dziennych SGH. *Biuletyn IGS*. 1 -2.
- Molenda, M. (1997). Warunki życia studentów Szkoły Wyższej Handlowej. In: W. Rakowski, (ed.). *Rodzina Polska w okresie kryzysu i ożywienia gospodarczego 1990 – 1995*. Warszawa: Polskie Towarzystwo Demograficzne: 116 – 126.
- National Yearbook for Higher Education* (1991 – 2005). Warsaw: GUS.
- Neave, G. (1998). On Being Economical with University Autonomy: Being Account of the Retrospective Joys of a Written Constitutions. In: M. Tight (ed.). *Academic Freedom and Responsibility*. London: SRHE and Open University Press: 31 – 48.
- Newman, F., Couturier, L., Scurry, J. (2004). *The Future of Higher Education: Rhetoric, Reality, and the Risks of the Market*. Jossey-Bass.
- Nordhaus, W. D. (1969). *Invention, Growth, and Welfare: A Theoretical Treatment of Technological Change*. Cambridge: MIT Press.
- North, D. C., Thomas, R. P. (1973). *The Rise of the Western World: A New Economic History*. Cambridge: Cambridge University Press.
- North, D. C. (1981). *Structure and Change in Economic History*. New York: Norton.
- North, D. C., Wallis, J. J. (1986). Measuring the Transaction Sector in the American Economy, 1870 – 1970. In: S. L. Engerman and R. E. Gallman (eds.). *Long Term Factors in American Economic Growth*. Chicago: University of Chicago Press: 95 – 148.
- North, D. C. (1996). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.

- OECD (1996). *Life-long Learning for All*. Paris: OECD.
- OECD (1998). *Human Capital Investment, An International Comparison*. Paris: OECD.
- OECD (1998). *Redefining Tertiary Education*. Paris: OECD.
- OECD (2001). *Education at a Glance, OECD Indicators, Indicators of Education Systems*. Paris: CERI.
- Osterczuk, A. M. (1996). Developments in Polish Higher Education. *Higher Education Management*. 8. (3): 59 – 69.
- Ostrom, E. (1999). Institutional Rational Choice: An Assessment of the Institutional Analysis and Development Framework. In: P. A. Sabatier (ed.). *Theories of the Policy Process. Theoretical Lenses on Public Policy*. Davies: Westview Press: 35 – 71.
- Pawłowski, K. (2002). Polska Liga Bluszczowa. *Forum Akademickie*. 2.
- Pawłowski, K. (2004). *Rediscovering Higher Education in Europe*. Bucharest: UNESCO – CEPES.
- Peeke, G. (1994). *Mission and Change: Institutional Mission and its Application to the Management of Further and Higher Education*. Buckingham: The Society for Research into Higher Education & Open University Press.
- Pfeffer, J., Salancik, G. R. (1978). *The External Control of Organizations. A Resource Dependence Perspective*. New York: Harper & Row Publishers.
- Poland** The Higher Education Act of 12th September 1990.
- Poland** The Act on Academic Titles and Degrees of 12th September 1990.
- Poland** The Act on Committee for Scientific Research of 12th January 1991.
- Poland** The Vocational Higher Education Schools Act of 26 June 1997.
- Poland** The Act on State Accreditation Commission of 20 July 2001.
- Poland** The Act on Financial Management of 27th August 1991.
- Poland** The Act on Student Loans of 17th July 1998.
- Poland** The Act on Employment Contracts in Public Higher Education of 16th September 2001.
- Porter, M. E. (1980). *Competitive Strategy. Techniques for analyzing industries and competitors*. New York: Free Press.
- Porter, M. E. (1998). *On Competition*. Boston: Harvard Business School Press.
- Posner, R. (1969). Natural Monopoly and its Regulation. *Stanford Law Review*. 21: 548 – 643.
- Poznański, K., Kucha, R. (1992). Poland. In: W. Wickremasinge (ed.). *Handbook of World Education: A Comparative Guide to Higher Education and Educational Systems of the World*. Houston, TX: American Collegiate Service.
- Psacharopoulos, G. (1973). *Returns to Education: An International Comparison*. Amsterdam: Elsevier.
- Psacharopoulos, G. (1980). *Education and Income*. World Bank Staff Working Paper No. 402. Washington: The World Bank.
- Psacharopoulos, G., Woodhall, M. (1985). *Education for Development: An Analysis of Investment Choices*. Oxford: Oxford University Press.

- Rakowski, W. (1994). 'Środowisko rodzinne studentów pierwszego roku Wydziału Ekonomicznego WSI Radom (1993) i ich warunki życia. In: J. Żuchowski, E. Frejtag-Mika, K. Hardian (eds.). *XXV Lecie Wydziału Ekonomicznego*. Radom: WSI w Radomiu: 95 – 119.
- Rakowski, W., Skrzypczak, I. (1995). Zróżnicowanie terytorialne warunków życia studentów studiów zaocznych. *Biuletyn IGS*. 1.
- Rakowski, W. (2000a). *Sytuacja środowiska studenckiego – pochodzenie społeczne i status materialny*. Biuro Studiów i Ekspertyz Kancelarii Sejmu. Opinia zlecona.
- Rakowski, W. (2000b). Aktywność zawodowa, dochody i warunki życia studentów studiów zaocznych PWSOŚ w Radomiu. *Przegląd naukowo – dydaktyczny. Tom IV*. Radom: PWSOŚ: 141 – 173.
- Rakowski W. (2001). Rodziny z osobą studiującą w trybie dziennym. In: Z. Tyszka (ed.). *Współczesne rodziny Polskie – ich stan i kierunki przemian*. Poznań: Wydawnictwo UAM: 141 – 163.
- Rakowski, W. (2004a). Studia zaoczne jako szansa poprawy warunków życia rodzin. *Przegląd naukowo – dydaktyczny. Tom VIII*. Radom: PWSOŚ: 94 – 115.
- Rakowski, W. (2004b). Wpływ poziomu wykształcenia rodziców uczniów na warunki ich życia na przykładzie Żyrardowa. In: W. Rakowski (ed.). *Między transformacją a integracją. Polityka społeczna wobec problemów współczesności*. Warszawa: SGH.
- Ratajczak, M. (2004). Unia personalna. *Forum Akademickie*. 2.
- Ramirez, F. O., Riddle, P. (1991). The Expansion of Higher Education. In: P. G. Altbach (ed.). *International Higher Education: An Encyclopedia*. New York: Garland: 91 – 106.
- Reisz, R. D. (2003). *Public Policy for Private Higher Education in Central and Eastern Europe. Conceptual clarifications, statistical evidence, open questions*. Wittenberg: Hof Wittenberg – Institut für Hochschulforschung an der Martin Luther Universität Halle-Wittenberg.
- Robertson, D., Hillman, J. (1997). Widening participation in higher education for students from lower socio-economic groups and students with disabilities. *UK National Committee National Committee for Inquiry into Higher Education Report 6*. Available online: <http://www.ncl.ac.uk/ncihe/report6.htm>.
- Rothschild, M., Clotfelter, C. T. (1993). The University in the Marketplace: Some Insights and some Puzzles. In: Ch. T. Clotfelter and M. Rothschild (eds.). *Studies of Supply and Demand in Higher Education*. Chicago: University of Chicago Press: 1 – 42.
- Rothschild, M., White, L. J. (1995). The analytics of pricing in higher education and other services in which customers are inputs. *Journal of Political Economy*. 103. (3): 573 – 586.
- Sadlak, J. (1991). Poland. In: P.G. Altbach (ed.). *International Higher Education. An Encyclopedia*. New York, London: Garland Publishing, Inc.
- Samuelson, P. A., Nordhaus, W. D. (1992). *Economics*. New York: McGraw-Hill, Inc.
- Scherer, F. M., Ross, D. (1990). *Industrial Market Structure and Economic Performance. Third Edition*. Boston: Houghton Mifflin Company.
- Schugurensky, D. (1999). Higher education restructuring. In: R. Arnove, C. Torres (eds.). *Comparative Education: The Dialectic of the Global and the Local*. Lanham: Rowman and Littlefield.
- Scott, P. (1993). Reflections on a Transatlantic Dialogue. *Policy Perspective* 5. (1).

- Scott, P. (2000). Higher Education in Central and Eastern Europe: An Analytical report. In: L. C. Barrows (ed.). *Studies on Higher Education. Ten Years After and Looking Ahead: A Review of the Transformations Higher Education in Central and Eastern Europe*. Bucharest: UNESCO – CEPES: 335 – 408.
- Scott, P. (2000). Ten years on and looking ahead. In: *Review of the transformations of higher education in Central and Eastern Europe*. Bucharest: CEPES: 341 – 407.
- Scott, P. (2002). Reflection on the Reform of Higher Education in Central and Eastern Europe. *Higher Education in Europe* 28.(1 – 2): 137 – 152.
- Sizer, J. (1979). Assessing institutional performance: an overview. *International Journal of Institutional Management in Higher Education*. 3. (1): 49 – 77.
- Sizer, J. (1982). Performance indicators for institutions of higher education under conditions of financial stringency, contraction and changing needs. In: R. McCormick (ed.). *Calling Education to Account*. London: Heinemann: 66 – 77.
- Singer, N. M. (1972). Financing Education. In: N. M. Singer (ed.). *Public Microeconomics*. Neil M. Singer, Little, Brown & Company, reprinted in: David W. Breneman, Larry L. Leslie, and Richard E. Anderson (eds.). *ASHE Reader on Finance in Higher Education*, Needham Heights: Simon & Schuster Custom Publishing: 37-49.
- Skuja, E. (1995). Performance of the Australian university sector in access and equity. In: G. Postle, J. Clark, D. Bull, K. Batarowicz and H. McCann, (eds.). *Towards Excellence in Diversity: Educational Equity in the Australian Higher Education Sector in 1995: Status, Trends and Future Directions*. Toowoomba: University of Southern Queensland Press.
- Slantcheva, S. (2005). Global Citizens and Private Higher Education. In: P. G. Altbach, D. C. Levy (eds.). *Private Higher Education: A Global Revolution*. Albany: Boston College, PROPHE: 175 – 179.
- Slaughter, S., Leslie, G. (1999). *Academic Capitalism*. Baltimore, London: The Johns Hopkins University Press.
- Sorensen, K. (1997). *Polish Higher Education. En Route to the Market*. Stockholm: Stockholm University.
- Statistical Yearbook of the Republic of Poland* (1990 – 2005). Warsaw: GUS.
- Steier, F. A., (2003). The Changing Nexus: Tertiary Education Institution, the Marketplace and the State. *Higher Education Quarterly*. 57. (2): 158 – 180.
- Stein, J. G., (2001). *The Cult of Efficiency*. Toronto: Anasi Press.
- Steiner, P., Lipsey, R. (1969). *Economics, 2nd ed.* New York: Harper and Row.
- Świerzbowska-Kowalik, E., Gulczyńska, H. (2000). *Dostępność wyższego wykształcenia – materialne i społeczne uwarunkowania. Raport z badania wśród studentów – na zlecenie Ministerstwa Edukacji Narodowej. (Access to higher education – economic and social determinants. A report from a survey of students requested by Ministry of National Education and Sports)*. Warszawa: Centrum Badan Polityki Naukowej i Szkolnictwa Wyższego, Uniwersytet Warszawski.

- Tadusiewicz, R. (2003). Ile kosztuje profesor?. *Forum Akademickie*. 11 – 12: 49 – 41.
- Teichler, U. (1991). Western Europe. In: P. G. Altbach (ed.), *International Higher Education. An Encyclopedia*. New York. London: Garland Publishing: 607 – 642.
- Teichler, U. (1992). Occupational Structures and Higher Education. In: B. R. Clark, G. Neave (eds.). *The Encyclopedia of Higher Education*. Oxford: Pergamon: 23 – 36.
- Theodossin, E. (1986). *The Modular Market*. Bristol: FESC.
- Tight, M. (ed.). *Academic Freedom and Responsibility*. London: SRHE and Open University Press.
- Tomusk, V. (2001). Enlightenment and minority cultures: Central and East European higher education reform ten years later. *Higher Education Policy*. 14. (1): 61 – 73.
- Trow, M. (1973). *Problems in the Transition from Elite to Mass Higher Education*. Berkeley, CA: Carnegie Commission on Higher Education.
- Turner, C. (1997). Organizing educational institutions as anarchies. In: A. Westboy, (ed.). *Culture and Power in Educational Organizations*. Milton Keynes: Open University Press.
- UK (1997). *National Committee of Inquiry into Higher Education, (Dearing Committee)*.
- Van Alstyne, C. (1976). *The costs of implementing federally mandated programs at colleges and universities. Policy analysis service special report*. Washington, DC: American Council on Education, Policy Analysis Service.
- Volkwein, F. J. (1986). State Financial Control of Public Universities and its Relationship to Campus Administrative Elaborateness and Cost. *Review of Higher Education*. 9. (3): 267 – 286.
- Volkwein, F. J. (1987). State Regulation and Campus Autonomy. In: J. Smart (ed.). *Higher Education: Handbook of Theory and Research, Volume III*. New York: Agathon Press: 120 – 154.
- Vossensteyn, H. (2005). *Perceptions of student price-responsiveness*. Enschede: CHEPS.
- Weiler, H. N. (2001). *States and Markets: Competing Paradigms for the Reform of Higher Education in Europe (Occasional Paper No. 16)*. New York: Teachers College, Columbia University - National Centre for the Study of Privatization in Education, Available on line: (www.tc.columbia.edu/ncspe)
- Weimer, D. L., Vining, A. R. (1999). *Policy Analysis; Concepts and Practice*. Upper Saddle River, New Jersey: Prentice-Hall, Inc.
- Whitty, G., Power, S. (2000). Marketization and privatization in mass higher education systems. *International Journal of Educational Development*. 20: 93 – 107.
- Williams, G. L. (1995). The marketization of higher education: Reforms and potential reforms in higher education finance. In: D. Dill, B. Sporn (eds.). *Emerging Patterns of Social Demand and University Reform: Through a Glass Darkly*. Oxford: Pergamon Press: 170 – 171.
- Williams, G. (2003). *The Higher Education Market in the United Kingdom*. Paper presented on the Douro Seminar: Markets in Higher Education.
- Windham, D. (1976). Social Benefits and the Subsidization of Higher Education: A Critique. *Higher Education*. 5. (3): 237 – 252.

- Winkler, K. (1977). State's Power to Close PhD Programs is Upheld by a New York Court. *Chronicle of Higher Education*. January.
- Winston, G. C. (1997). Why can't college be more like a firm? Technical Report Discussion. Paper 42. Williams College.
- Winston, G. C. (1999). Subsidies, Hierarchy and Peers: The Awkward Economics of Higher Education. *Journal of Economic Perspectives*. 13. (1): 13-36.
- Wolf, C. (1982). Government Shortcomings and the Conditions of Demand. In: H. Hanusch (ed.). *Public Finance and the Quest for Efficiency*. Proceedings of the 38th Congress of the International Institute of Public Finance, Copenhagen.
- Wolf, C. (1993). *Markets and Governments: Choosing Between Imperfect Alternatives*. Cambridge: MIT Press.
- Woodhall, M. (1970). *Student Loans: A Review of the Experience in Scandinavia and Elsewhere*. London: Harrap.
- Woodhall, M. (1982). *Student Loans: Lesson from Recent International Experience*. London: Policy Studies Institute.
- World Bank (2002). *Constructing Knowledge Societies: New Challenges for Tertiary Education*. Washington D.C:
- World Bank (2004). *Tertiary Education in Poland*. Washington D.C:
- Young, K. E. (ed.). (1974). *Exploring the Case for Low Tuition in Public Higher Education*. Iowa City: IA: National Association of State Universities and Land-Grant Colleges.
- Zumeta, W., Thompson, F. (1981). A Regulatory Model of Governmental Coordinating Activities in the Higher Education Sector. *Economics of Education Review*. 1. (1): 27 – 52.
- Zumeta, W. (1992). State policies and private higher education: policies, correlates, and linkages. *Journal of Higher Education*. 63. (4): 363 – 417.
- Zumeta, W. (1996). Meeting the Demand for Higher Education Without Breaking the Bank: A Framework for the Design of State Higher Education Policies for an Era of Increasing Demand. *The Journal of Higher Education*. 67. (4): 367 – 425.
- Zumeta, W. (1997). State Policy and Private Higher Education: Past, Present and Future. In: J. Smart (ed.). *Higher Education: Handbook of Theory and Research, Volume XII*. New York: Agathon Press: 43 – 106.