European Commission Directorate-General for Economic and Financial Affairs

Economic Policy Committee

Efficiency and effectiveness of public expenditure on tertiary education in the EU

ANNEX : COUNTRY FICHE POLAND

Joint Report by the Economic Policy Committee (Quality of Public Finances) and the Directorate-General for Economic and Financial Affairs

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Brief characterization of the tertiary education system

1. Main features

Higher education system in Poland and the basis for its operation are laid down in the Act of 27 July 2005 – Law on Higher Education. Its provisions are applied both to state (public) and non-State (non-public) higher education institutions, in which programmes of study are offered on the same basis and upon completion of the same requirements. Higher education institutions are divided, irrespective of their status, into academic and vocational ones. An academic higher education institution is a school in which at least one of its organisational units is entitled to award the academic degree of *doktor*.

A vocational higher education institution is a school offering first or second cycle study programmes or one-tier (long-cycle) study programmes, and which is not entitled to award the academic degree of *doktor*.

Study programmes are offered as first cycle, second cycle and one-tier (long-cycle) programmes and doctoral (third cycle) programmes. First cycle programmes leading to a *licencjat* degree last from 6 to 8 semesters, and those leading to an *inżynier* degree last 7 or 8 semesters. Second cycle degree programmes last 3 or 4 semesters and one-tier (long-cycle) programmes leading to a *magister* degree last from 9 to 12 semesters.

Doctoral study programmes last no longer than 4 years and upon completion graduates are awarded a certificate. Under a separate procedure graduates are conferred the academic degree of a *doktor* or *doktor w zakresie sztuki*. Higher education programmes and doctoral programmes may be offered as full-time or part-time programmes.

Web site of Ministry of Science and Higher Education:

http://www.eng.nauka.gov.pl/ms/index.jsp?place=Menu08&news_cat_id=448&layout=2

1/ TEACHING	Poland										
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Academic staff per 1000 inhabitants											
relative to the average	1.85	:	1.93	1.96	1.99	2.04	:	2.16	2,53	2,56	:
Number of students per 1000											
inhabitants	24.8	27.4	29.9	33.3	35.8	37.2	38.3	39.2	50,8	50,9	:
Number of students (graduate and post-											
graduate) per 1000 inhabitants	:	:	:	:	:	:	:	:	:	:	:
From public institutions	:	:	:	:	:	:	:	:	34,1	33,5	:
From private government-dependent									16.0	15.0	
institutions	:	:		:	:	:	:	:	16,8	17,3	:
<i>From private independent institutions</i> Ratio of students per academic staff	13.4	:	15.5	17.0	18.0	18.2	:	18.1	0,7 20,1	19,8	:
Number of graduates per 1000	15.4	•	15.5	17.0	18.0	16.2	•	10.1	20,1	19,0	•
inhabitants	5.82	5.51	6.62	8.16	8.7	9.07	9.21	9.37	10,3	10,8	:
Ratio of graduates per 1000 academic	5.02	5.51	0.02	0.10	0.7	2.07	7.21	7.57	10,5	10,0	•
staff	3.1	:	3.4	4.2	4.4	4.4	•	4.3	4,1	4,2	:
Standardized recruiter view indicator	0.11		011				•		-,-	-,-	•
(graduates' employability as perceived	l										
by recruiters)	:	:	:	:	:	:	:	2	:	:	:
Standardized peer view country											
indicator (quality perceptions among	l										
peers)	:	:	:	:	:	:	:	1.94	:	:	:
PISA scores	:	:	:	:	:	:	:	:	:	:	:
Average total time spent by students in											
order to obtain a BA degree	:	:	:	:	:	:	:	:	:	:	:
Average total time spent by students in											
order to obtain a MA degree	:	:	:	:	:	:	:	:	:	:	:
Remuneration of a tenured university											
professor with 10 year seniority	<u> </u>	:	<u> </u>		<u> </u>	<u> </u>	<u> </u>	:	:	<u> </u>	
2/ RESEARCH											
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Publications per 1000 inhabitants	0.11	0.11	0.12	0.15	0.16	0.18	0.21	0.24	:	0,34	:
	1998-	1999-	2000-	2001-	2002-	2003-	0.21	0.2.			
	2002	2003	2004	2005	2006	2007					
Quality of research (position in the ISI											
citation index) lack of measurement											
rules	2.74	2.82	2.82	2.98	:	:					
% of research done in cooperation with											
industry lack of data	:	:	:	:	:	:					
3/ EXPLANATORY FACTORS FOUN						0000	0001	000-	0.0.0.5	0007	0000
Main astagonias of some -it.	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Main categories of composite	1										
indicator Funding Pules Indicator											
Funding Rules Indicator Evaluation Indicator	•	•	•	•	•	•	•	•	•	•	•
Staff Policy Indicator	•	•	•	•	•	•	•	•	•	•	:
Starr Folicy Indicator	•	•	•	•	•	•	<u> </u>	•	•	•	<u> </u>
4/ EXPENDITURE											
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total public expenditure on tertiary											
education institutions as a percentage of	l										
GDP	1.12	0.92	0.72	1.02	1.22	1.25	1.26	1.6	:	:	:
Total expenditure per student (€) lack											
of measurement rules	:	:	:	:	:	:	:	:	:	:	:
Private expenditure on tertiary	l										
education institutions as a percentage of	:	:	:	:	:	:	:	:	:	:	:

GDP lack of measurement rules											ĺ
Total expenditure on education as a percentage of GDP	5.02	4.78	4.87	5.42	5.41	5.35	5.41	5.9		•	:
Private expenditure on education as a	0.00			0112	0111	0.00	0111	•••	•	•	
percentage of GDP	:	0.15	:	:	0.64	0.66	0.59	0,4	:	:	:
Funds from non-public sources as % of											
total income (fees, earned income,											
investment, other) no data available	:	:	:	:	:	:	:	:	:	:	:
Tuition fees as average of the cost of											
tuition	:	:	:	:	:	:	:	:	:	:	:
Percentage of funds received by private											
government-dependent institutions		_									
from public sources no data available Total public expenditure on grants,	:	·	•	•	•	•	•	•	•	•	•
loans, and other programmes to cover											
education and/or maintenance of											
students (universal programmes / by											
categories such as merit or socio-											
economic status) no data availablec	:	:	:	:	:	:	:	:	:	:	:
Source: Eurostat OECD LIOE a											

Source: Eurostat, OECD, UOE and Member States.

2. Structure of institutions and funding arrangements

The institutions structure and financial system

The higher education in Poland could be get in public higher education institution or nonpublic higher education institution. These institutions are divided into university-type higher education institutions and non-university-type higher education institutions. This division depends on right to confer the academic degree of *doctor*. There are three levels of education: first-cycle programmes finished with degree of *licencjat* or *inżynier*, second-cycle programmes finished with degree of *magister* and third-cycle programmes for doctoral students..

Activities of public higher education institutions are financing by State-budget subsidies for its statutory tasks, and may be financed by its own revenues. Public higher education institutions get State-budget subsidies obligatory. Non-public higher education institutions could apply for funds from State-budget subsidies in limited degree. Non-public higher education institutions get subsidies obligatory for the financial support for students and doctoral students. State-budget funds are about 60% of all incomes of public higher education institutions. State-budget funds are not important in financing of non public higher education institutions. The basis of financing these institutions are fees charged for educational services *czesne*. Fees charged for educational services are about 15% of all incomes of non-public higher education institutions. Both public and non-public education institutions may be granted other funds from the State-budget and budgets of local government units or their associations. Within the scope of conducting research higher education institutions could get subsidies for funding research and development work

The primary tasks of a higher education institution:

- teaching students to prepare them for employment;
- educating students in the spirit of responsibility for the Polish State, consolidation of
- democratic principles and respect for human rights;
- conducting research and development work, and providing research services;
- training and advancement of academic staff;
- disseminating, and contributing to, achievements of science, national culture and technology,
- among other things by collecting and making available library and information resources;
- providing training to enable the acquisition and development of knowledge;
- creating conditions for the physical development of students;
- conducting activities benefiting local and regional communities.

A non-university higher education institution providing only first-cycle programmes shall not be obliged to perform the tasks referred to in section 1, subsections 3 and 4.

Autonomy degree

A higher education institution has in particular the right to:

- define the conditions of admission to degree programmes, including the number of places
- available for students, except in medical fields of study;
- establish study plans and curricula, while respecting degree programme requirements;
- verify the knowledge and skills of students;
- issue national higher education diplomas confirming the award of a degree, and certificates
- confirming the completion of doctoral programmes, non-degree postgraduate programmes
- and retraining courses.

The rector of a public higher education institution takes decisions in all cases concerning institution, especially in cases concerning assets and business matters of the institution and supervision or management of the institution (except for the matters reserved by the Law on Higher Education Act or the statutes for the remit of other bodies of the institution or the head of finance and administration). Decisions concerning mentioned cases in non-public institutions take rector or other single-person authorities established in accordance with the procedure laid down in the statutes of this institution. The rector of a public higher education institution is accountable, pursuant to the rules laid down in separate legislation, for

infringement of the legislation on public finance by the institution. A public higher education institution manages its funds independently on the basis of an activity-and-finance plan and in accordance with the legislation on public finance and accounting. The amount of funds to be allocated for the remuneration of employees in a public higher education institution are determined by the senate within the limits of funding available in the institution.

Connection with local authorities and business environment:

In order to ensure better use of the intellectual and technological potential of higher education institutions and the transfer of research findings to the economy, higher education institutions may

operate academic business incubators and technology transfer centres.

Academic business incubators and technology transfer centers may function as:

- institutional-level unit,
- commercial partnership,
- foundation.

In accordance with Law on Higher Education Act (art. 60 and art. 63) a public higher education institution may have a council - collective body. The members of the council of a public higher education institution may include, in particular, representatives of: State authorities, local government bodies, and self-government bodies representing professions, academic, professional and artistic institutions and associations, employers' organisations and, if this is provided for in the statutes, business selfgovernment organisations, entrepreneurs and financial institutions.

3. Governance and regulatory framework

The Minister responsible for higher education shall supervise the activities of higher education institutions in respect of their compliance with the law, the statutes and the permit granted for the establishment of a non-public higher education institution, as well as the propriety of expenditure of public funds. The minister responsible for higher education may request information and clarification from the bodies of a higher education institution and the founder of a non-public higher education institution, and may conduct inspections of higher education institutions. The law basis concerning functioning of higher education are established into Act of 27 July 2005 - Law on Higher Education. Public institutions are created on the basis of acts (university-type higher education institutions) and Council Ministries Decrees (non-university-type higher education institutions). Non-public institutions are created upon an application of natural person or legal person with the consent of Minister responsible for higher education.

Institutions which support higher education system:

The General Council for Higher Education

The Council establishes higher education policy of country cooperates in this scope with the Minister of science and higher education and other authority or public administration body.

The State Accreditation Committee (Panstwowa Komisja Akredytacyjna)

The State Accreditation Committee is independent institution which works on improve quality of education within the scope of higher education system in Poland. The main object of the Committee is support of Polish public and non-public institutions in building of educational standards to follow the best patterns of European and global academic space. These works aimed at assurance high position on national and international work market to graduates of Polish high education institutions and improve Polish institutions competitiveness as an European institution.

The Central Commission on Academic Degrees and Academic Title and Degrees

The Central Commission on Academic Degrees and Academic Title and Degrees, hereinafter referred to as "the Central Commission" gives opinion on draft acts concerning conferring the degrees of doctor and habilitated doctor and the title of professor, as well gives opinion on employment in high education institution on position of associate professor people without habilitated doctor degree.

Bureau for Academic Recognition and International Exchange

Bureau is unit which is subordinate to Minister of Science and Higher Education. Bureau is ENIC/NARIC centre in Poland and closely cooperates with centers from this network on the whole world. Science 1 may 2004 Bureau fulfills the role of Polish centre of information (contact point) with reference to directives on general system of recognition of professional qualifications got in UE.

4. System's strengths and weaknesses

System's strength is institutions autonomy, both in educational and financial aspects. Institutions lead unimpeded employment policy. There are only two limits - obligation to assurance minimum of employment for study specializations and minimum of payments for employments. System's strength is also support system for low economical status students by State-budget subsidies and system of students' loan and credits.

System's weakness is the weak connection between work market and education.

Explanatory factors for efficiency

1. Output flexibility

1.1. Course content and exams

In accordance with art. 4 par. 1 of Law on Higher Education Act of 27 July 2005: A higher education institution shall be autonomous in all areas of its activity pursuant to the rules laid down in this Act.

Within the scope of this autonomy, in accordance with art. 6 par. 1 point 2 of mentioned Act: A higher education institution shall have in particular the right to establish study plans and curricula, while respecting degree programme requirements laid down in the legislation adopted on the basis of the decree of the Minister of Science and Higher Education of 12 July 2007 on standards of education for particular fields of studies and levels of education as well as procedure of creating and conditions to be fulfilled by the higher education institution for running interdisciplinary and macro-field studies (the Journal of Laws No 164, item 1166).

Standards of education are defined for particular fields of studies and levels of education and The General Council for Higher Education prepares they drafts in consultation with academic environment. Standard is basis for passing by Council the base organisational unit for study plans and curricula, for particular fields of studies and levels of education within the scope of institution rights autonomy. The State Accreditation Committee gives opinion on standard and education quality realization and for particular fields of studies and levels of education.

1.2. Offer of short studies and other diversifies studies

In accordance with art. 159 of Law on Higher Education Act of 27 July 2005 degree programmes in a higher education institution shall be provided as first-cycle or second-cycle programmes, or as long-cycle programmes.

- first-cycle programmes: undergraduate programmes providing knowledge and skills in a specific area of study, preparing for work in a specific profession, and leading to the degree of licencjat or inzynier;
- second-cycle programmes: graduate programmes providing specialist knowledge in a specific area of study as well as preparing for creative work in a specific profession, and leading to the degree of magister or an equivalent degree;
- long-cycle programmes: graduate programmes open to applicants holding a secondary school leaving certificate, providing specialist knowledge in a specific area of study as well as preparing for creative work in a profession, and leading to the degree of

magister or an equivalent degree; the completion of such a programme provides access to third-cycle programmes.

1.3. Student choice

In accordance with art. 163, par. 1 of Law on Higher Education Act of 27 July 2005 (Journal of Laws No. 164, item 1365, as amended): degree programmes in a higher education institution shall be provided as full-time programmes or part-time programmes.

<u>Full-time programmes</u>: a form of study in which the curriculum comprises courses requiring direct participation of academic staff and students, with the course load defined in the degree programme requirements for this form of study, and which is specified by the senate of a higher education institution

<u>Part-time programmes</u>: a form of study other than full-time programmes complying with the degree programme requirements defined for this form of study, and specified by the senate of a higher education institution.

In accordance with art. 8, par. 1 mentioned Act: a higher education institution may provide degree programmes, doctoral programmes, non-degree postgraduate programmes and retraining courses.

<u>Doctoral programmes</u>: third-cycle programmes open to applicants holding the degree of magister or an equivalent degree, providing advanced knowledge in a specific area or discipline of science, preparing for independent research and creative activity, and for the award of the academic degree of doctor.

<u>Non-degree postgraduate programmes</u>: programmes other than degree programmes or doctoral programmes which are designed for holders of a higher education diploma.

In accordance with art. 171, par. 1 mentioned Act: students may follow a degree programme in more than one field of study or other courses, also in more than one higher education institution. The rules and procedure for taking up study based on such arrangements shall be laid down in the study regulations.

Moreover in accordance with art. 165, par. 1 the same Act: The organisation and schedule of degree programmes shall allow for the transfer and recognition of results obtained by students in an organisational unit of their home institution or in another institution, including a foreign institution, in accordance with the rules of a learning achievement transfer system.

The minister responsible for higher education shall lay down, by regulation, the requirements and procedure for transferring learning achievements, taking into account – with comparability and compatibility ensured between the degree programme requirements and the

duration of degree programmes followed in various national and foreign higher education institutions – credit-based methods of expressing student learning achievements, requirements for their transfer and accumulation and the procedure for the recognition of such achievements, and having regard to the need to ensure the continuity of education.

Courses taught as part of degree programmes may also be delivered using distance education methods and techniques. The main rules in this scope are established by decree of the Minister of Science and Higher Education of 25 September 2007 on requirements concerning courses taught as part of degree programmes delivered using distance education methods and techniques.

1.4. Numerus clausus

In accordance with art. 6, par. 1, point 1 of Law on Higher Education Act of 27 July 2005 (Journal of Laws No. 164, item 1365, as amended): a higher education institution shall have in particular the right to define the conditions of admission to degree programmes, including the number of places available for students, except in medical fields of study.

In accordance with art. 6, par. 3 of this Act: in consultation with the minister responsible for higher education, the minister responsible for health matters shall specify, by regulation, the maximum student enrolment level for each field and form of medical studies in individual higher education institutions, while taking into account the teaching capacity of the institutions concerned and the demand for graduates in these fields of study.

1.5. Regional/ European/ global mobility

There are no limits to the transfer of students between programmes and between different higher education institutions.

2007/2008	Erasmus Program	Rother	bilateral	Total
		change		
Students departures	ok 12.900,	1.798,		14.698,
Students arrivals	ok 4.000,	10.870,		14.870,
Total	ok 16.900,	12.668,		29.568,

Statistical data concerning mobility

The number of Polish The number of The number of The number of foreign Polish students. foreign students, academic teachers who academic teachers, which who take who came to take advantages of came to Poland within the frame of Erasmus advantages of Poland within the Erasmus Program (to Erasmus frame of Erasmus lead classes) Program scholarship scholarship (to lead classes) ? 1998/1999 1426 220 359 ? 1999/2000 2813 466 605 2000/2001 3691 614 678 310 2001/2002 4322 750 365 800 5419 996 884 418 2002/2003 464 2003/2004 6278 1459 946 2004/2005 8388 2332 1394 1026 9974 1740 1291 2005/2006 3063 2006/2007 11219 3730 2030

Only Erasmus Program

In accordance with Polish law regulations higher education diploma and academic degree of doctor diploma, which are encompass bilateral contract about mutual judge education, can be honor as a equivalent to Polish documents only in the way of nostification process.

Under international agreements Poland honor university degree, higher education diploma and academic degree of doctor diploma from following countries: Armenia, Austria, Belorus, Bosnia and Hercegovina, Bulgaria, Croatia, the Czech Republic, Estonia, France, Kazakhstan, North Korea, Cuba, Libya, Lithuania, Latvia, Macedonia, Moldova, Mongolia, Germany, Russia, Romania, Serbia and Montenegro, Slovakia, Slovenia, Syria, Tajikistan, Ukraine, Uzbekistan, Hungary, Vietnam.

2. Evaluation

2.1. Institutional evaluation

The State Accreditation Committee

The Act of 20th July 2001, amending the existing Higher Education Act, established the State Accreditation Committee as legal body working for the quality of education, defined its tasks and its working procedure.

The Law on Higher Education, adopted by the Parliament on 27 July 2005, redefined the objectives of the State Accreditation Committee.

The State Accreditation Committee is the only statutory body entrusted with the responsibility of evaluating the quality of higher education, its opinions and resolutions have a legally

binding effect. Since 23 January 2009 it has status of a full member in ENQA (the European Association for Quality Assurance in Higher Education).

On 15th April 2009 the State Accreditation Committee was officially accepted to European Quality Assurance Register for Higher Education (EQAR) founded to enhance transparency and trust in quality assurance. EQAR publishes and manages a register of quality assurance agencies that substantially comply with the European Standards and Guidelines for Quality Assurance (ESG) to provide the public with clear and reliable information on quality assurance agencies operating in Europe.

3. Funding rules

3.1. Public funding

Public higher education institution-financial system

There are set of task subsidies established into Act – Law on Higher Education which institutions get from State-budget:

- Subsidies in the scope of didactic activity for:
 - the tasks related to the teaching of full-time students and full-time doctoral students, and the training of research staff, as well as to the maintenance of the higher education institution, including renovation work;
 - o the tasks of a military higher education institution related to national defence;
 - the tasks of a government service higher education institution related to the safety of citizens;
 - the tasks of a higher education institution for art studies related to cultural activity within the meaning of the legislation on the organisation and pursuance of cultural activity;
 - the tasks of a higher education institution for maritime studies related to the maintenance of training ships and specialist training centres for maritime staff and the military training of students;
 - the tasks of a higher education institution training aircraft personnel for civil aviation related to the maintenance of training aircraft and specialist training centres for aviation staff;
 - the tasks related to medical services delivered as part of the training of fulltime students in a basic organisational unit of a medical higher education institution or another public higher education institution performing the tasks and conducting research in medical sciences under direct supervision of doctors or dentists who are authorised to practise the profession of doctor or dentist and are employees of the institution;

- the tasks related to the provision of postgraduate specialisation training for doctors, dentists, veterinary surgeons, pharmacists, nurses and midwifes, and laboratory diagnosticians;
- the tasks related to the teaching and medical rehabilitation of disabled students.
- Subsidies for the tasks related to non-reimbursable financial support for students and doctoral students in the scope established by Act,
- Subsidies for the co-funding or funding of investments, including investment projects supported by public Community funds under regional development contracts.

Non-public higher education institution-financial system

A non-public higher education institution can receive State-budget subsidies for the tasks notrelated to the teaching of full-time students and full-time doctoral students. Subsidies can be allocate for:

- the tasks related to the teaching of full-time students and full-time doctoral students, and the training of research staff, as well as to the maintenance of the higher education institution, including renovation work;
- the tasks of a military higher education institution related to national defence;
- the tasks of a higher education institution for art studies related to cultural activity within the meaning of the legislation on the organisation and pursuance of cultural activity;
- the tasks of a higher education institution for maritime studies related to the maintenance of training ships and specialist training centres for maritime staff and the military training of students;
- the tasks related to the provision of postgraduate specialisation training for doctors, dentists, veterinary surgeons, pharmacists, nurses and midwifes, and laboratory diagnosticians;
- the tasks related to the teaching and medical rehabilitation of disabled students.

A non-public higher education institution complying with the requirements laid down in the legislation adopted on the basis of Article 95, section 1 may be granted a subsidy to cover a part of fees paid by full-time students and full-time doctoral students.

3.2. Impact of quality assessments on funding

The minister granting the subsidy referred to in Article 94, section 1, subsection 1 may allocate additional funds for degree programmes provided in specific fields of study, macro-fields of study or as interdisciplinary programmes to a public higher education institution where degree programmes are of a particularly high quality as confirmed by an assessment of the State Accreditation Committee.

3.3. Private funding

3.3.1. Tuition fees and/or households

In public higher education institution fees charged for educational services, in particular for part-time degree and doctoral programmes it's about 15% of revenues. For non-public higher education institution fees charged for educational services are the main revenues.

3.3.2. Business, other

Earned income (without tuition fees) is a small part in source of funding.

3.3.3. Grants/loans

Higher education institutions can establish a special fund for financial support for students and doctoral students.

The main fund is a financial support for students and doctoral students and shall be used for grants, scholarships and aid payments. The fund shall be based on the subsidiary, fees for accommodation in student dormitories, fees for meals in student canteens and other revenues, including fees for renting premises in student dormitories and canteens.

A higher education institution may establish its own scholarship fund for staff, students and doctoral students using funds from donors.

Grants approved by the minister responsible for higher education in consultation with General Council for Higher Education are exempt from income tax.

Commercial banks can offer special financial products dedicated especially for students. Those products are characterized by lower charge or even they don't have any charge.

4. Impact on Employability

During execution modernization process higher education institutions had to adjust their teaching offer to demands of the labour market. In this connection there are develop such fields of study which graduate are sought-after by employers.

Very important role play Career Offices. Career Offices are function on most of higher education institutions. Offices can help students in looking for employers, getting professional experience or in founding own business.

Training period is indispensable part in education process in higher education institution. Usually, the training period last about 3-12 weeks. The longest training period is during medical studies and they last for few months.

Structural Funds Use

In the frame of IV Priority Tertiary Education and Science of Human Capital Operational Programme 2007 – 2013, Measure 4.1 Strengthening and development of didactic potential of universities and increasing the number of graduates from faculties of key importance for knowledge-based economy, Sub-measure 4.1.1. Strengthening and development of didactic potential of universities are taking activities which involve financial support for educational offer growth concerning people outside academic society. For example special courses, trainings according to labour market needs and knowledge-based economy.

Thanks to gaining new qualifications and competence increase the ability to get, maintain, and change a job. Moreover together with gaining qualifications (special or deficit on labour market) a level of payment could be higher. Results of these activities will be better preparation of graduates to face with economic realities.

Activities will involve either financial support for projects which embrace development programmes of higher education institutions.

In the frame of IV Priority Tertiary Education and Science of Human Capital Operational Programme 2007 – 2013, Measure 4.1 Strengthening and development of didactic potential of universities and increasing the number of graduates from faculties of key importance for knowledge-based economy, Sub-measure 4.1.2. Increasing the number of graduates from faculties of key importance for knowledge-based economy are taking activities which involve financial support for projects which embrace education realization of faculties recommended by Minister of Science and Higher Education through making didactic process concerning these faculties more attractive.

The support embraces implementation of contracted education through improving attractiveness of education at mathematical, natural and technical (SMT) faculties due to implementation of projects including for example:

- creation of grant schemes for students of contracted faculties
- creation and implementation of compensatory programmes addressed to first-year students of SMT faculties covering improving competences necessary to continue education in these faculties
- implementation of new or amended curricula adjusted to Polish economy needs,
- other forms of teaching activity specified by the university, improving the attractiveness of education in the mathematical-natural and technical faculties

All activities should be adjust to real needs and development vision of institutions according to requirements of knowledge-based economy and didactic and infrastructural potential of institutions.

Expected result of these activities will enable better preparation of graduates to functioning in Polish economic realities and supply growth for specialists who are demanded on labour market.

5. Recent and planned reforms of the tertiary education system

5.1. Planned reforms (or reference to ongoing policy debate)

Suggested solutions of higher education reform concerning management system of higher education institutions, career model and abilities according to XXI centuries challenges and needs come from Polish economy development.

Presented propositions in frame of institutions **management system** lead to increase of higher education institutions autonomy within the scope of teaching. All institutions will become free from complicated central administrative procedures, however the best institutions will get independent freedom within the scope of creation of original, innovative and interdisciplinary faculties.

Second important element of reform is **science career.** There are a big difference between Poland and world standards of ages structure and the way of promotion. Unfortunately this state is not reflected by indicators of educational potential. Suggested mechanism which are going to increase level of doctorates, simplify habilitation procedure, account of employees from real educational results as well open institutions for foreign scientists, are treat as a turning point

Solutions concerning **students** are pillar of reform. Theirs purpose is abolition of barriers, especially for students who come from less well-of families, through creation of new scholarship system, increase of funds for financial assistance and facilitations in scope of students loan system.

Students law protection will be reach through introduction of obligation to conclude agreements between institutions and students. Special grants and rewards for the best students lead to optimization of conditions for young scientists. Moreover employers needs will be reach through efficient mechanisms which will connect institutions with labour market.

These assumptions are result of social consultations which had beginning in April 2008 in the Chancellery of the Prime Minister through submitting of "Assumptions project". In the context of five reforms packet accepted by government in December 2008 these solutions are necessary step to assurance cohesion between higher educations and science systems.

These changes aimed at strategic targets realization were defined in accepted by government document – "Poland 2030. Development Challenges". Additionally it is important that Polish education institutions reach good position (between first twenty) in European rankings before 2020. Moreover very important (in short prospect – near 5 years) is growth about 200% of number foreign students who are studying in Poland.