Tertiary Education in Poland

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THE WORLD BANK

Europe and Central Asia
Human Development Sector Unit

Projects Directorate
Industry and Services Department
Human Capital Division

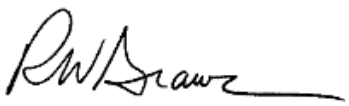
Foreword

The World Bank has been active since 1963 in supporting the growth and diversification of tertiary education systems in its client countries and in promoting essential policy reforms to make the sector more efficient, relevant, equitable, transparent and responsive. The importance of tertiary education as a critical pillar in a knowledge economy is set out in the recent World Bank report: *Constructing Knowledge Societies: New Challenges for Tertiary Education.*

The exposure of the European Investment Bank to the education sector is more recent, dating back to 1997, when the EU Council authorized the EIB to invest in the human capital sectors. For the EIB, education is an essential component of the innovation process.

In 2003, as part of its policy dialogue on Knowledge Economy with the Polish Government, the World Bank undertook a review of tertiary education. Also in 2003, the EIB designed a framework loan operation of which a substantial part supports the education sector. With the agreement of the Ministry of National Education and Sports, the World Bank and EIB activities were combined into a common review of tertiary education in Poland. This Report is the fruit of that combined effort.

The Report has one other feature, in that it is the first joint sector study by our two institutions. It is thus a good example of the two Banks working together to assist a country's development. The Report has been prepared in a spirit of promoting the sharing of knowledge. It is hoped that this will be of interest to Polish policy-makers and professional practitioners who are grappling with issues of tertiary education reform.



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Acknowledgments

This Review of the Polish Tertiary Education System was undertaken by the World Bank and the European Investment Bank in consultation with the Ministry of Education and Sports of Poland. The report was written by a team led by Mary Canning, Lead Education Specialist in the Human Development Sector Unit in the World Bank and comprising Nina Kancewicz-Hoffman, Warsaw University, currently Scientific Secretary to the Director of Science and Strategy of the European Science Foundation, Dorota Holzer-Żelażewska, Research Analyst in the Human Development Sector Unit at the World Bank and Albert Tuijnman, Senior Economist in the Human Capital Division of the European Investment Bank.

The report draws on data supplied by the MoNES and the Central Statistical Office (GUS). It has benefited from discussions with many Government officials and members of the tertiary education community in Poland. A meeting to discuss an early draft of the report was held in Warsaw University in January 2004 and was attended by over 100 higher education professionals. The authors are very grateful for the feedback received and would like to give special thanks to the Ministry of National Education and Sports, the Ministry of Scientific Research and Information Technology, the Polish State Accreditation Commission, the General Council for Higher Education, the Rector and staff of Warsaw University, especially: Ireneusz Białecki, Stefan Jackowski and Julita Jabłecka. Valuable comments were also received from Ewa Freyberg (former Undersecretary of State in Ministry of National Education and Sports), Ryszard Mosakowski (Politechnika Gdańska), Richard Yelland (OECD) and Toby Linden (World Bank).

The authors wish to thank the World Bank peer reviewers, Jamil Salmi and Lauritz Holm-Nielsen, and the EIB peer reviewers, Luisa de Almeida Ferreira and Stephen Wright, for their helpful comments and suggestions .

Abbreviations and Acronyms

EIB	European Investment Bank
EU	European Union
GDP	Gross Domestic Product
GCHE	General Council for Higher Education
GUS	Central Statistical Office
HEI	Higher Education Institution
IP	Intellectual Property
IALS	International Adult Literacy Survey
KAUT	Accreditation Commission for Technical Universities
KBN	State Committee for Scientific Research
KRASP	Conference of Rectors of Polish Academic Schools
LLL	Lifelong Learning
MoNES	Ministry of National Education and Sports
MoSRIT	Ministry of Scientific Research and Information Technology
OECD	Organization for Economic Co-operation and Development
Phare	Polish Hungarian Aid Restructuring Economies Program
PISA	Program for International Student Assessment
PKA	Polish State Accreditation Commission
PPP	Purchasing Power Parity
UKA	University Accreditation Commission
WB	World Bank

Executive Summary

The Polish Tertiary Education Report was undertaken by the World Bank and the European Investment Bank in consultation with the Ministry of National Education and Sports of Poland (MoNES). The modernization of higher education and other tertiary education services has become an increasing focus of public concern in Poland. A major purpose of the report is to discuss important issues in Polish tertiary education and to focus on policies to improve the quality and accessibility of educational services

Structure of the Report

Section One of this report summarizes the key trends in the development of tertiary education in Poland since the beginning of the 1990s, including the evolving legal framework and the principal outcomes of a decade of reform. *Section Two* focuses on the major outstanding issues today with respect to the financing of tertiary education, quality assurance, and linkages to science and research and the business community together with the need for Poland to build capacity for, and implement, a comprehensive lifelong learning system. *Section Three* presents some promising policy options and suggests specific reform measures for consideration by policy makers in Poland.

Outcomes of a decade of Reform (Section One)

Much has been accomplished since the early 1990s to orient the Polish tertiary education system to the human capital needs of a competitive open economy. In the course of the transformation process, there has been a gradual shift in the priorities for reform. At the outset, the primary task for lawmakers and stakeholders was to give Higher Education Institutions (HEIs) greater autonomy after decades of Government control and to ensure increased participation in tertiary education. An impressive series of legislative measures has been very successful in achieving this objective, and in the related restructuring of the system of courses and degrees. By the late 1990s, following a dramatic increase in the numbers of both students and HEIS, the preoccupation of the Government and the public at large had shifted to issues of equity and quality.

The Major Issues Today (Section Two)

The projected decline of Poland's population together with changing labor market demands for skilled workers have major implications for the education and training system. There is an anticipated increase in knowledge-related employment opportunities, but the proportion of jobs open to poorly qualified blue-collar workers and those leaving school without a formal qualification is expected to decline further in the present situation of high unemployment. The report suggests that, in addition to scientific knowledge and technical and entrepreneurial know-how, the education and training system needs to produce school leavers and graduates who have acquired competencies and life skills such as problem solving, teamwork, communication and technological literacy skills, as well as the business skills and risk-taking attitudes needed for entrepreneurship. The results of recent comparative international studies of student achievement and wider learning outcomes cast doubt on the readiness of

the Polish education and training system at all levels to prepare individuals to respond to the changing demands of the knowledge economy and exploit to the full the opportunities to be offered by Poland's European Union (EU) membership.

Six key issues are discussed:

1. *Financing*: Public expenditure per student is very low by international standards. Even when differences in price levels have been taken into account, per-student spending on tertiary education is less than half of the OECD average and considerably below that in Hungary and the Czech Republic. Without a funding formula or some similar mechanism to allocate state finances, there is no guarantee that educational expenditures are appropriately prioritized. Capacity for strategic, multi-annual capital investment planning is not developed at institutional level.

2. *Equity* A growing demand for higher education has resulted in fee-paying forms of studies in public universities and in non-public HEIs. Since 1998, full-time day students in these courses have been eligible for financial support, but the proportion receiving this is low. In August 1998, a preferential Student Credit program was introduced, but the take-up rate has also been low for reasons that are not wholly clear. Consequently many students and their families bear significant costs. Available studies and reports show that access to higher education for young people from uneducated families is much more limited than for their peers from families with a tradition of higher education.

3. *Governance:* Polish Universities now enjoy more autonomy than 11 other OECD countries for a range of academic and budgetary functions, including the distribution of financial resources, the recruitment of staff and student enrollment. However, systems of governance are narrow, with little opportunities for outside stakeholders, such as the scientific and business communities, to exert any influence. Autonomy needs to be balanced with a requirement to account to Government and stakeholders for the quality and efficiency of their operations. The academic vision of a university needs to be combined with the effective management of a modern institution. At present, there are few incentives to seek greater internal efficiency, such as by using non-traditional teaching methods or institutional sharing of staff or other scarce resources

4. *Quality*: In common with other countries that have experienced a rapid expansion and increased participation rates in tertiary education, Poland has suffered a dilution of average quality. The rapid growth of non-public HEIs is frequently blamed for this decline. Although there are examples of non-public HEIs which provide innovative courses of recognized quality, in many non-public institutions this rapid response to market demand has come at the expense of acceptable standards. This has serious implications for equity. Where academic staff are taking multiple teaching posts in non-public HEIs, they are unlikely to devote much time to the needs of students in non-public HEIs who are frequently paying for these courses in distinctly inferior conditions. Moreover, within public institutions, non-paying students tend to get priority attention, as they are the best students selected through competitive admission procedures. Fee-paying students are academically

weaker as a rule, because they enter fee-paying forms of study programs having been unsuccessful in the competition for free-of-charge study programs. On the positive side, Poland has recognized the need to accredit new non-public institutions and has already taken important steps towards a comprehensive quality assurance system through the establishment and further development of both the State Accreditation Commission and other HEI based committees.

5. *Responsiveness to business needs* : The combination of academic traditions with an autonomous legal and financial framework has encouraged a relatively inward looking and independent academic culture, which tends to show little interest in either the labor market or the business and innovation environment. Most HEIs lack a clear focus on the needs of high technology companies or societal needs in general. There there are few linkages, such as contract or joint research, personnel exchanges, cross-patenting, licensing of technology, purchase/sharing of equipment, between HEIs and the business and industry sectors.

6. *Orientation to Lifelong Learning*: Currently, in Poland, there are inadequate provisions and lower participation in lifelong learning opportunities as defined by the OECD. To address this issue, the Ministry of National Education and Sports took the lead in the elaboration of a lifelong learning strategy which was adopted by Government in July 2003. While this LLL strategy is an excellent first step in the process of creating an agenda for action, the development of the necessary implementation plan for this ambitious agenda represents a challenge for Polish policy makers and institutional capacity will be needed to ensure implementation of this program.

The Way Forward: Promising Policy Options (Section Three)

The tertiary education system in Poland would benefit considerably from a clearer and more coherent Government policy and vision for the sector, accompanied by an enabling framework that encourages institutions to be more innovative and more responsive to the needs of a globally competitive knowledge economy and to the changing labor market requirements for advanced human capital. In this respect, the report recommends that the policy-making role of MoNES should be strengthened, in order to lead the debate on education reform in general, and on the development of tertiary education in particular. In order to build on progress to date and move further towards a world class tertiary education system, the report proposes a series of policy options under the headings of: (i) *financing* a system of mass tertiary education in a transparent and equitable way; (ii) *improving* the quality of educational services; (iii) improving the *responsiveness and linkages* of the system both to the labor market and to the innovation and technology needs of a modern knowledge based economy; and (iv) orientating tertiary education to a *lifelong learning system*.

Tertiary Education in Poland

Introduction

1. "Tertiary education is central to the creation of the intellectual capacity on which knowledge production and utilization depend and to the promotion of the lifelong learning practices necessary to update individual knowledge and skills"[1]. There can be no doubt of its importance to Poland as the country seeks to prosper in a European economy that is increasingly dependent on technology and on the rapid exchange of information.[2] Success in the competitive labor market will depend on the building up and continuous renewal of Polish human capital[3]. As in many other countries, possible reforms to the system of providing and financing higher education and other tertiary education services to increase their relevance to today's social and economic needs have become an increasing focus of public concern.

2. This report follows OECD usage in its use of the terms "tertiary education" and "higher education". Tertiary education refers not only to "universities and other tertiary institutions that award degrees and advanced research qualifications", but also to other post-secondary institutions that "also provide programs that would be classified at a lower level than a degree". The first part of this report summarizes how tertiary education in Poland has evolved since the beginning of the 1990s. Section Two of the report discusses Poland's comparative position with respect to human capital development using selected international indicators. It also discusses the changing skill demands of the labor market since the early 1990s. This is followed by an analysis of key trends in the tertiary education sector which discusses, inter alia, the requirements with respect to the financing of tertiary education, quality assurance, and linkages to science and research and the business community. The final part of the section discusses the need for Poland to build capacity for and implement a comprehensive lifelong learning (LLL) system that makes available modern education and training services to all members of society. Finally, Section Three presents some promising policy options and suggests specific reform measures for consideration by policy makers in Poland in the key areas of financing, quality assurance, responsiveness to innovation and the orientation of the tertiary education sector to a lifelong learning framework.

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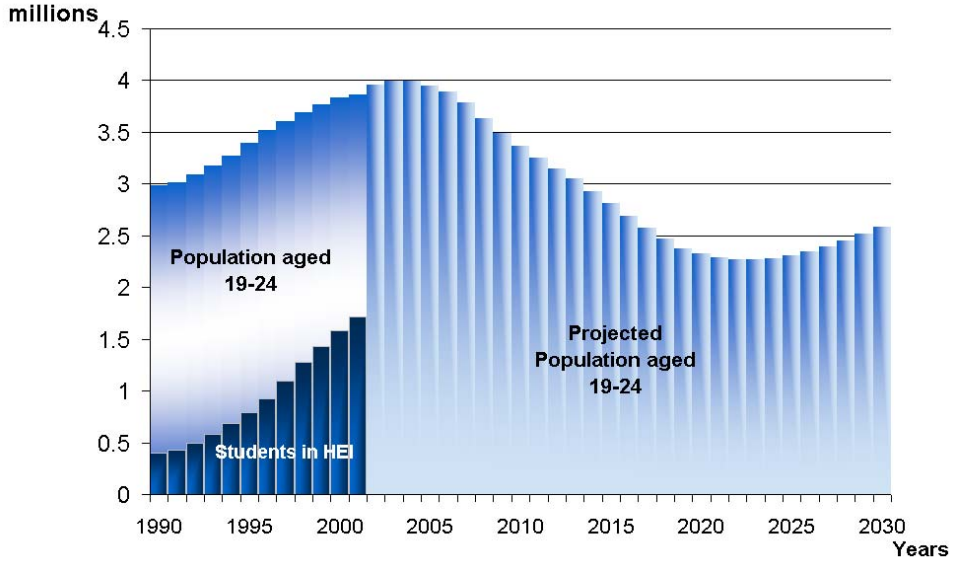
[1] World Bank. 2002. page xvii.
[2] European Commission. 2000
[3] Defined as the "knowledge, skills, attitudes and other individual attributes needed for economic activity" in OECD. 1999.

Key Trends in the Development of the Tertiary Education System

3. Since the early years of transition, the demand for places in higher education has steadily increased, creating new opportunities and challenges for the Polish tertiary education sector. New legislation has granted significant autonomy to Higher Education Institutions (HEIs). What has been the effect of these changes?

Figure 1. Population Aged 19-24 and Students Enrolled in HEI Poland, 1990-2030



Source: GUS, *Higher Schools and their Finances in 2002*, D*emographic Yearbooks* and GUS 1999 Population Projection Data.

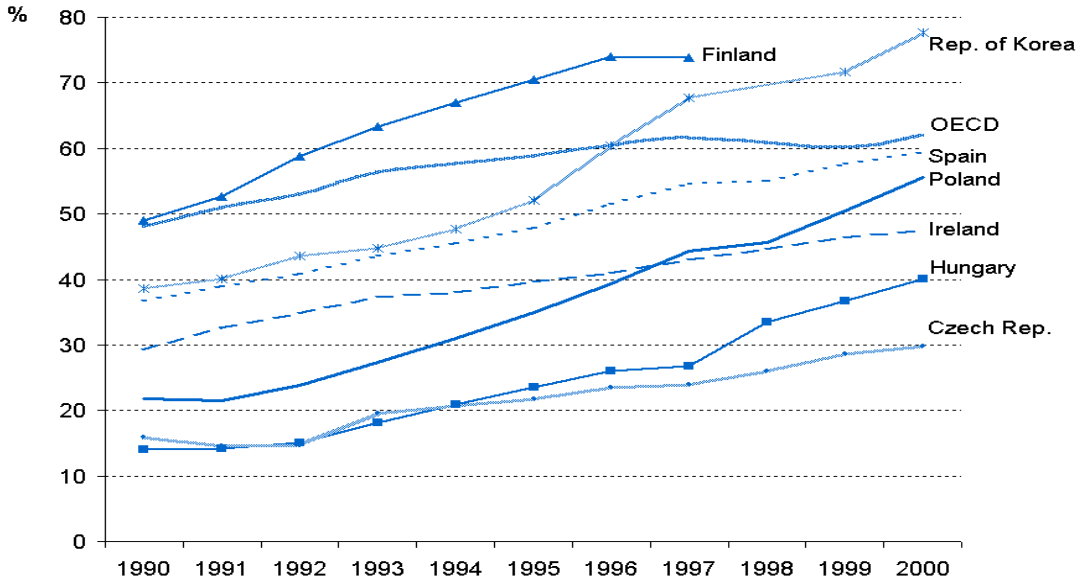
4. One consequence has been an huge expansion in the number of students studying in HEIs leading to a more than threefold increase between 1990 and 2001. This has resulted in participation rates that currently are equal to the OECD average for high-income countries. In 1997-1998, gross tertiary enrolment equaled or surpassed the rate observed in countries renowned for their high levels of human development countries such as Ireland and Japan.

Table 1. Participation Rates in Tertiary Education in Poland

	1990/91	1995/96	2000/01	2001/02	2002/03*
Student # in '000s	403.8	794.6	1584.8	1718.7	1800.5
Participation[4] Rate in %					
Gross	12.9	22.3	40.7	43.6	46.2
Net	9.8	17.2	30.6	32.7	35.0

* Data for 2002/03 is based on National Census Data
Source: GUS, *Higher Schools and their Finances in 2002.*

Figure 2. Gross Tertiary Education Participation Rates. Selected Countries, 1990 - 2000

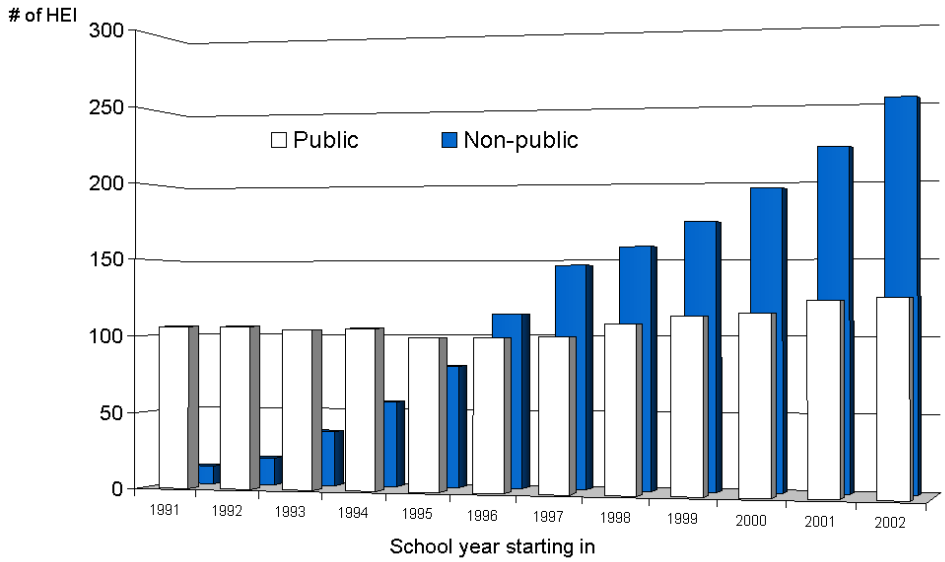


Source: World Bank 2004b.

5. As Figure 3 shows, this rapid increase in demand has been met by a mushrooming of non-public HEIs, from approximately 15 in 1992 to more than 250 in 2003. In 1997, the number of non-public institutions surpassed for the first time the number of public institutions, and there are now about twice as many.

[4] The gross participation rate is based on the number of students, regardless of age, enrolled at a given level of education divided by the total population that corresponds to the theoretical age group specified for that level of education. The net participation rate is based on the number of students in a specified age group (corresponding to legislated standards) enrolled at a given level of education divided by the total population in the same age group.

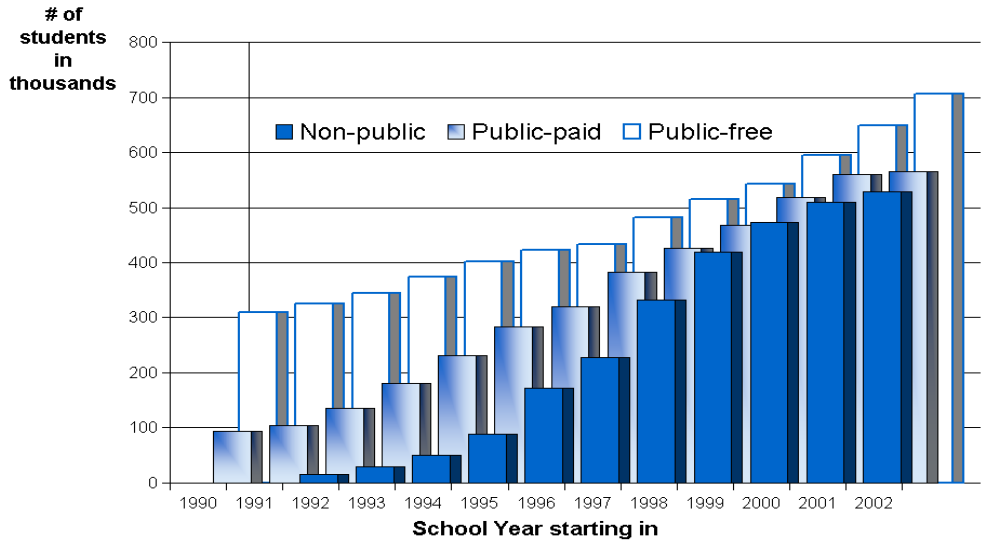
Figure 3. Number of Tertiary Education Institutions in Poland. Public and Non-public, 1991 – 2003



Source: GUS, *Higher Schools and their Finances in 2002.*

6. Another outcome has been the creation of fee-paying forms of studying at public HEIs. Although these are legally required to limit their intake of fee paying students to less than 50%, in many institutions this requirement is ignored. The result is that the number of paying students, from both public and non-public HEIs, exceeds the number of non-paying students, see Figure 4.

Figure 4. Number of Tertiary Education Students in Poland. In fee-paying and non-paying forms of studies, 1991 – 2002



Source: GUS, *Higher Schools and their Finances in 2002.*

Reforms to the Legal Framework

7. Since the beginning of the 1990s, the Polish tertiary education and academic research systems have been transformed through four pieces of legislation:

(a) The Law on Higher Education (12 September 1990);

(b) The Law on Academic Titles and Academic Degrees (12 September 1990);

(c) The Law on the State Committee for Scientific Research (12 January 1991);

(d) The Law on Higher Professional Schools (26 June 1997).

8. The following main provisions of the **Law on Higher Education** of 1990 shaped the Polish tertiary education system for the next decade:

(a) The assurance of academic freedom to each Higher Education Institution in conducting academic research and disseminating its results and opinions of academic circles. This was a direct reaction to the functioning of the higher education system under the political control of the communist state;

(b) The significant independence of HEIs in shaping their organizational structure, staffing policies and financial management systems. More decision powers were devolved to statutes and other internal documents of the institutions;

(c) The provision for greater independence of faculties, both in organizational and financial matters, although their decisions have to be approved either by the Rector or by the Senate. This opportunity has been used by strong and large universities (which otherwise would have become too difficult to steer) to decentralize parts of their decision-making process;

(d) The main governing powers were delegated to elected collegiate bodies, both at the institutional and faculty level. 'There is … clear weighting in favor of collective bodies, rather than individual deans and rectors, in decision making";[5]

(e) The provision for the establishment of non-public institutions. In 1990 the only non-public HEI was the Catholic University of Lublin, which had been granted state funding support through parliamentary decision. In contrast, by 2002 there were more than 250 non-public HEIs in the country;

(f) The introduction a difference in the financing of full-time day studies and other modes of studying (evening and extramural). Whereas full-time day studies are provided free of charge, HEIs are free to charge user fees for all other types of studies. This solution has had a strong influence on the development of the tertiary education sector in Poland;

(g) The provision for the creation of the General Council for Higher Education (GCHE), an independent body with an advisory role to the Minister for National Education. The members of the Council are academics elected by the academic community and also include students' representatives. For a decade the Council played a key role in the development of the higher education sector in Poland as it determined the subjects in which degree courses could be offered and established minimum curriculum requirements for these subjects.

[5] OECD. 1996a. page 34.

Based on these requirements it also evaluated applications for establishment of new private HEIs for the Minister of National Education and Sports. The remit of the General Council for Higher Education has changed since 2001 with the creation of the State Accreditation Committee. It now has a mainly advisory role to the MoNES and also to the Ministry of Scientific Research and Information Technology (MoSCRIT). The Council advises on education policy; on regulations that govern HEIs and on issues raised by the adoption of the Nowa Matura as an entrance examination. It continues to advise on the minimum curriculum requirements for a particular degree course and on new fields of studies.

9. The main function of the **Law on Academic Titles and Degrees** was to ensure that comparable academic criteria would be applied in conferring academic degrees and titles after the decades of political interference. The Central Commission for Academic Titles and Degrees, to which members are elected by the academic community, ensures the quality and fairness of decisions taken. The Commission grants individual faculties and research institutes the right to confer degrees of doctor and doctor habilitatus.[6] It also recommends individuals to the President of the Republic of Poland for conferral of the State title of professor, on the basis of an award procedure conducted in an authorized research unit.

10. The establishment, in 1991, of the **State Committee for Scientific Research (KBN now MoSCRIT)** brought about a major change in the funding of research in Poland. The following characteristics of the system are important:

(a) Institutions from all three research sectors, Higher Education, the Polish Academy of Sciences and the Industrial Institutes, function as parts of the same system;

(b) A significant portion of the funding is allocated on a competitive basis in the form of peer reviewed research grants;

(c) Institutional funding is based on the evaluation of all research institutions entitled to receive core funding from KBN. These institutions are evaluated at regular intervals and the level of their core funding depends on the category in which they were ranked;

(d) For HEIs, this new financing system introduces a certain degree of diversification in funding from public sources as they are financed both from the budget of the MoNES (for educational activities) and from KBN (for research activities).

11. The passage of the **Law on Higher Professional Schools,** in 1997, marked the end of the initial reform phase. The Law was designed to fill a gap in the system of higher education by providing for the establishment of public institutions which function on a regional level, under the joint supervision and leadership of the MoNES,

[6] The Doctor Habilitatus is awarded to candidates who already hold a Doctor's Degree, on the successful presentation of a second dissertation and colloquium. The Habilitation dissertation should represent the candidate's major contribution to development in a given field or branch of learning and should be published in full or in its major parts. In German-influenced higher education systems one cannot be appointed to a professorial chair without the Habilitation

the regional authorities, other regional actors (i.e. professional associations and employer organizations) and the established universities with which they conclude collaboration agreements. This joint leadership should assure both academic quality and academic staff for the new schools (universities) and responsiveness to the needs of the region and the labor market.

12. The four legal acts have been amended in response to emerging developments in the sector. The new Law on the Academic Title and Academic Degrees was approved in 2003. The Law on Higher Education has been amended several times with the establishment of the State Accreditation Committee in 2001 as a major development. In July 2004, at the time of writing, following consultation among various members of the education community, two sets of proposals are under consideration by the Parliament as a basis for a new law to address key issues of higher education reform in Poland. The legal framework for research policy and funding is also in the process of being changed. In 2003 the State Committee for Scientific Research has been reorganized and the Ministry of Scientific Research and Information Technology (MoSRIT) has been created. A draft law on the funding of research prepared by the new Ministry has been submitted to Parliament.

The Principal Achievements of Reform

13. Since the early 1990s, new degree programs and courses have been developed and the Polish system re-oriented to reflect more closely the Anglo-European structure of tertiary level qualifications, as promoted subsequently by the Bologna process. In this structure three levels of degrees are codified: the licencjat (Bachelor), magister (Master) and doctorate (Ph.D.) as opposed to the two levels (Masters and Ph.D) that were prevalent earlier. The process of actually implementing the new degree structure is progressing slowly but steadily with more and more faculties adopting it. The process is supported by MoNES and the State Accreditation Committee through the definition of codified requirements for each degree. However, a substantive internal discussion within academia on the consequences of dividing the five-year programs into two phases and on the expectations for the licencjat as opposed to the magister has yet to take place in many faculties.

14. **Ph.D. studies** have existed in Poland for several decades. Increasing the number of doctoral students is a priority for MoNES and the State Committee for Scientific Research (KBN). The number of Ph.D. students grew from 4,427 in 1993 to 31,072 in 2002. Ph.D. students have access to research funding in the form of special KBN grants. The form and content of doctoral studies are being transformed. Traditionally, Ph.D. studies comprised a lengthy period of individual academic work on a doctoral thesis under the supervision of a professor. As in other European countries, the American model of doctoral studies, comprising both course work with examinations and the writing of academic texts, is in the process of being introduced in Poland. But because clear rules have not yet been established and different institutions are at different stages of implementation, curricula and course completion requirements can still differ. Some regulations concerning doctoral studies were determined in March 2004, in the new Law on Academic Titles and Academic Degrees. It is expected that the new law on higher education will further clarify the curriculum requirements and general functioning of doctoral studies.

15. **Licencjat Degree and Professional Higher Education**. The introduction of the licencjat degree as part of the alignment of Polish higher education with the predominant European system of higher education has facilitated the development of professional education. The process has been speeded up by the introduction of the Law on Higher Professional Schools in 1997. The new schools, set up on the initiative of MoNES or on the initiative of the regional authorities (a parliament of a voivodship – sejmik wojewodzki), are intended to produce graduates oriented toward the labor market. However, neither the licencjat degree nor the professional schools have been really accepted as being of equal value to traditional academic studies by the Polish academic community, by employers and by society at large. Higher professional schools are perceived, by their leadership and staff as well as by students, as a requirement for the second level of university education – the master's degree. This is demonstrated by the way in which the schools market themselves, emphasizing the fact that their diploma allows students to continue to study for a master's degree. Also, research shows that the majority of students enrolled in the professional schools plan to continue their studies towards a master's degree[7]. Any review of job advertisements in daily newspapers confirms that employers prefer graduates with a master's degree and do not consider the licencjat degree as a fully-fledged diploma.

16. In research universities, the licencjat degree was initially introduced in evening and extramural fee-paying forms of studies. There has been much less interest in introducing the licencjat degree for full-time day studies. Students who do not pay tuition fees may be less concerned with the length of time required for obtaining a degree. Some departments have been reluctant to introduce the licencjat because they do not accept the principles of professional education in their field. As noted above, the introduction of the licencjat degree has not everywhere been followed by a thorough discussion within faculties and departments on the definition of requirements for the two levels of licencjat and master's degree courses and thesis. Instead, universities prefer graduates of professional schools to continue in fee paying masters' courses, as these provide a source of revenue.

17. Since the early 1990s, international linkages have been established at the institutional and individual levels through the active participation of universities, faculties, departments and individual researchers and students in various EU exchange programs. The flow has been predominantly from Poland to the former EU-15 countries. Academic networks between Poland and the EU and USA are flourishing. The European Credit Transfer System (ECTS), which facilitates the comparability of diplomas and increased mobility of Polish students throughout the EU, has been introduced in the mid-nineties and has been developing since then. The process of implementing the Diploma Supplement, assuring international recognition of Polish HE diplomas and thus encouraging the inflow of foreign students to Poland, started in 2000 and, by the end of the academic year 2001/2002, almost 4,000 Diploma Supplements were issued. The implementation of both processes is not obligatory under the present law; however the new draft Law on Higher Education proposes to establish them as requirements.

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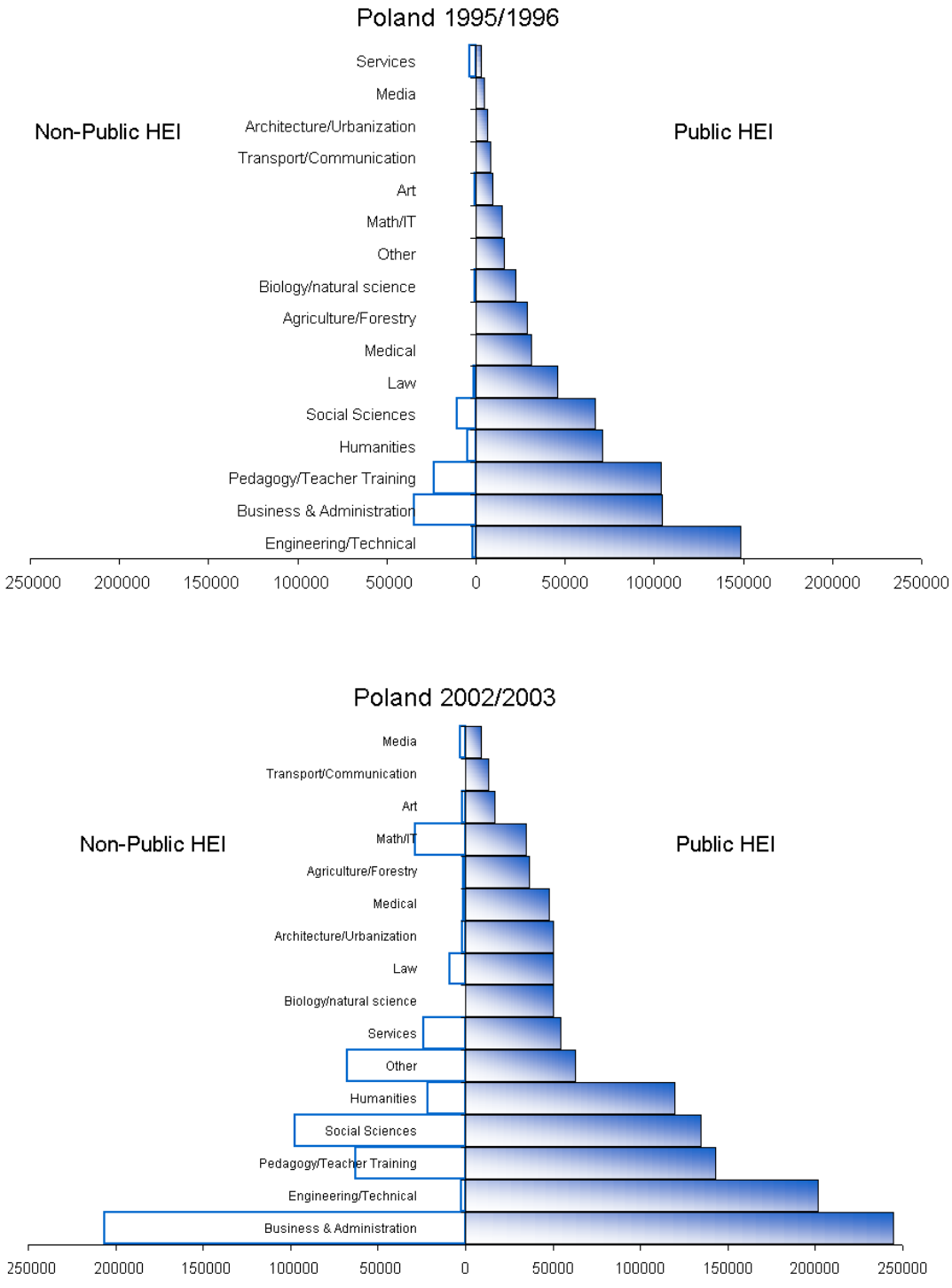
[7] Wójcicka Maria, NiSW 2/18/2001.

18. One major positive development, that has resulted from the last decade of reform in the tertiary education sector, has been the significant diversification of the programs and courses offered in public HEIs. Student choice has also been accommodated by allowing for different types of study, full-time diploma as well as evening and extramural programs. In addition to a larger number of students studying more and more varied courses, the two diagrams of Figure 5 provide additional information about the institutional transformation of tertiary education in Poland. Not surprisingly, there has been a large and predictable growth in business and social sciences courses with the larger proportion of that growth in non-public HEIs. There is also growth in mathematics and IT teaching and training in the non-public sector. However, it is important to note that non-public HEIs do not offer Engineering /Technical/ Scientific courses in any appreciable numbers. Hence, the growth that has taken place has mainly been in courses that are quick to deliver and relatively cheap to run, presumably because they do not require an investment in laboratories or other expensive equipment. This preponderance of "cheap to run" courses in non-public HEIs has implications for the equitable financing of the education and training system, because students who are not able to gain access to public universities are, de facto, limited in their choice of professional orientation.

19. Much has been accomplished since the early 1990s to orient the Polish tertiary education system to the human capital needs of a competitive open economy. In the course of the transformation process, there has been a gradual shift in the priorities for reform. At the outset, the primary task for lawmakers and stakeholders was a focus on the need to create greater autonomy for HEIs after decades of Government control and to ensure increased participation in tertiary education. By the late 1990s, the increase in the numbers of HEIs had led to a greater preoccupation, both in Government and in the public at large, with equity and quality. These issues will be discussed in Section Two of this report.

Figure 5. Absolute increase in number of students and difference in profile between non-public and public schools in 1995 and 2000

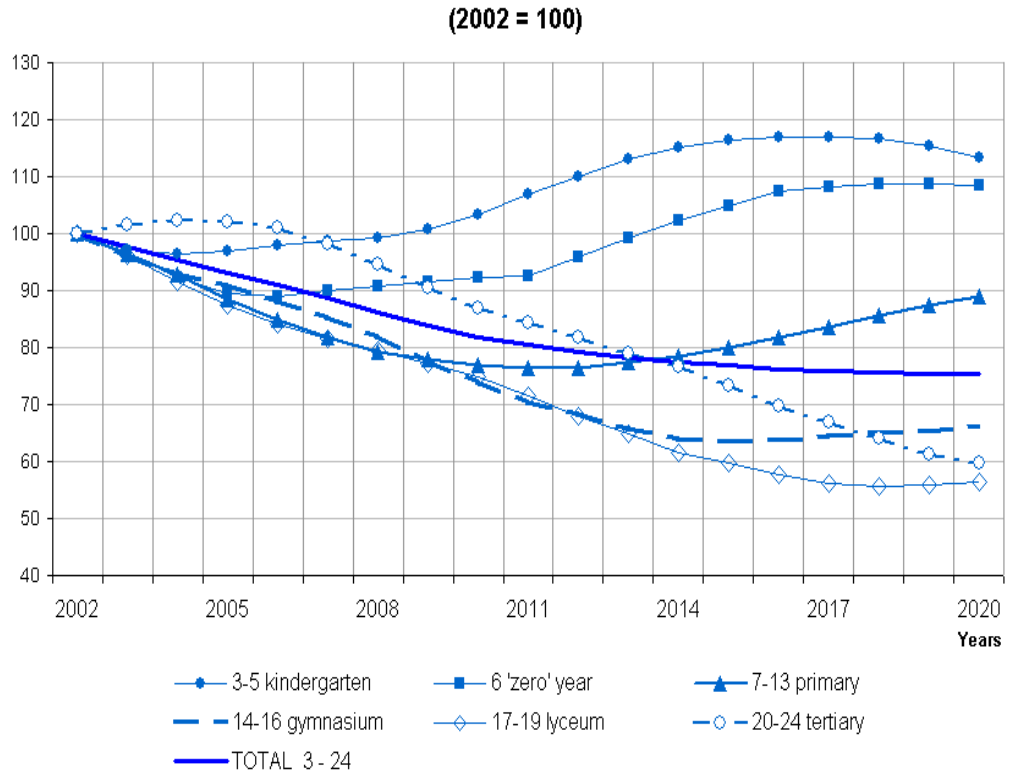


Source: GUS, *Higher Schools and their Finances in 2002*.

Demographic Challenges[8]

20. The demographic structure of the school-age population in Poland is changing dramatically. The country's total fertility rate is well below replacement, having declined from an average of 2.0 births per woman in 1990 to 1.3 births per woman in 2000. As a result, the size of the school-age population (2-24 years of age) has been in decline since 1990. Relative to the situation in 2000, the sector is projected to face a 22 percent decline in the school-age population by 2010. By 2020 the decline in the size of this population is expected to reach 28 percent. Figure 6 shows that the baby "booms" and "busts" will hit the different levels of the education system at different points along the forecasted cycle.

Figure 6. Projected Demographic Trends by Level Specific Ages. Poland 2002 – 2020



Source: GUS. 1999 Population Projection Data.

21. The PPP-adjusted unit cost in both primary and secondary education is well below the OECD average[9]. At the same time, there is a large backlog of capital

[8] World Bank. 2003b. pages 69-70.

investment in the Polish school system, teachers' salaries are quite low by international standards, and indicators of education quality and performance suggest that quality-related spending may have to increase. The demographic changes, discussed above, could turn into a significant savings dividend if the Government can adjust inputs to capture the savings associated with smaller cohorts. For example, the unit cost of a primary school student in 1998 was US$1,496.[10] If all those who were 7-14 years old in 1998 had been enrolled, the cost for the 4.9 million children would have been US$7.4 billion. In 2010, the 7-14 year old cohort is projected to decline to 3.1 million children. Using 1998 unit costs, this smaller cohort translates into a savings of US$2.7 billion. These changes of age structure will have significant implications for the organization and number of schools and for the demand for trained teachers with different profiles. Although it is unlikely that the whole theoretical demographic efficiency dividend can be fully realized, much can be achieved by careful planning.

A changing labor market

22. Changing labor market demands for skilled workers in Poland since the early 1990s have major policy implications for the education and training system. Figure 7 below illustrates that, even in a period of high unemployment, graduates with secondary or tertiary education do better in the labor market than those with a primary or incomplete education. The latter have, for example, a higher probability of being unemployed than the former. In terms of employment outcomes, the graduates of basic vocational schools are doing worst of all. Apparently, employers not only use educational qualifications to screen prospective workers, but more highly educated persons also have more valuable skills including adaptability and trainability. With the anticipated increase in knowledge-related employment opportunities in Poland, in parallel with other developed economies, the proportion of jobs that are open to poorly qualified blue-collar workers and those leaving school without a formal qualification are expected to decline further. This is a significant issue for policy makers, particularly because unemployment rates are already high and the labor force participation rate comparatively low.

23. Figure 7 shows the unemployment rates, from 1993 to 2003, of individuals who graduated within 12 months prior to the survey and who did not continue their formal education,. Unemployment rates among graduates generally show an upward trend from 1997 or 1998, but there is a marked difference between graduates from general secondary education and those from vocational secondary schools.

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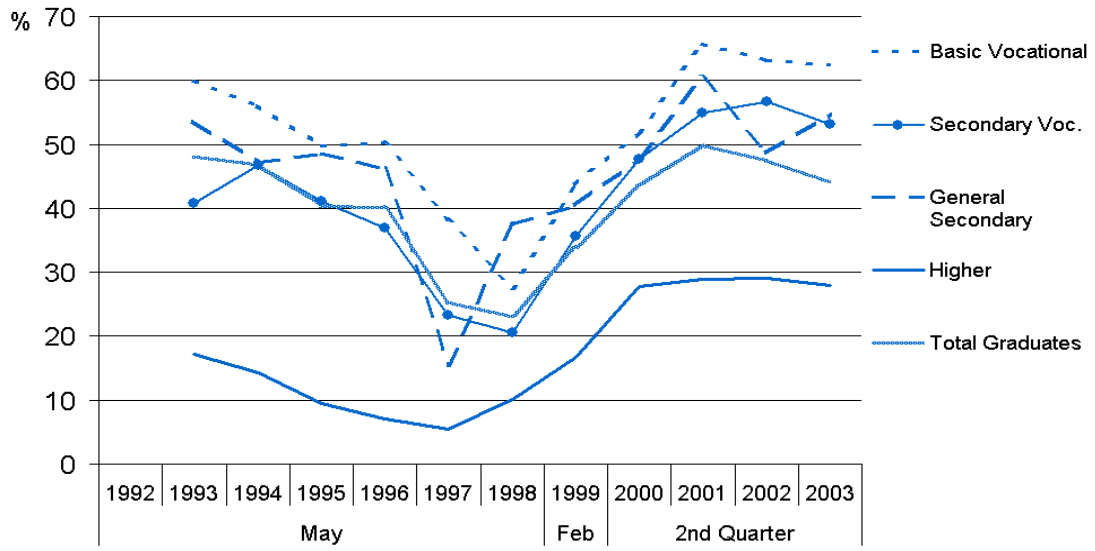
[9] PPP (purchasing-power parity) adjustments are used in international comparisons to reduce distortions arising from diverse price structures, fluctuating exchange rates, and other elements that cause price levels to diverge in dollar terms.

[10] Cost estimates are derived from OECD education databases.

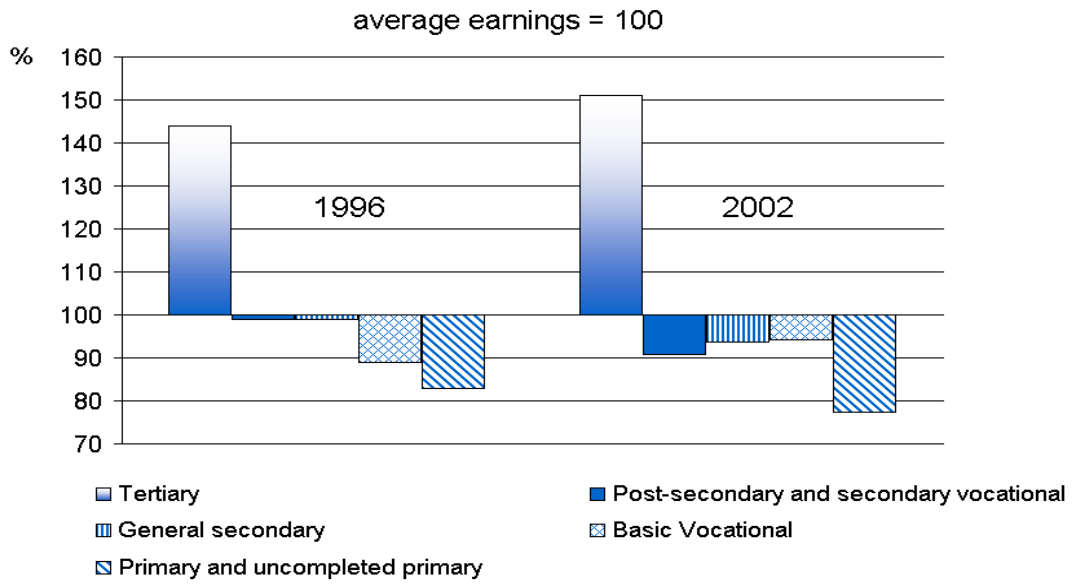
Figure 7. Unemployment rates among education graduates, Poland (1993-2003).



Source: GUS, Labor Force Survey.

24. Figure 8 presents further evidence to illustrate the increasing importance of educational qualifications and associated skill differences in the Polish labor market in recent years. The data suggest that the relative wage difference between the poorly and well educated employed population increased substantially between 1996 and 2001. The evidence also shows a small improvement in the relative wages of highly educated persons during the same period.

Figure 8. Earnings by educational attainment relative to average earnings, Poland 1996 and 2002



Source: Own calculations based on GUS Labor Force Survey Data

25. The estimates provided in Table 2 suggest that wage premia have increased significantly between 1996 and 2001, with a marked increase in the wage returns to skilled professionals and managers. Interestingly, the data also suggest that the relative wage position of office workers, clerks and other workers in white-collar services was stable over the period, while the relative wages of blue-collar workers declined significantly. Increasing income differentials can be caused by a number of different factors, including changes in labor demand and supply, but prior research and analysis strongly suggest that the return to education and skills is another major contributing factor.[11]

26. International labor market research indicates that, in modern labor markets, individuals can no longer anticipate employment by the same firm or public sector employer for their entire working life, but must expect to change jobs and to learn new skills regularly and often.[12] Within companies, job specifications themselves change rapidly with a great emphasis placed on flexibility and a willingness to take on new tasks and assume responsibility for learning on the job. "Successful businesses are looking for employees who can adapt to changing needs, juggle multiple responsibilities and routinely make decisions on their own."[13] In addition to scientific knowledge and technical and entrepreneurial know-how, the education and training system needs to produce school leavers and graduates who have acquired generic competencies and life skills, such as problem solving, teamwork, communication and technological literacy skills, as well as the business skills and risk-taking attitudes needed for entrepreneurship.[14]

Table 2. Wages as Percent of Average Wage, Selected Professional Groups, Poland 1996 and 2002

Selected professional groups	1996	2002
Top managers	182	233
Professionals	118	133
Technicians and other medium staff	102	102
Office workers	91	89
Personal services and sellers	70	60
Farmers and gardeners	78	67
Blue-collar workers in manufacturing	96	84
Operators of machines	98	89
Unskilled workers	68	59

Source: GUS. Wage Surveys 1996 (March) and 2002 (October)

[11] De la Fuente, A., 2003. and Patrinos, H. and Psacharopoulos, G., 2002.
[12] OECD. 1994.
[13] Partnership for 21st Century Skills. www.21stcenturyskills.org
[14] Rychen D.S. & Salganik L.H. (Eds.). 2003.

Poland in International Comparison

27. At first glance it would indeed seem that Poland, with its strong academic, and intellectual traditions[15], has the capacity to develop a skill-based, high-technology knowledge economy through the further development of its human capital stock. However, some recent international studies of student achievement and wider learning outcomes have produced data that question the readiness of the Polish education and training system, at all levels, to prepare individuals to respond to the changing demands of the knowledge economy and exploit to the full the opportunities to be offered by Poland's European Union (EU) membership.

(a) Evidence from the International Adult Literacy Survey (IALS) conducted by Organization for Economic Co-operation and Development (OECD) and Statistics Canada in the mid-1990s, demonstrated that close to 75 percent of the Polish population aged 16-65 years performed below the level deemed necessary by labor market experts and employers to function competently in an information and literacy-rich workplace.[16]

(b) The data collected for the IALS also showed that both the general and the employed population in Poland participated less frequently in organized adult education and training programs during the year before the interview, compared with the populations of other, mostly Northern European nations.[17] More recent data, collected in 2002 for the European labor market survey, confirm this picture. Only 0.33 percent of all adults aged 35-54, without completed upper secondary education, participated in any form of education or training during the four weeks prior to the survey. The comparable estimate for the EU-15 was 2.28 percent.[18]

(c) In the 2000 survey conducted by OECD under the Program for International Student Assessment (PISA), Poland was ranked 24 out of 31 countries in reading and mathematical literacy skills and 21 in scientific literacy skills, behind the high human development countries (OECD, 2003). The country distribution on the PISA reading literacy scale relative to Gross Domestic Product is displayed in Figure 9.[19] The 2003 *Literacy Skills for the World of Tomorrow - Further results from PISA 2000 Report* shows considerable variation in levels of knowledge and skills between students, schools and countries. In Poland, the marked difference for students going into vocational education, and those destined for a more academic education, emerges from detailed analysis of the results.

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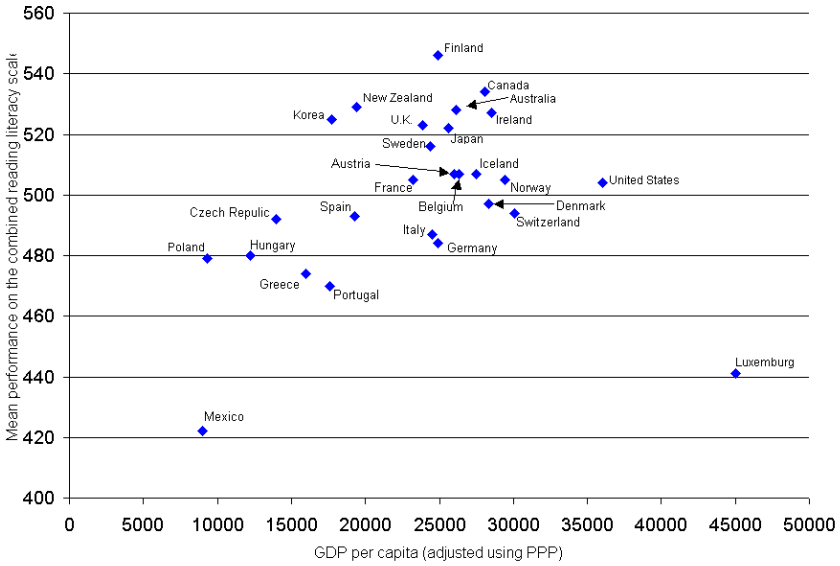
[15] Evidence from the PISA study demonstrates the elitist character of the Polish education system by highlighting the difference in achievement between students who receive a general education with an academically oriented curriculum as opposed to those entering the vocational education system.
[16] OECD and Statistics Canada. 1995.
[17] OECD and Statistics Canada. 2000.
[18] Commission of the European Communities. 2004.
[19] The PISA study takes a broad approach to the measurement of reading, mathematics and science – examining the ability of 15-year-olds to apply their knowledge and skills in order to meet real-life challenges rather than the extent of their mastery of a specific school curriculum. See OECD. 2003c.

Figure 9. Student Performance in Reading Literacy and GDP per capita adjusted using PPP: PISA 2000



Source: OECD 2001a and OECD 2001b.

(d) The 2003 Global Competitiveness Report, which surveyed the quality of technology stocks of human resources and took into account economic creativity (*inter alia* familiarity with new technology and a high level of competence in English), provided a ranking of the EU acceding countries as shown in Table 3.

Table 3. Country Growth Competitiveness Ranking

EU Accession Countries (2003)

Estonia	22	Slovak Republic	43
Slovenia	31	Poland	45
Hungary	33	Bulgaria	64
Latvia	37	Turkey	65
Czech Republic	39	Romania	75
Lithuania	40		

Source: Global Competitiveness Report 2003.

Expenditures On Tertiary Education

28. With reference to OECD benchmarks, the expected range of expenditure for all levels of education as a percentage of GDP would be between 4 and 6 percent. Expenditures on tertiary education would generally be expected to represent between 15 and 20 percent of total public education expenditure.[20]

29. Poland's actual public allocations, by educational levels, are comparable to those for the OECD (see Table 4). In 2000, Poland spent 10 percent on preschool education, 72 percent on primary and secondary education and 18 percent on tertiary education.

Table 4. Structure of Public Education Expenditures (by Level and Type of Education)

Level of Education	Percent of Total Education Expenditures Allocated by Level						1998 Comparaisons	
	1995	1996	1997	1998	1999	2000	Poland[b]	OECD[b]
Preschool	10.8	10.3	9.9	10.0	10.1	10.1	10.0	9.6
Primary Education	51.2	50.1	50.5	50.5	47.0	41.1		
Lower Secondary[c]	NA	NA	NA	NA	1.9	8.4		
Upper Secondary	21.2	21.7	21.7	21.8	21.5	22.9	72.3	69.3
of which:								
General	*5.3*	*5.6*	*5.8*	*6.1*	*6.2*	*7.0*		
Vocational	*15.9*	*16.1*	*15.9*	*15.7*	*15.2*	*15.8*		
Tertiary	16.8	17.9	17.9	17.7	19.6	17.6	17.7	21.2

[a] These exclude expenditures not allocated by level, such as extracurricular activities, teacher training, transport of students, administrative costs of the MoNES, dormitories, and correctional facilities. In 2000, spending on teacher training constituted 0.4 percent of total public education expenditures. Other expenses not allocated by level, amounted to 10.3 percent.

[b] The estimates refer to public expenditures on education, net of the share allocated to tertiary institutions for research and development activities.

[c] In 1999 Poland split the eight-year primary school into the six-year primary school and three year lower secondary school.

Source: World Bank. 2003b. page 66.

30. However, for higher education, Poland, has the lowest per-student outlays in all the OECD countries for which data are available. Even when differences in GDP have been taken into account, per-student spending on tertiary education was less than half of the OECD average and considerably below Hungary and the Czech Republic.[21]

[20] World Bank. 2002.

[21] One reason for this comparatively low expenditure on tertiary education in Poland is, undoubtedly, low teacher salaries. However, it is difficult to identify the precise cause and significance of these findings. Are there small teacher/student ratios? Are more Polish students studying cheaper courses in institutions without well-equipped classrooms and laboratories? Without further analysis of

Table 5. Tertiary Education Expenditure*
Selected Countries, 2000

Country	Annual expenditure per student USD	Country	Annual expenditure per student USD
Republic of Korea	6118	Ireland	11083
Finland	8244	Hungary**	7024
Spain	6666	Czech Republic	5431
Poland**	3222	OECD mean	9571

** Annual government expenditure on educational institutions per student in equivalent US dollars converted using PPPs , based on full-time equivalents.*
*** Public institutions only.*
Source: OECD. 2003a.

31. Moreover, given the growth in enrolment, public expenditures for tertiary education have actually declined significantly on a per student or unit cost basis. However, it should be recalled at this point that much of the enrolment growth in tertiary education has occurred in institutions classified as non-public or in paying forms of studies at public universities.

Allocation Mechanisms

32. State support for tertiary education in Poland comes from two main sources: (i) a major part from MoNES for the core activities of HEIs including staff salaries and infrastructure investment; and (ii) a smaller part from the Ministry of Scientific Research and Information Technology for research. Higher Education Institutions in Poland are quite autonomous (relative to, say, Hungary or to Slovakia) with the principle of budget fungibility well established and authority for spending resting squarely with the Rector and the Governing body.

33. MoNES has no transparent methodology by which it can prioritize investments in tertiary education. Possibly due to the country's post-war history of using centrally allocated budgets for capital expenditure on tertiary institutions, and the experience in more recent years of resource constraints so severe that capital budgets were nearly entirely eroded, even the large and well respected universities in the country do not have a capacity for working with multi-annual capital investment plans. As a consequence, capital spending in public tertiary education is insufficiently well planned and not transparent.

34. Between 1992 and 2000, the funding for teaching was allocated on the basis of an algorithm. An OECD report described the system in 1996 as follows:

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comparable data for the Czech Republic or Hungary, on the one hand, and Poland on the other, it is difficult to identify whether the low Polish budget is having an unduly negative effect on the quality of higher education overall.

> 'Starting from 1992, funds for teaching provided to the universities are, in part, distributed to the institutions proportionately to the previous year's expenditure, partly according to an algorithm which takes into account the number of students (using discipline weights and giving to extra-mural students half as much weight as to regular students) and the ratio of [students to] highly-qualified teaching staff employed by the institution (here, too, a weighting table is used, ranking the different level of staff). When in 1992 the algorithm was applied for the first time, less than 30 per cent of the higher education budget was allocated according to the algorithm and about 70 per cent according to the previous year's expenditure; in 1994 the proportion was 60 percent and 40 per cent. The introduction of the new funding mechanism was aimed at increasing the number of students and at raising the qualification level of staff.' [22]

35. The new funding mechanism led to changes in the structure of academic staff, raising its qualification level (e.g. leading to increased numbers of habilitated doctors, who have the requisite qualifications to apply for a professorial appointment); however it discouraged any rationalization of numbers of staff. The new system also promoted an increase in the number of doctoral students, who were counted in the algorithm, instead of assistants with work contracts who were not. But it provided no other incentives to improve internal efficiency or develop longer term reform plans. Since there was no increase in overall funding,[23] there were no means to offer incentives for pursuing more fundamental changes and all HEIs merely adapted their services to existing structures and staff instead of seeking ways to meet changing demands from future students, parents, and employers.

36. Since 2000, the funding formula, originally established in the early 1990s to promote the expansion of enrollment and to encourage HEIs to employ greater numbers of professors with doctorates, has been officially abandoned. The Ministry now divides the funds proportionally to the previous year's expenditure. This approach risks fossilizing existing structures and modes of operation and moves away from international good practice. Funding for higher education institutions can be based on agreed indicators or development plans or on contracts with the funding body and each of the instruments serves the implementation of a certain policy.

37. As explained in paragraph 10, the research funding streams originating from the KBN (science) budget provide both funds to cover core establishment costs (so called 'statutory funding') and competitive project based funding for which researchers compete. The core funding is based on an institutional evaluation procedure. In the case of HEIs, the subject of evaluation and funding are the faculties within a university, not the institution as a whole. Once budgets are allocated to faculties, it is up to the Faculty Deans to decide about the allocation of research funds to disciplines, fields of study and research groups, although often University Senates work out the general policy guidelines for faculties. Project based funding is awarded directly to applying researchers or research teams. Only a small part of KBN funding (usually less than 20%) is distributed to central university authorities via the MoNES budget. This procedure of awarding research funds to Faculties should assure that

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[22] OECD. 1996a. p.112.
[23] Dabrowa-Szefler, M., NiSW 2/20/2002.

scarce money goes directly to teams that have been positively evaluated. This has an impact on the performance of Faculties in the exact, applied and natural sciences, which are oriented to research, and have relatively few students and almost no fee paying students. Faculties such as Management, Economics and Law rely on funding for teaching activities both from MoNES and from individual student tuition fees.

38. The advantage of this funding system is that it gives an incentive to faculties to develop their own strategy, either based on teaching or on research activities (and sometimes on both). However, the methods applied by both MoNES and KBN to the financing of HEIs also have disadvantages. One is that they weaken the ability of university authorities to pursue and implement university-wide reforms or develop new programs, as scarce discretionary funds remain at their disposal. If HEI leaders are to develop and implement strategies for reform and innovation, then they should have the resources to do so. Another disadvantage is that faculties become rather independent and less prone to consider interfaculty cooperation or the functioning of the HEI as a whole.

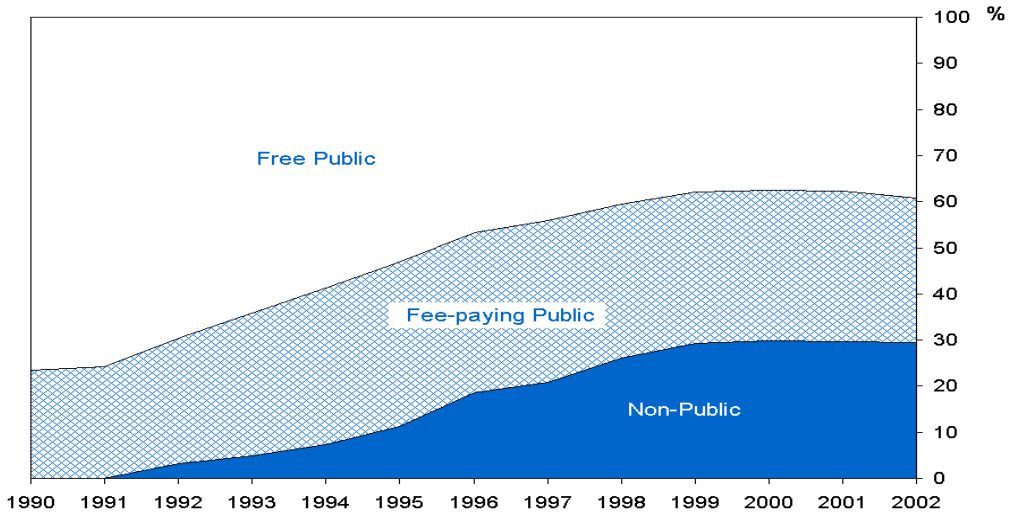
Financing of Tertiary Education

39. The Constitution of the Republic of Poland guarantees that education is free of charge in public sector institutions. However it also states that, by a legal Act, charges may be made for certain educational services provided by public higher education institutions.

40. The overall response to the growing demand for higher education has been the creation of fee-paying forms of studies in public universities and in non-public HEIs. As financing of tertiary institutions from the State budget did not increase proportionally to the growth in the number of students, it is generally believed that unit costs have declined and students and their parents now pay more of the indirect costs (this group financed growth through tuition fees). It is also thought that savings have been made to the costs of the staff of HEIs (more students per academic employee, more working hours).[24] Non-public institutions often have no proper infrastructure or libraries. Their students use the resources of public HEIs without any formal agreement or financial compensation. The costs of this indirect State support for students of non-public institutions are a burden for public universities.

[24] Dabrowa-Szefler, M., NiSW 2/20/2002.

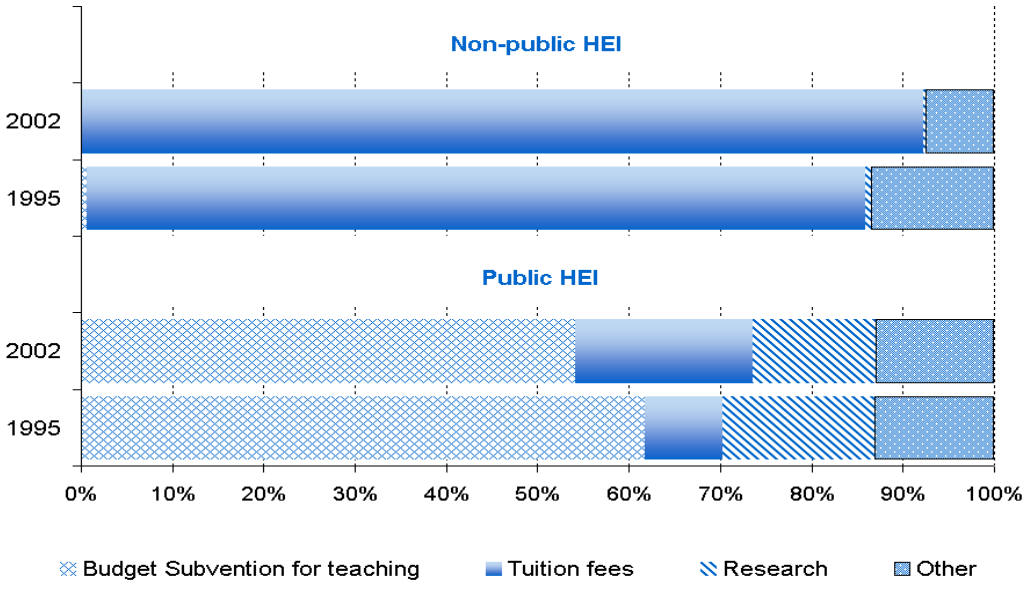
Figure 10. Shares of fee-paying and non-paying HEI students, 1990-2002



Source: GUS, own calculations based on data from *Higher Schools and their Finances* and MoNES data.

41. In response to rising demand, there has been an increase in places as well as in the number of fee-based (paid) forms of studies in public HEIs which now have four distinct sources of financial support, of which revenue from the state budget and private sources constitute the largest shares. By contrast, non-public HEIs are almost entirely dependent on tuition fees. The increase in places as well as in the number of fee-based (paid) forms of studies in HEIs has had a strong impact on their budgets. Figure 11 shows the degree of dependence of non-public HEIs on tuition fees.

Figure 11. Higher Education Institutions' Total Income Structure by Source 1995 and 2002



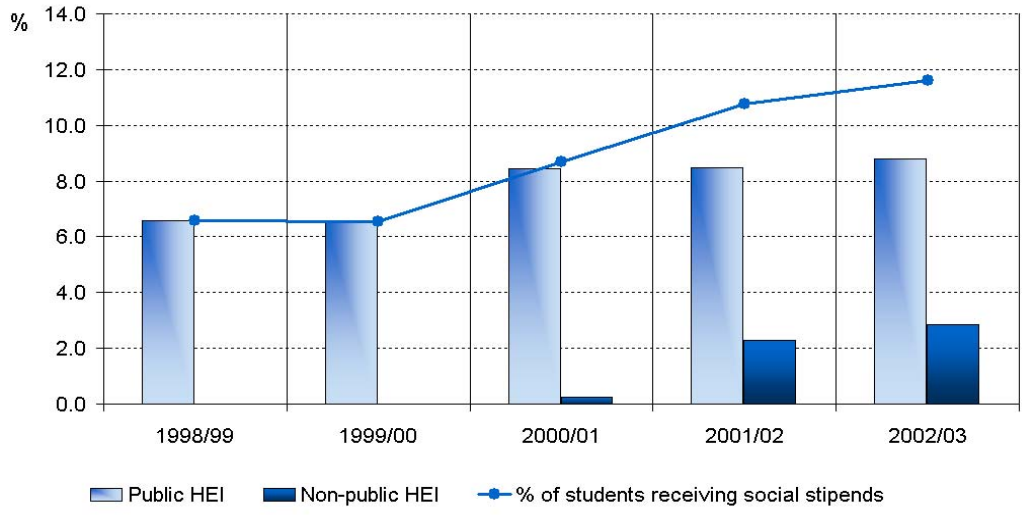
Source: GUS, *Higher Schools and their Finances in 2002*.

42. Fee-based forms of study programs are primarily created in areas and subjects, which are in high demand and do not require extensive capital investment in expensive infrastructure and equipment: management, economics and finance, law, social sciences, humanities, and teacher training studies. The popularity of these subject areas is also connected to the fact that some established disciplines (e.g. engineering and agriculture schools) have been losing students. In their search for a continuous supply of students HEIs have been developing new 'fashionable' study programs. For example, during the 1990s, almost all technical universities and many agricultural universities created management schools. While this is not, in itself, necessarily a bad development, its usefulness ultimately depends on labor market demand and whether the graduates can be absorbed in jobs that require them to use and further develop the knowledge acquired through education. Indicators such as the length of time spent in studies, unemployment rates for young people with different educational qualifications and wage growth for different categories of occupations, suggest that Poland is in the process of creating an oversupply of tertiary graduates based on current labor market structures and the current demand for skill. Moreover, stringent quality requirements especially related to the qualification of the teaching staff have not always been enforced.

Student Support Programs

43. According to the current law in public HEIs and since 2001 in non-public HEIs, full-time day students are eligible for participation in financial support programs. These programs include social stipends, special stipends for the disabled, stipends for high achievers, grant-in-aid, and subsidies for boarding and meals. The decisions regarding the granting of this aid lie with the Rector of the HEI and the self-governing student body. The new law on higher education foresees eligibility for these programs, for students irrespective of whether they are in fee-paying or free of charge forms of education.

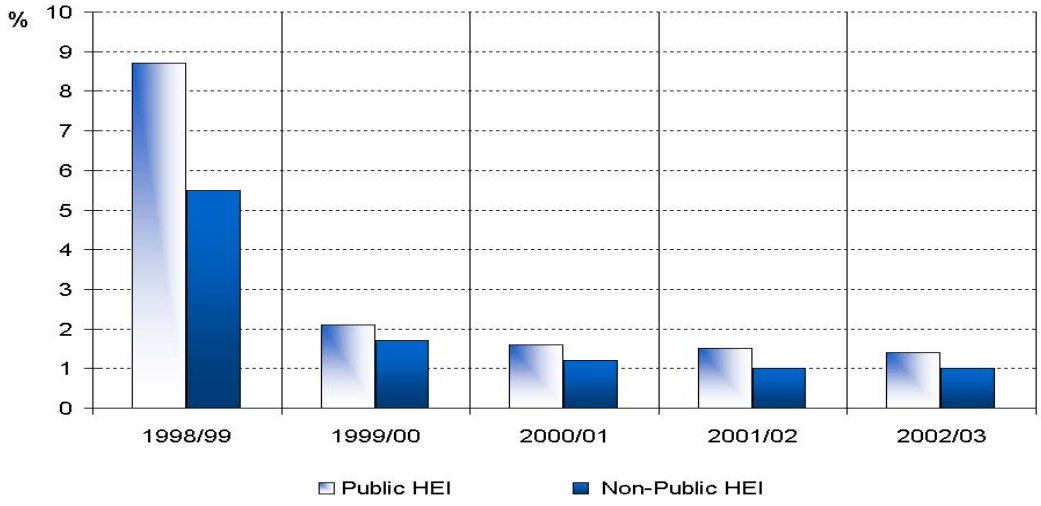
Figure 12. Share of tertiary students receiving social stipends, 1998 - 2003



Note: data on non-public HEI may be incomplete
Source: GUS, *Higher Schools and their Finances in 2002*.

44. In August 1998, a preferential Student Credit program was introduced whereby students, whose family income was low, would be eligible to receive a Government-subsided credit from commercial Banks to be paid back starting one year after graduation. The new law on higher education proposes to broaden access to these preferential student credit programs by including doctoral students and civilian students in military schools. Moreover, the new law foresees the lengthening of the grace period for repayment to two years after graduation. Students, whether Polish or EU citizens, attending public or non-public institutions, can borrow 450 PLN (USD$ 112.5) per month, for ten months of the year (October-July) until their studies end, for a period not to exceed six years. The interest rates during the credit period are paid by the State and students who come from very poor families must get a guarantee.[25] The Student Loan and Credit Fund operates from within the Bank of the National Economy (Bank Gospodarstwa Krajowego). The revenues of the Fund consist of: budget subsidies, interest from deposits, investment income from Treasury securities, repayment of the loan principal, and other sources, including inheritances, donations, etc.[26] While the program seems to be operating satisfactorily, it is curious that the low take up rate in 1998 has declined yet further to an almost negligible number of students in 2003 (see Fig.13).

Figure 13. Credits Granted in years 1998-2003 (as a % of the number of students in HEIs.)



Source: MoNES. *Kredyty Studenckie w latach 1998-2003*. Internal Report.

45. It seems that the credit and loan program is not designed to attract significant amounts of private financing into the tertiary education system. Because the take up rate of the program is low, however, there is still substantial private expenditure borne by the students or their families for living expenses. Further analysis of these student

[25] Credit security is required and may be in the form of a bill of exchange, civil guarantee or mortgage. There is also a possibility of a guarantee from Bank of National Economy for the poorest students, from the State Credit Guarantee Fund.

[26] Law of July 17, 1998 on student loans and credits. As of October 1, 2002. Article 3.

support programs would be necessary before judgments could be made about the profile of the students who do avail of them and about the longer-term outcomes.

Equitable Access to Tertiary Education

46. Since there are (and always were) more candidates than places for selected public schools and selected study programs, for decades Polish public HEIs have accepted students on the basis of highly competitive entrance examinations. In this system, a young person in a graduation year first takes *matura* examinations and, during the next two months, entrance examinations.[27] As the demand for higher education grew significantly and the State was not able to finance HEIs to such a level that they could accept all those wishing and able to study, competition for *State-funded (free of charge) study places* has become fierce. For example, by 2003, Warsaw University could only admit about one in ten applicants for a study place[28]. The demand for study places is especially high in selected study areas: economics, management, law but also social sciences, biotechnology and information technology. On the other hand, there are study areas, sometimes with academic staff of highest quality (physics, chemistry) which do not have sufficient candidates and accept students with a *matura* certificate on a basis of an interview. In these degree programs the selection process takes place later on.

47. In a situation of growing demand and competition, each candidate is allowed to apply for and take examinations for several study programs. Success in these examinations is strongly influenced by the combined factors of stimulation and support from the family and from school. The assistance of parents and teachers can cover, inter alia, help in the selection of a suitable study program (more ambitious for a promising candidate or one less in demand for a weaker candidate), special preparatory courses, and additional foreign language classes.[29] Even the mere fact of living in an academic city makes it easier to take examinations for more departments.

48. The winners in this competitive situation are the candidates who come from social groups characterized by all or some of the following factors: families with a tradition of attending higher education; families from large cities; affluent families. The most obvious reasons for this situation are: (i) the lower quality of primary and, more importantly, secondary education outside big cities, especially in small towns and rural areas; and (ii) the comparatively high cost of living and studying in a big city for students from the provinces. On average, since achievement is strongly

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[27] However, in 2005, the MoNES will introduce the Nowa Matura which is expected to be recognized as an entry requirement by the HEIs.

[28] In 2003 in Warsaw University, for example for Arabic studies, there were 20 candidates per place while in Warsaw in 2003, there were 27.8 candidates for the new study program 'Tourism and recreation' at the Agricultural Academy; 24.13 candidates for psychology at Cardinal Wyszynski University – (data according to "Gazeta Wyborcza"). In some departments, the situation is more difficult because of laureates and finalists of so called School Olympics. High school students traditionally take part in competitions in a specific subject area (math, IT, physics but also history, philosophy, etc.) and the best have a right to enter selected faculties without entrance examinations. This leaves less (sometimes significantly less) places for other candidates

[29] For example, a pilot survey conducted in Warsaw University showed that, prior to enrollment , 63% of students attended paid courses or private lessons

correlated with socio-economic background, students from the wealthiest and most educated families will have better access to free public universities. In addition, since non-public HEIs use many professors from public HEIs, one could argue that the less well-off students attending non-public universities are subsidizing, indirectly, the better-off students in public universities.

49. There are no data available to show a more detailed analysis of these trends over time. However based on the available studies and reports, it can be inferred that access to higher education for young people from uneducated families is much more limited than for their peers from families with a tradition of higher education. Thus, there is a risk that access to public university education in Poland is, in a sense, hereditary.[30]

50. This problem has been a focus of studies conducted by Ewa Świerzbowska-Kowalik and Hanna Gulczynska of Warsaw University at the request of MoNES.[31] Their 1999 survey covered second year university students and used a country-wide sample. The results show that students from families with a tradition of higher education have much better access to full-time day studies (free of charge) for a masters degree in traditional academic centers than students whose parents do not have higher education. Moreover, on average 64% of all students paid tuition fees, but 78% of students, whose father had only primary education, and 49% of students, whose father had higher education, paid tuition fees. The researchers note that, with the growth of the number of students in Poland, the percentage of students from underprivileged groups has been growing faster than from social groups which traditionally sent children to tertiary education institutions. Nevertheless, there are still major inequities in the system.

Governance of Higher Education

51. In the course of the last 10 years, in most OECD countries, higher education systems have been evolving to adapt to a more complex environment. In addition to the changing role of Government, multiple stakeholders, including students and their families and the scientific and business communities, today expect to have a role in how universities are organized and how they serve the needs of a changing clientele. In a general way, the concept of stakeholder involvement (local communities, and businesses) in institutional governance is lacking in Poland and does not seem to be foreseen in the new draft law. One result of this rather narrow governance system is that the educational process within HEIs is not oriented towards the labor market, and there are few open channels whereby outside stakeholders can influence the course content or governance of the public universities. Only in the Higher Professional Schools are regional authorities, local self-government as well as regional employers and professional organizations represented in the Governing body (Konwent). However there are no studies or analyses of the impact of this arrangement on the operation of higher education institutions.

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[30] Domański. H. , NiSzW, 2/16/2000.
[31] Świerzbowska-Kowalik. E., Gulczyńska. H., 2000.

52. The GCHE contributes to the establishment of higher educational standards which comprise no more than fifty per cent of all courses. HEIs have the autonomy to determine fifty per cent of their curricula. Degree courses are organized mainly on the basis of academic disciplines.

53. Table 6 demonstrates that Polish HEIs enjoy more autonomy than 11 other OECD countries for a range of academic and budgetary functions, including the distribution of financial resources, the recruitment of staff and student enrollment. This remarkable degree of autonomy brings with it the need for HEIs to balance their independence with the legitimate requirement to be accountable to Government and to their clients for the quality and efficiency of their operations. In order to survive in this challenging environment, HEIs will need to develop effective leadership to deliver both the academic vision of a university as well as the effective management of a modern institution. OECD sums up the challenge thus: "The governance of higher education in the 21st century needs to develop a fusion of academic mission and executive capacity, rather than substitute one for the other".[32]

Table 6. Extent of University Autonomy in 12 OECD countries

Countries	Own buildings and equipment	Borrow funds	Spend budgets to achieve objectives	Set academic structure and courses	Employ and dismiss staff	Set salaries	Decide size of student enrolment
Australia	Y		Y	Y	Y	Y	
Austria			Y	Y	Y	Y	
Denmark		Y	Y		Y		Y
Finland			Y		Y	Y	
Ireland	Y		Y	Y	Y		Y
Mexico	Y		Y	Y	Y		Y
Netherlands	Y	Y	Y		Y	Y	Y
Norway			Y	Y	Y		Y
Poland	**Y**	**Y**	**Y**	**Y**	**Y**		**Y**
Sweden			Y	Y	Y	Y	
United Kingdom	Y		Y	Y	Y	Y	

Y = Yes, meaning that the university has the power.

Note: These responses come from a survey undertaken in 2003 by members of the OECD's Institutional Management in Higher Education Programme. [33]

Internal Institutional Efficiency

54. There is little analysis that would allow for an overall assessment of the internal efficiency of the Polish tertiary education system. Moreover, there are no mechanisms to monitor and evaluate the efficiency of the system and of individual institutions. Anecdotal evidence suggests that teaching methods tend to remain

[32] OECD. 2003b. page 75.
[33] World Bank. 2004a. page 31.

traditional, and that courses are rarely revised to take account of the needs and interests of students, employers and the wider community.

55. In 2001, Poland (6.4) and France (6.8) were the two countries with the highest number of years of enrollment in higher education by non-employed individuals.[34] This by far exceeds the OECD average (4.6) and raises some questions about both efficiency and effectiveness. If the labor market cannot absorb all tertiary graduates, then students have a strong incentive to stay on in the education system and delay actual graduation in order to avoid or postpone unemployment. This is rational student behavior, but may not be the most efficient use of either public or private resources. That students stay on in the system does have a beneficial consequence as well, since Poland (with Japan and Turkey) has the highest tertiary survival rates of all OECD countries. Over 80 per cent of all students who commence tertiary education in the country complete their program, although it takes them, as a group, more time than in many other countries.

56. In several instances, the OECD report[35] notes that the fragmentation of the tertiary sector into universities, technical universities, medical academies, agricultural academies, pedagogical schools, etc. causes inefficiencies because specialists in the same or closely related fields are employed in different types of institutions. The report also notes that in a city or in a region, there often exist several institutions with similar or overlapping teaching and/or research activities. There are few incentives in the applied financing or staffing models that might increase internal efficiency, for example, through staff exchanges or the sharing of other scarce resources. While this report does not argue against differentiation either in or between institutions, some incentives to overcome the reluctance of faculties and institutions to work together and pool resources would greatly improve overall efficiency.

57. Management practices in certain tertiary education institutions are underdeveloped, and reflect a lack of understanding of the importance of setting objectives, assigning priorities, creating incentives planning processes, and analyzing outputs against the targets set. Higher echelon management posts such as Rectors, Vice-Rectors and Faculty Deans are rotated according to academic seniority or group interests rather than by managerial skills or experience. The managers are elected for a rather brief period (three or four years) with a right to be re-elected once, which is not conducive to the accumulation of relevant skill and experience. The Law on Higher Education specifies the minimum academic qualifications a successful candidate for Rector or Dean should possess, but it does not define requisite managerial competence. The leaders are elected by large bodies composed of representatives of the academic and administrative staff and of students. As already noted, no representatives of external stakeholders, such as large employers or the local government, are present on the governing bodies of many HEIs except for the Higher Professional Schools. University senates and faculty boards, which is where many important decisions are taken, sometimes lack both experience and guidance on managerial and financial issues. A related issue is that there are few opportunities for either prospective or employed university administrators to obtain formal training in finance and management. There is no specialized university-level preparation for this

[34] OECD. 2003a. .
[35] OECD. 1996a.

profession and, surprisingly, universities do not offer continuing training opportunities to their administrative personnel. Although it is said that some Polish HEIs have recently begun to introduce strategic planning and leadership and management training, such practices remain ad hoc, insufficient and untransparent due to a lack of relevant data. There are some exceptions in some of the more innovatory,mostly non-public, HEIs where, in the fields of management and business, new management and teaching practices do exist. Moreover, some years ago, Warsaw University initiated interdisciplinary studies in humanities and natural sciences which have since become a countrywide initiative. There are also some other examples of study programs that respond to the needs of the labor market, such as joint programs in mathematics and economics and in chemistry and law.

Quality Issues

58. In common with other countries that have experienced a rapid expansion and increased participation rates in tertiary education, Poland has suffered from some unfavorable, although hardly surprising, outcomes, most notably a dilution of quality. There is a general perception that overcrowding, deteriorating infrastructure and insufficient investment in equipment and laboratories have had negative implications for educational provision in public HEIs. The situation in non-public institutions is often worse. Although there are examples of non-public HEIs which provide innovative courses of recognized quality, in many non-public institutions the rapid response to market demand has come at the expense of acceptable standards. Recently this has led to considerable criticism of private HEIs and discussion of why, instead of creating healthy competition, their operation often creates many ethical and quality problems. One hypothesis is that private HEIs in Poland, with only few exceptions, were not established according to new or innovative educational and/or managerial concepts, but were created within the old HE system mostly as 'cooperatives of academic teachers' motivated by financial reasons. Most non-public HEIs are not established as independent enterprises with their own staff, capital investment, academic mission and development strategy. Moreover they use academic teachers, who are simultaneously employed permanently in public HEIs and often teach additional hours in more than one private institution. This means that they use the same curricula and teaching materials, in addition to their time. If they become administrators in a non-public sector institution, their loyalty is in question and fair competition between public and private schools is not possible. The ongoing process in the higher education sector in Poland could be described as a rather uncontrolled privatization of public Higher Education.

59. The issues raised above have implications for equity. Academic staff who are moonlighting by taking multiple teaching posts in non-public HEIs, are unlikely to devote much time to the needs of students there, even though the latter are paying for these courses in distinctly inferior conditions. Moreover, within public institutions non-paying students tend to get priority attention, as they are the best students selected through competitive admission procedures. Fee-paying students are academically weaker as a rule, as they failed to get into free-of-charge study programs. Even though daytime students tend to get most of the attention and time of the teaching staff, the diplomas issued by the school are the same for all groups of students.

Academic Loyalty Pacts?

"Moonlighting fees for additional work range from PLN 150 to 300 per hour. By teaching in a number of institutions, an economics professor can earn up to PLN 25,000 a month.

Economics, finance, banking, management and marketing can be studied in 169 HEIs, of which 130 are non-public. In the 2001/02 academic year, there were 508,635 students in economics related fields (GUS- Central Statistical Office). There were 1,530 professors in these fields altogether (qualified and tenured, including retired professors). Thus, for every living professor in economics related disciplines, there were 332 students.

The response to this situation in 2003 has been to request faculty to sign "loyalty pacts" declaring that institution X is the primary place of employment of the professor and that s/he will not use their name for the faculty roll of another school. This may result in a situation in which some departments of schools will be unable to constitute a minimum number of qualified faculty staff.

Article in Polityka: "Titled Pay". July 19, 2003

60. Recently, several newspapers have attempted to produce a ranking of HEIs. WPROST, a weekly with nation-wide circulation, has published a ranking of HEIs for the last 11 years. The ranking is based on a questionnaire filled out by the HEI and then verified with the most recent data from MoNES, GUS, and KBN. The WPROST ranking evaluates all HEIs that have graduate students, (apart from army and theological HEIs) in separate groups for public and non-public HEI by the type of education provided. This ranking is meant to be a guide for secondary school graduates and university graduates for MBA studies. While this provides some kind of evaluation and test of quality for prospective students, it is not a strictly formal process and, inevitably, opinion is divided on how useful these rankings are.

Quality Assurance

61. Most courses taught in public HEIs, even evening and extra-mural courses, have been evaluated and are deemed as meeting at least the minimum standards of quality. However the rapid establishment of new non-public institutions has focused attention on the approval process that allows them to register with the government and offer new courses. In the past, the responsibility of evaluating applications for study programs from new non-public establishments rested with the General Council for Higher Education.

62. To address the growing disquiet about quality, two separate accreditation initiatives emerged in Poland in the space of three years that are broadly in line with European initiatives and best practice.

Accreditation in the EU Context

In 1998, as a result of the Bologna Declaration, a working group, headed by the European University Association (EUA) prepared a report on accreditation which started out with the following working definition:

"Accreditation is a formal, published statement regarding the quality of an institution or a programme, following a cyclical evaluation based on agreed standards".

In this context, the EUA group distinguished between two main possible functions of accreditation:

- ✓ Minimal quality control ensuring that a university fulfils minimal quality requirements and has appropriate quality monitoring procedures in place.
- ✓ Quality assurance leading to an analysis and to recommendations regarding quality, including a specific quality assurance strategy.

Evaluation of European Higher Education, A Status Report. Prepared for the European Commission DG XXII by the Centre for Quality Assurance and Evaluation of Higher Education, Denmark in cooperation with Comité National d' Evaluation, France. September 1998.

63. In 1994, 12 business and management schools adopted a Business Schools' Agreement on Quality of Education (SEM Forum). This enabled the creation of a professional accreditation system in Poland. By late 1997, at the moment when the rapidly increasing numbers of HEIs were perceived to be multiplying without any formal quality control system, a formal consortium of Polish universities (comprehensive, classical higher schools encompassing natural, exact social, and human sciences including law and management) voluntarily took steps to address the issue of quality assurance through the establishment of an independent University Accreditation Commission (UKA). By 2003, there were independent accreditation commissions for all types of schools: technical universities, medical, agricultural and pedagogical academies, management and economics education, art schools and others. A coordinating body, the Accreditation Commission of the Conference of Rectors of Polish Academic Schools (Komisja Akredytacyjna, KRASP), has been established to assure coordination of procedures and processes. Some programs have been evaluated jointly, for example IT by UKA and the Accreditation Commission for Technical Universities (KAUT).

64. Meanwhile, like other transition countries confronted with the challenges of rapid expansion in tertiary education, the Polish Government established the State Accreditation Commission (PKA) a fully independent body that took over responsibility from the General Council for Higher Education in 2002. Since then, this body has a statutory responsibility to ensure the quality of teaching in Polish HEIs. The PKA also has an official advisory role to the Minister on all applications for the establishment of new institutions. In addition, the PKA is systematically evaluating quality and verifying compliance with requirements for higher education degree programs, as well as approving new courses. Thus, accreditation in Poland has become essentially compulsory as, once selected for evaluation by PKA, no HEI can refuse.

Polish State Accreditation Commission

"By the end of 2002, about 1,000 applications were received, of which 685 were processed; it is expected that within four or five years all degree courses within all HEIs will be evaluated. Since a single school has 4-5 study lines on average, and there are 380 schools, we have about two thousand educational units with various forms of instruction to check. Last year we had over 150 of such inspections, I think that this year we will be able to carry out about 400. The PKA uses a four point grading scale: distinguished, positive, conditional and negative. No HEI has yet earned a distinguished rating. There have been 100 positive grades and 40 conditional grades awarded to courses. A negative grade has been given to 12, of which 7 are absolute and the rest are still defending themselves. If HEIs receive a negative rating, the Minister of Education can dissolve the unsatisfactory degree course, transfer students to another institution or forbid further enrollment of students into that course. Information will be made available on individual courses and institutions on the Ministry's website.

Schools are informed in advance that they are to be inspected for particular degree courses and are requested to prepare a self-evaluation report, no longer than about 30 pages. The PKA team also tries to talk to the greatest possible number of university employees and students. A draft preliminary report is first made available to the HEI which has the right to respond. This response is sent to a PKA technical team for a further review, after which the evaluation is voted on in the presidium of the State Accreditation Commission.

The PKA evaluation is potentially a very powerful instrument as it will be used in the future in the allocation of subsidies."[36]

65. Thus, it is fair to conclude that Poland has already taken some important steps towards the establishment of a comprehensive quality assurance system. The two types of accreditation bodies, the independent accreditation commissions organized in the Accreditation Commission of the Conference of Rectors of Polish Academic Schools and the State Accreditation Commission complement each other as the PKA is responsible for establishing and controlling minimal requirements while the other HEI based committees are focused on the possibilities of improvement.

Responsiveness

66. In Poland, the combination of academic traditions with an autonomous legal and financial framework encourages a relatively inward looking and independent academic culture. Most HEIs tend to concentrate on academically oriented education and basic research without much reference either to the labor market or to the business and innovation environment.

[36] *Polityka* May 24, 2003.

Degree Course Mix And Content

67. In common with many other countries, there is debate in Poland about the content and mix of educational courses offered in Polish public and non-public HEIs, especially in the context of the rise in the number of students in economics and other social science disciplines.

68. While there is public discussion about the perceived deterioration in the quality of teaching and learning, "there is no evidence that the 'knowledge economy' has particularly increased the demand for scientists and engineers… Rather, it is the returns to general problem-solving skills, as well as to (harder to measure) attributes such as flexibility, adaptability, and 'client orientation' that have increased substantially".[37] As a consequence of the enrolment expansion, the proportion of tertiary students enrolled in the natural sciences and engineering fields decreased slightly between 1990 and 2000, and in 2001, it was below the OECD average. This is not due to a decline in numbers, but rather to the spectacular growth of enrolment in the other fields. However, the observed trend still gives rise to concerns about alignment with the needs of a knowledge based economy.

Linkages to Research, Development and Innovation

69. It has been argued that cooperation between academic research and industry is weakly developed, and hence that HEIs and other research units do not fully realize their potential as sources of innovation and commercially viable technological advances. Most HEIs lack a clear focus on the needs of high technology companies or societal needs in general. There also is an absence of linkages (e.g. contract or joint research, personnel exchanges, cross-patenting, licensing of technology, purchase/sharing of equipment) between HEIs and the business and industry sectors. In this respect, HEIs do not differ much from the other two main actors in Polish research, the Polish Academy of Sciences (PAN) institutes and the industrial research institutes (JBR). All Polish research institutions are missing the so called "third leg" that relates to business and purpose-funded Research and Development activities. This may be attributed to the legacy from communist times when basic, rather than applied science, was highly regarded and rewarded, as a kind of ideology-free haven but also to the fact that there is little demand (pull) from industry and enterprises in Poland which makes the promotion of more applied projects more difficult.

70. The dominance of basic science is a characteristic of Polish research. In the philosophy and structure of KBN, as well as in its funding practice, basic science has a much stronger position and the criteria used for the evaluation of project proposals and of project results work much better for basic science projects. Evaluation of both institutions and research project applications uses traditional academic research output indicators, primarily publications in refereed academic journals, and currently gives little weight to industrially or socially related activities. At the institutional level, basic and applied research are evaluated in a similar way, without taking into account the specificity of each mode.

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[37] World Bank. 2003a. page 99.

71. An additional disincentive to change the current academic orientation in higher education is the career path of a Polish researcher, which is based on publications in internationally peer-reviewed journals. Patents or industrial innovations count for significantly less, if at all. There are no clearly defined and stable rules for the evaluation of patenting and innovations as elements of a researcher's work. Each KBN research discipline group defines its own criteria and values to be attributed to patents, as compared to scientific publications and other activities.

72. While the fact that the newly proposed Law on Higher Education does not allow professors to hold multiple jobs could be viewed as a welcome development aimed at improving quality of teaching and research work, there is also a danger that this regulation could constrain healthy linkages with industry. The ban in the draft law is directed at multiple jobs in competing HEIs, which tend to be, for the most part, non-public. It is true that, if this provision in the draft Law were to be introduced, an academic would have to seek the Rector's approval for any kind of a second job. Although it is likely that jobs in enterprises would be endorsed as an acceptable activity, this procedure will create an additional obstacle to undertaking such jobs in a situation when there are no incentives, little encouragement and no tradition of undertaking such jobs and of achieving career goals through business related work.

73. Moreover, there are no other incentives that would motivate professors to cooperate with business as well, including addressing the issue of Intellectual Property Rights. The Law on Industrial Property establishes that, in general, innovative research that is carried out in the place of work is owned by the employer. Although the law does allow for the regulation of this issue through a specific contract, it remains a matter of good will. To set a good example and stimulate innovation, KBN contracts for research grants regulate the sharing of profits between a researcher and the employing institution.

74. The above-mentioned lack of incentives may also explain why efforts to create technology incubators, technology transfer centers and science parks in Poland have not yet been very successful. Several technological parks and incubators have been established, mostly with the assistance of foreign aid programs, but there are few success stories to date. These experiences, however, have created a small cadre of people with real experience of technology and commercialization, and a broader awareness of the time, effort and additional tools it takes to achieve success. Many of them also visited successful centers in Europe and the Unites States, which means they have had direct but limited experiences of good practice elsewhere. But, almost universally, they have noted that successful models have benefited from medium to long-term major funding from public budgets, and that this is missing in the current Polish system, which is a major problem in replicating international experience and best practice in Poland.

75. To stimulate involvement of HEIs in knowledge and technology transfer, a set of incentives combining legal and financial aspects is required. Such incentives were never introduced in Poland on a significant scale, although they have many times been discussed. However, it is the intention of the new Ministry for Scientific Research and Information Technology to reorient Polish research toward applications, through the ongoing reforms in organization and funding of science and through the creation of

instruments and incentives for pursuing applied research in the Law on Financing of Science submitted to the Parliament earlier in 2004.

76. Donations from corporations to HEIs and research establishments are theoretically possible, as is the establishment of foundations or chairs supported by business for specific research activities. A business or an individual can in theory support academic activities and qualify to receive a 15 percent tax deduction.

77. A new and promising link to the labor market and employers has been created by a rapid development of career offices in Poland during the last few years. The first office was established in 1993 at the Nicolas Copernicus University in Torun, with the assistance of the British Know-How Fund. The idea was then promoted among other HEIs and, by 2003, there were around 140 such offices in public and non-public institutions. The offices were supported with EU (PHARE) assistance funds, which enabled the purchase of equipment, software and books, as well as training of staff and the development of international contacts. In 2002, the Ministry of Labor announced a grant competition for the further development of existing, and the creation of new, offices at universities. In 1998, these career offices in Poland founded the National Network of Career Offices, which has now over 50 members. Leading offices participate also in the European movement of career offices. Their often well developed relations with local employers and businesses could be a starting point for further collaboration.

Orientation of Tertiary Education to Lifelong Learning:

78. Internationally, learning is increasingly perceived as "a fundamental key to wealth creation and competitiveness in the current global information economy".[38] In knowledge based societies, individuals acquire new skills and competencies through a wide variety of settings, not only in formal education and training institutions (i.e. schools, colleges, universities and training institutes), but also through non-formal learning in the workplace and informal learning in everyday life. In countries with a high level human development, it is recognized that, in order to ensure equity, learning opportunities should be made available throughout the lifespan of individuals and in a multiplicity of venues. However, a recent report concludes that, in Poland, there are currently inadequate provisions for lifelong learning opportunities as defined by the OECD.[39] Therefore, it is not surprising that participation in lifelong learning is lower in Poland than in most other OECD countries.

79. In 2003, mindful of the need to address the issue of the provision of lifelong learning, MoNES has taken the lead in the elaboration of a lifelong learning strategy for Poland with the participation of other key ministries concerned (Economy and Labor, Science, Telecommunications). This strategy was adopted by Government in July 2003. It prioritizes these key elements of a lifelong learning framework:

(a) *increased access* to include the personal learning needs of all citizens;

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[38] OECD. 1998. and De Ferranti, D., Perry, G.E., Lederman, D., and Maloney, W.F. 2002.
[39] Tuijnman, A., 2002.

(b) *improved quality of education*, to include improved teaching skills; updated content; ICT to train and to provide learning materials; new assessment, certification and curricula; and new systems of accreditation of institutions;

(c) *better partnerships* among the providers of educational services, employers and trade unions;

(d) *increased investment* in human resources, including the improved efficiency of existing investments; the creation of incentives especially for the poor in rural areas, and for those threatened with social exclusion, and the encouragement of employers to take responsibility for the learning of their employees;

(e) further development of a modern guidance and counseling service, available throughout life and accessible through a bank of web-based information resources.

80. While this LLL strategy is an excellent first step in the process of creating an agenda for action, the development of the necessary implementation plan for this ambitious agenda represents a challenge for Polish policy makers.[40] The operational program for 2004-2006, with specific actions and timelines, has been agreed with the European Commission and approved by the Government. Institutional capacity will be needed to ensure implementation of this program.

[40] Agreement on an implementation plan for the LLL Strategy awaits the finalization of the Law on Higher Education.

The Way Forward: Promising Policy Options for Tertiary Education

81. The tertiary education system in Poland would benefit considerably from a clearer and more coherent Government policy and vision for the sector, accompanied by an enabling framework that encourages institutions to be more innovative and more responsive to the needs of a globally competitive knowledge economy and to the changing labor market requirements for advanced human capital.

82. In this respect, the policy-making role of MoNES should be strengthened in order to lead the debate on education reform in general and on the development of tertiary education in particular. One could consider the creation of a "Tertiary Education Forum", an instrument that would allow a range of stakeholders to work together in formulating a shared vision for Poland's future system. Within such a Forum, the strategic guidance of MoNES, the role of the General Council for Higher Education in formulating a vision for the sector and the assignment of a formal role for the Conference of Rectors, would be important. The Forum could also offer a mechanism for involving research and business leaders as well as student associations and thus make different voices heard in the formation of education policy that learns from best international practice. In addition to the existing bodies charged with quality assurance, consideration could also be given to the creation of buffer bodies, i.e. public organizations fully owned by the State but not formally part of a Ministry. In other countries, such bodies serve important functions such as, inter alia, financing allocations and admission procedures. Buffer bodies usually have their own management Board which is accountable to the Ministry.

83. In order to build on progress to date and move further towards a world class tertiary education system, this section proposes a series of policy options under the headings of: (i) *financing* a system of mass tertiary education in a transparent and equitable way; (ii) *improving* the quality of educational services; (iii) improving the *responsiveness and linkages* of the system both to the labor market and to the innovation and technology needs of a modern knowledge based economy; and (iv) the orientation of tertiary education to a lifelong learning system. The policies discussed below are aimed at providing a useful framework of reference during the deliberations on the new Law on Higher Education.

Financing Reforms

84. Some issues concerning internal efficiency in the Polish tertiary sector were discussed in Paragraphs 54-57. However, these issues are not analyzed because the available data on unit costs are generic and do not give a breakdown of costs by specialization. Before the share of public expenditures allocated to tertiary education is allowed to increase, an analysis of how much the current system actually costs needs to be carried out. This will provide a basis for examining how increased state funding might be utilized most appropriately. That analysis should include a costing

of basic degree courses in both public and non-public HEIs so that the formula discussed in (para 89 b) below can be applied.

85. The social and political issues surrounding the issue of how to finance mass tertiary education are not unique to Poland. In an increasing number of countries tertiary education is to a large extent subsidized by public funds, but also supplemented by private sources of income. Studying the mechanisms that might be put in place to attract more private finance into the tertiary system is a task of considerable importance for Poland. The ways in which various finance components, such as tuition fees, funding for teaching and research, and student support programs interact must also be clarified.

86. Because people who attend university tend on average to come from homes with higher-than-average incomes, financing higher education primarily through taxation makes poorer members of the community contribute very inequitably to the education of children from richer families. Consequently tuition fees or other taxation-linked schemes to raise private contributions in an equitable way are increasingly used. Moreover, since in all societies, a university degree is an extremely valuable social and private asset and one denied to the majority of taxpayers, equity suggests that all full-time and part-time beneficiaries of tertiary education should contribute to cost proportionally to the expected social and private benefits.

87. In order to introduce a transparent tuition fees policy without penalizing poorer students, it is advisable that any program of major charges and fees be introduced on a phased basis only after a robust program to protect the poor has been established.[41] Such students require means-tested grants, scholarships or other affirmative action programs. The current system of student credits and loans should be analyzed so as to understand better why the take-up rate is so low. In order to strengthen the policy making role of the MoNES, together with its capacity to implement an equitable fees policy, the development of an information system, whereby the socio-economic background of students could be monitored, would be appropriate.

88. The political implications of introducing tuition fees for everyone are potentially quite difficult, as a number of European countries have recently discovered.[42] The ongoing debates about the introduction of tuition fees in some continental European countries are illustrative of how difficult it is to introduce the idea of payment for higher education in countries where expectations to date have been that all education should be a free good. However, the development of transparent and progressive taxation systems in some of Poland's competitive neighbors (Sweden, Denmark, Norway, Finland) could be a useful model for Poland

[41] According to Świerzbowska-Kowalik. E., Gulczyńska. H., 2000, 64% of all students in HEIs were paying tuition fees in 1999 and according to MENiS data, 46.3% of public HEI students paid tuition fees.

[42] Hungary had a system of tuition fees in the mid 1990s but this was abolished in 1998. Ireland attempted to re-introduce tuition fees in 2003 and abandoned the attempt after public protests rendered it politically impossible. The United Kingdom. introduced tuition fees some years ago in conjunction with a student loan scheme in an attempt to resolve the issue of who pays for the high participation rates in tertiary education in that country. This process has been fraught with difficulty and is a perpetual source of acrimonious debate in the media.

at this time. The experience of other European countries, notably Austria, Hungary, Ireland, the Netherlands, and the United Kingdom, may be relevant to Poland, primarily because these countries have experimented with different approaches to both fees and loans during the past decade with varying degrees of success. Caution should be exercised in the development of all of the above- mentioned financing strategies because one set of programs alone is not sufficient. A combination of programs should be available, and should be introduced to the public only after full discussion with stakeholders to ensure that the underlying equity issues are well understood. Any extension of the fee system requires a public relations effort to explain to the electorate that reformed funding, if properly implemented, will allow every gifted young Pole to gain access to an intellectually world class institution and that this opportunity will not be diminished if s/he comes from a poor and/or less educated family.

89. With the above caveats, consideration should be given to the following policy options to address the financing of tertiary education and, by extension, lifelong learning, in both public and non-public HEIs:

(a) Request all public HEIs to develop multi-annual development plans and capital investment programs, and fund only capital costs of institutions where this can be justified on the basis of explicit criteria;

(b) Allocate State expenditures for public HEIs, using a funding formula based on an agreed set of criteria with respect to efficiency and quality enhancement. Such a formula should allocate public financing for tertiary education as part of a consultative process between MoNES and HEIs;

(c) Provide, through the funding regime, incentives to encourage institutions to be efficient and achieve economies of scale through combining courses, sharing facilities and staff between faculties, and to develop cost-saving and income generating activities;

(d) Ensure that the funding regime creates competitive pressures, enhances innovation and improves linkages between science, applied research and the world of work. In this context, a mechanism whereby the proceeds of consultancy work would be shared among the professors involved, their department and the university as a whole, should be considered. Performance based contracts could be another useful mechanism to promote competition and enhance innovation;

(e) Introduce an improved method of student loans and grants conditional on the accreditation of institutions, non-public and public, with special provisions that target, through credits, grants or other scholarship schemes, needy or disadvantaged students;

(f) Leverage additional private funding through tuition fees, private endowments and donations from the business community.

Quality

90. Given the demographic projections for Poland discussed in paragraphs 20-21, it is inevitable that, by 2005[43] demand for tertiary education will begin to decline. Fewer students will pose a threat to some institutions, but will also provide an opportunity to improve quality and access. The threat will come from shrinking revenues to HEIs from tuition fees. It is not clear what the effect of this reduction in demand will be for non-public HEIs created to fill an urgent demand for more places. Under one scenario, quality will win and poor non-public HEIs will close shop. Another scenario is that poor quality, non-public HEIs will survive because they are cheaper to run, while higher quality, non-public institutions will run out of money and close. Therefore, there is an urgent need to improve standards in all non-public and public HEIs by further developing and strengthening the system of quality assurance that is already in place. This will ensure fair competition and should allow the best institutions to survive. A policy, that would concentrate scarce resources in fewer selected universities to create world class centers of excellence, would also have a positive effective on quality and would support innovation.

91. The problem of multiple appointments of staff has been highlighted as an unacceptable consequence of a poorly funded academic system and as a major issue affecting the quality of education provision in all HEIs. It has been widely accepted that changes in incentives are necessary in order to link the business and research commercialization agenda to academic career progression. Current initiatives to encourage single jobs in HEIs are a move in the right direction, provided they do not go too far and reduce flexibility. Normal international practice is to limit the time (as opposed to trying to limit the earnings) that faculty can spend on secondary activities, with a limit in many circumstances of one day per week. Additional flexibility can be gained by delegating to faculty level the management of academic time, so that within a particular research team a trading practice can develop, whereby the Dean can allow buying in and buying out of core academic duties to accommodate research contracts from whatever source.

Loyalty Incentives for University Faculty

In response to the phenomenon of multiple employment of academic teachers and the resulting dangers to the quality both of research and teaching, Warsaw University introduced a scholarship scheme for academic staff in 2000. The aim is to reward the best and most committed staff members.

Candidatures for scholarships are selected in a competitive procedure by deans of faculties and ranking lists are submitted to the Rector. The Committee for Academic Scholarships, nominated by the Rector, makes the final selection of fellows. The main criteria of selection, both on faculty and central levels, are the quality of teaching and research as well as commitment to other aspects of University work. The "Regulations for the academic scholarships scheme of Warsaw University" give preference to academic teachers who are solely

[43] By 2005 the population aged 19-24 will begin to decline and by 2010 the number of population in this age group will be smaller by 17.5% when compared to the year 2005 - a decrease of over 0,5 million people.

employed at Warsaw University, and especially to those who do not teach in rival HEIs.

During the period the scheme has been working, 1,637 scholarships were awarded, out of which 804 were for habilitated doctors and 833 for doctors. The annual number was: 672 in the first year, 483 in the second year and 482 in the third year which was between 32% and 21 % of eligible staff members. The amount awarded is different for doctors and habilitated doctors, but calculated so that it is significant in proportion to the salary.

Each year, the following three faculties were among those with the highest percentage of academic teachers rewarded in their category: Faculty of Chemistry (every year the highest percentage), Faculty of Mathematics, Informatics and Mechanics and Faculty of Physics. The Faculties of Law, Economics and Faculty of Modern Languages and Oriental Studies joined the group at least once.

92. In order to build internal capacity to manage tertiary institutions efficiently and effectively, HEIs will need to focus on training in the areas of planning, financial management, information systems, as well as on the operation of a new kind of institution where credit transfers and constant curriculum reform are part of the implementation of a reformed tertiary system. HEI management will increasingly be required to develop policies to deal with adequate provision for evening and extra mural students - those studying using open or distant education methodologies.

93. Schools need to develop administrative data collection and analysis systems and professional institutional research, as a basis for defining their mission and strategy and following up implementation plans. When formulating their policies, they should take into account such complex factors as trends in tertiary education and in the labor market, the needs of the society and the policy of the State, as well as available resources. This would require the hiring of professionally prepared staff or the training of already employed personnel.

94. Working with the university and research and business communities, the MoNES has here a significant role to play as a leader in formulating a strategy for higher education as a starting point for the efforts of individual HEIs. It should also initiate the collection of education statistics and analytical work to support HEIs in their development.

Quality Assurance – a tool for improvement

95. Ideally, quality assurance in tertiary education should be based on mechanisms that are transparent and capable of reassuring users and Government of the quality of the course offerings and the value for money. As a tool for comparison and mobility, quality assurance is also important within the international context. One of the objectives of the Bologna Declaration is the promotion of European co-operation in quality assurance with a view to developing comparable criteria and methodologies. As the Ministers also intend to introduce a more convergent degree system, this urges the need for comparable quality standards.

96. Different countries have adopted a variety of quality assurance methods, ranging from procedures for monitoring teacher effectiveness (Scotland and England), high–quality management processes (Mainland China and the Special Administrative Region of Hong Kong); systems for licensing new institutions and certifying educational credentials (Chile); and rewarding research productivity, either of individual schools (Mexico) or of entire academic departments (United Kingdom).[44] Other quality assurance approaches include Accreditation Councils, national examinations, public rankings against national or international benchmarks, and publication of information. Germany and the Netherlands have introduced accreditation by law.

97. As discussed in paragraphs 61-65, Poland has approached its quality assurance system for tertiary education along the same lines as many other European countries. On the one hand, as Table 6 demonstrated, Polish HEIs enjoy a great measure of autonomy and can decide themselves what they are going to teach and research within budgets, over which they have, for the most part, complete control. However, in line with most OECD countries this autonomy has to be balanced by the need of government to determine value for money.[45] This does not necessarily lead to more regulations; incentives can also be developed to ensure that a university will voluntarily be accountable both to government for funding while screening itself to improve quality.

98. In this context, as an ideal solution, HEIs themselves should continue to develop systems for internal quality management with an external assessment of the relevant parameters of quality such as, for example:

- ✓ the fitness of higher education objectives and aims in each study program for students, who will live and work in a dynamic and exacting knowledge based society;
- ✓ the results of higher education in terms of standards for graduates' knowledge, skills and attitudes;
- ✓ the suitability of HEI facilities and the internal organization of the programs.

99. Poland's State Accreditation Committee (PKA), has the potential to evolve further as a supportive institution for HEIs in the further development of quality assurance mechanisms. It would be helpful if, in the process of accrediting institutions, the PKA would continue to place greater emphasis on the importance of the initial, internal self assessment by the faculty and institution concerned, to complement the external review conducted by visiting peers. This would contribute further to a climate that would encourage the best quality in tertiary education in Poland, including measures to promote a culture of quality through public debate, agreement on explicit standards and expectations, transparent rules and enhanced information systems.

100. In this context, it is useful to consider the example of the Hungarian Accreditation Committee (HAC), whose external evaluation report concluded that

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[44] World Bank. 2002.
[45] OECD Paris. 2003b.

"considering the dramatic changes in Hungarian tertiary education, the HAC acted as a stabilizer and contributed to the development of the system. It was successful in upholding minimum standards, which was important given the rapid growth of non-public institutions. However, the report also notes that **its criteria have been narrow and utilitarian and that the emphasis on minimum standards has induced a culture of compliance**." The report recommended **" a shift in strategic priorities, based on trust, and a more supportive role of quality assurance systems (e.g. audits on internal quality assurance procedures)**".[46]

101. This report suggests that quality assurance in Poland could usefully go beyond what has been achieved to date, so that existing accreditation systems could be extended from being a tool for evaluation, to a means of general improvement. It is not suggested that a new system of quality assurance be introduced; rather it is envisaged that the current system could be further developed on a step-by-step basis, and that the professional work of the PKA, the UKA as well as the various other HEI based committees, could be supported and strengthened.

Responsiveness to Innovation

102. There are special challenges for the tertiary education sector to respond to, and promote, a culture of innovation necessary for Poland to flourish in the European and global economy. This section includes some suggestions for Government policy makers which would improve the linkages between HEIs and the scientific and business communities that have assisted in the successful transfer of technology in other countries.

103. **One measure to consider is the broadening of institutional governance structures to include external stakeholders**. The presence of representatives of business, industry and local government in the governance structures of HEIs can be helpful in improving the efficiency and relevance of these institutions. However, the draft Law on Higher Education does not, at present, include a provision that allows qualified and interested stakeholders to serve on Boards of Governors in public and non-public HEIs. The possibility of reviewing this issue within the current draft Law might usefully be considered.

104. **Another measure is the identification of incentives** that are feasible within the Polish economic context for existing HEIs to transform. These incentives would stress cooperation across all three core activities (teaching, research and wealth creation). Intellectual Property (IP) should be taken as seriously as the publications side of academic outputs, in addition to being a potential source of revenue. The exploitation of IP by individuals, which would be explicit from the start of the research work, is one key incentive.

105. **Another option is to strengthen or create Research and commercialization units** in the core management of the HEI or R&D Institute that provide advice and active help to academic staff to capture resources for research from non-traditional sources, manage IP rights and pursue commercialization objectives on behalf of the

[46] Hungarian Accreditation Committee. 2000.

academics and the academic institution. MoNES (maybe in collaboration with MoSRIT) should offer incentives to HEIs to pursue a policy of explicitly "picking winners" or of reviewing research projects, with a view to discovering "what works" and the dissemination of good practice. Linkages with the business community could be encouraged by creating opportunities for students to have a "stage" in businesses as part of their university program. The career offices described earlier could be helpful in initiating different forms of collaboration with the business community, as they often have already well established credibility.

HEI's within a Lifelong Learning Framework

106. The design and delivery of tertiary education services within a lifelong learning framework should include, though not be confined to, the following elements:

(a) **Greater institutional flexibility.** There continue to be blockages between the formal and non-formal system in Poland that inhibit mobility and constrict the learning opportunities of individuals. For example, the draft Law on Higher Education limits the right to conduct postgraduate (post-licencjat, post-engineering, post-magister) studies to units of HEIs that have the right to confer a master's degree. Alternative pathways and new institutional responsibilities and procedures can be developed, so that different programs and courses are recognized in equivalent institutions;

(b) **Differentiation of curricula** with an emphasis on flexible team-based approaches, to enable students to cope with novel and uncertain futures, rather than emphasizing academic knowledge of a fixed body of facts relevant to the subject being studied. The introduction of explicit entrepreneurship modules in many courses, at both undergraduate and post graduate levels is essential;

(c) **An academic environment suitable for different student cohorts** to facilitate a wider age range including mature first time students. The retraining of older graduates in new technologies and approaches can be expected to produce a more mixed attendance pattern with a significant number of part time students studying modular courses and often including accreditation of prior and experiential learning;

(d) **Using the growing potential of ICT to introduce different teaching methods,** with an increased personalized delivery (distance and e-learning solutions) and a growing proportion of real life experiences being built into courses through participative, group problem solving and project oriented approaches;

(e) **Development of programs to satisfy the learning needs of individuals in a range of different locations.** A major challenge will be to plan to link with EU-wide lifelong learning data bases as quickly and effectively as possible. One example could be PLOTEUS[47] - the European Internet Portal on Learning Opportunities, which will be part of a common information service supporting mobility throughout Europe, and which already gives structured access to

[47] www.ploteus.net

information on education and training at all levels to enhance the transparency of learning provision for all citizens;

(f) **Ensure that certifying agencies recognize competencies and knowledge gained through both formal non-formal and informal learning**. Certification can be based on competences rather than on the basis of courses taken. Steps should also be taken to recognize prior learning experiences.

Conclusion

107. As discussed throughout this report, the modernization and reform of tertiary education is a complex process that must respond equitably and efficiently to the changing needs of individuals and the economy. The Polish government, the Parliament, the academic community and Polish society at large are faced with a number of important challenges in trying to balance conflicting objectives. For example, while the autonomy and integrity of higher education institutions must be safeguarded, this report has discussed the need to address institutional rigidities and to introduce incentives that will improve flexibility and make institutions more accountable both to Government and to stakeholders in the world of work. The degree to which budgets should be allocated to institutions using standard finance algorithms, versus implementing a "money following the student" or voucher approach, is also a difficult unresolved issue. A third important tradeoff facing Polish decision makers, involves the orientation and implementation of accreditation procedures, where a fine balance must be struck between the licensing of institutions on the one hand, and the measurement, assessment and evaluation of quality standards on the other. In sum, while the tertiary education sector in Poland has already undergone remarkable and highly impressive growth and change over the past 15 years, the reform process is still far from complete.

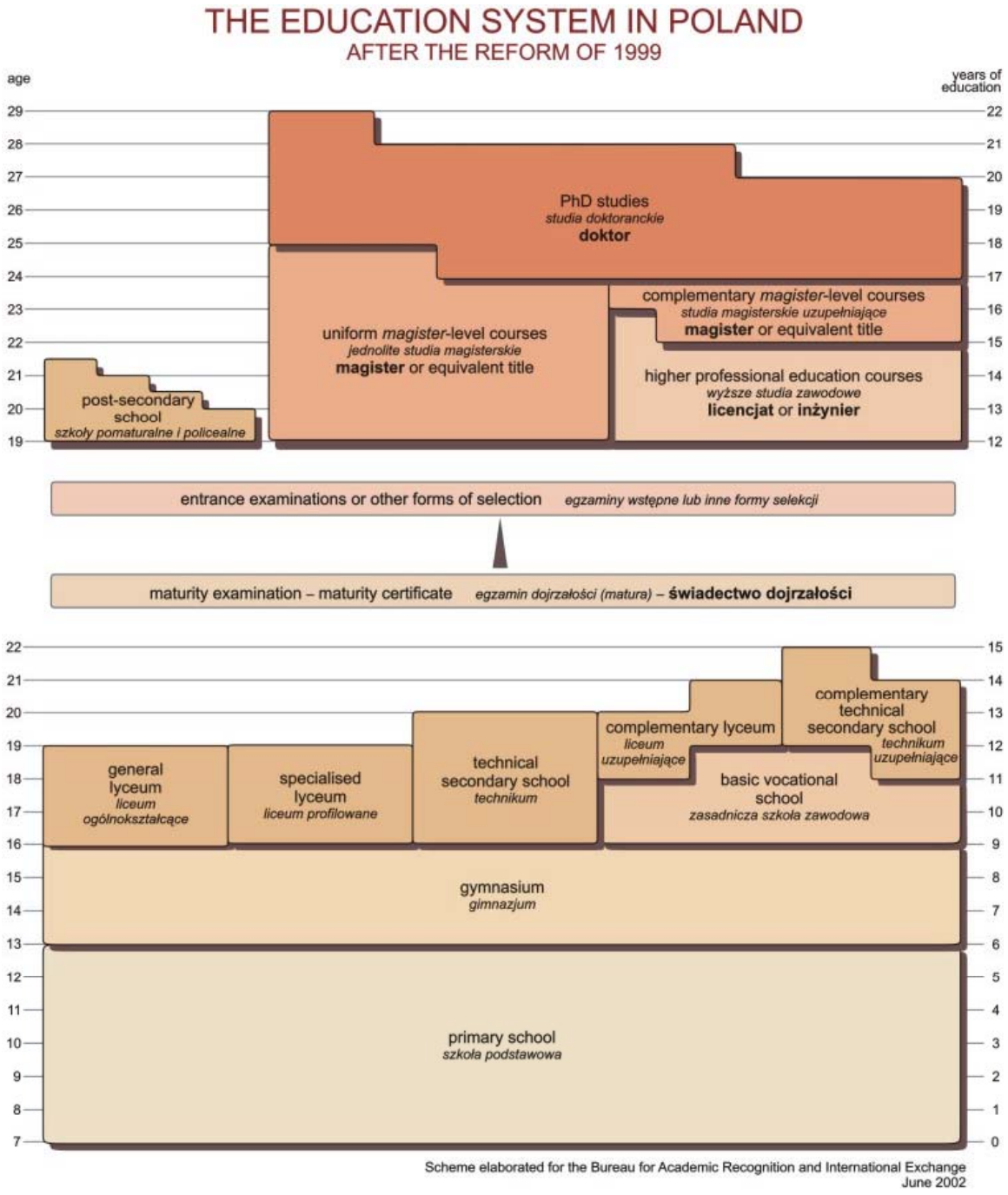
ANNEX I: Poland's Education System following the 1999 Reform

1. Since 1999, a program of educational reform has resulted in changes to the structure of the system, especially in relation to the provision of more flexible modular and market relevant courses in the "profiled lycees".

2. The new structure of the education system consists of preschool, six years of primary education, three years of lower secondary education, between two and four years of upper secondary education, depending on the student's program, modular vocational/technical post-secondary programs of six months to two years in length, and tertiary education of two types: academic and higher vocational. Significant curricular branching occurs at the secondary level. The options are the three-year academic ("general") lycee; at least 14 three-year vocational/technical programs ("profiled lycee"), with local governments, teachers, students, and parents at a given *powiat* choosing which subset of the 14 will be offered at the secondary schools in that *powiat*; four-year technical secondary schools; and two-year or three-year basic vocational programs. (see diagram of the structure below). Graduates of all but the basic vocational programs are defined as secondary school graduates, and graduates of the technical secondary schools also receive the certificate of technician. Secondary school graduates can, if they wish, take the *matura* examination which is one requirement for entrance into tertiary education. Whether or not they have taken the *matura* examination, they can enter post-secondary school. Graduates of basic education can enter post-secondary education or take the *matura* only if they graduate from a "second chance" two year supplementary technical high school or academic lycee program.

3. The introduction of the new structure and policies was aimed at broadening educational services, offering a diversity of educational pathways and a smoother passage of students through the entire system, better access to vocational qualifications and more responsiveness to the labor market. Specifically, the provision of vocational education aims to provide shorter teaching cycles, a good general education, broadly profiled vocational training and comparability of qualifications. It is anticipated that the knowledge gained in first level vocational schools, primarily geared for students who wish to become independent and start working as quickly as possible, will permit students who wish to continue to learn to gain professional qualifications in shorter cycle colleges, in extramural forms or during professional work as well as during further education in universities.

4. Thus, the new structures which are being put in place, with their stress on the integration of the content of general and vocational education and on preparing young people for a constant readiness to learning new skills and knowledge can be expected to respond to the needs of lifelong learning as discussed in the final section of the report.



Source: http://www.buwiwm.edu.pl/educ/schemat-after.htm

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