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 PORTUGAL

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 in Portugal is organised as a binary system, with university education oriented towards the provision of solid academic training, combining the efforts and responsibilities of both teaching and research units, and polytechnic education concentrates particularly on vocational and advanced technical training that is professionally orientated.

The higher education system includes public higher education, consisting of the institutions that belong to the State and the public foundations it has set up, and private higher education, consisting of institutions belonging to private entities.

The network of higher education institutions comprises today, in the public higher education:

- 14 public universities (three with the status of public foundation under private law)
- 1 public university education institute
- 4 university education schools (not integrated into universities)
- 15 public polytechnic institutes
- 6 public polytechnic education schools (not integrated into polytechnics)

And in the private higher education:

- 10 private universities
- 1 university education institute
- 29 university education schools (not integrated into universities)
- 2 private polytechnic institutes
- 55 polytechnic education schools (not integrated into polytechnics)

The quality assurance of higher education is based on the evaluation and accreditation of higher education institutions and their study cycles, along the best international practices in which independent external evaluation is mandatory, through the Portuguese Higher Education Evaluation and Accreditation Agency (‘A3ES’), created in 2007.

Some of the main recent trends are compiled in the following paragraphs.

About almost three years since the OECD’s Education Policy Committee met in Lisbon to review Portugal’s higher education policy in December 2006, a number of steps have been taken to follow up on the Committee’s recommendations and a thorough legal reform of the Portuguese higher education system was completed.

The implementation of the full regulation that aims to bring higher education in Portugal in line with the Bologna process was carried out very successfully, including the opening of higher education to new publics and the development of post-secondary education mainly through the polytechnic sub-system (*i.e.*, Technological Specialization Courses – CETs):

- In the 2009-10 academic year, all study cycles in public and private higher education institutions are organized in accordance with the Bologna process principles.
- The opening of higher education to new publics through the new access regime for students aged over 23 years, resulted in the number of adults entering higher education by this means rising to roughly 11 775 in the 2007-2008 academic year (compared to 10 850 in 2006-07), up from around just 900 adults that started higher education in 2005 (before the reform).
- In 2008, around 230 post-secondary education programmes (*i.e.*, Technological Specialization Courses, CETs) were offered in Institutions of higher education, majorly on Polytechnic Institutions, involving around 7 000 admitted students (compared to a total of around 1 000 students enrolled in these courses in 2005).
- Overall, the success of the reform is accounted for by a significant increase in the number of students enrolled in higher education. In fact, the declining trend in new students in higher education observed in the OECD Review Report of December 2006 was reversed in the academic year 2006-2007 (95 431 in 2006-2007, compared to 84 363 in 2004-2005 and 82 720 in 2005-2006). This trend accelerated in 2007-2008 with an increase in the access to public higher education, with particular impact on polytechnic education. Total enrolments in higher education of people aged 20 have increased 20% over the last 3 years (2005-2008), reaching about 36% of the corresponding age population (compared to 30% in 2005).

Following the OECD report of December 2006, the reform of the legal-juridical system and of the evaluation regime of higher education institutions (HEI's) was approved by Parliament and published in 2007. It considers significant changes in the internal system of governance of HEI's (including the management structure), as well as in their external societal relations (including, internationalization, research partnerships and business links, as well as external evaluation and accountability). The following aspects should be emphasized:

- The new Legal Regime of Higher Education Institutions ("RJIES"), approved by Law n. 62/2007, dated 10 September, establishes the organizational principles of the higher education system, the autonomy and accountability of institutions, setting up governing Boards with external participation, diversity of organization and legal status (including public foundations governed by private law), establishment of consortia, recognition of research centres as part of the University management framework. It is noted that, so far, three higher education institutions - the University of Porto, the University of Aveiro and ISCTE (in Lisbon) - completed their transference to the

regime of public foundation governed by private law, strengthening university autonomy;

- The new legal framework for the evaluation of higher education (Law 38/2007 of 16 August)and the creation of the Higher Education Evaluation and Accreditation Agency ('A3ES') (Decree-Law 369/2007 of 5 November), both aiming at ensuring the quality of higher education through the evaluation and accreditation of higher education institutions and their study cycles, along the best international practices in which independent external evaluation is mandatory;
- The creation of conditions to foster the national and international mobility of students and graduates, namely*: i)* the new "Regulations on Arrangements for Changes of Study Programmes, Transfers and Return to Higher Education", which seek to facilitate the entry of higher education students into Portugal to continue their studies, with rapid and objective recognition of their previous school education and occupational training, and to create simplified arrangements to return to higher education for those who abandoned their studies; and *ii)* the new legal framework for the recognition of foreign degrees, which simplifies the system for recognizing foreign degrees in Portugal;
- The introduction in the Autumn 2007 of an innovative system of student loans with mutual guarantee underwritten by the State, which complements the system of public grants, thereby improving access to higher education for all students. About 7 000 loans have already been contracted through the banking system and this represents an important new achievement for Portugal and the Portuguese families, which follows current practices in modern societies at the OECD level.

This profound legal reform of higher education, which also reflects the current European movement to modernise higher education, has been driven by policies aimed to:

- Extend the recruitment base and the number of students in higher education;
- Reinforce the top of the system, by fostering the internationalization of research universities and their specialization;
- Promote the binary system, with polytechnic education concentrating upon professionally-oriented and vocational training. University education should be further concentrated on postgraduate education.

By the time the necessary legal changes were made, the Portuguese government has promoted an overall action fostering public and private investment in science and technology ("Commitment to Science"), including a large programme of international partnerships with leading institutions worldwide. Scientific output in Portugal increased by 68% over the last four years when measured in terms of the number of scientific publications internationally referenced.

The following aspects should be emphasized:

- Gross expenditure on R&D (GERD) achieved a maximum of 1.51% of GDP in 2008. Business expenditure on R&D (BERD) grew almost three times from 2005, attained a level of 0,76% of GDP in 2008, which represents 50% of the national expenditure on R&D.
- The number of researchers per thousand labour force increased to a level of 7.2 in 2008, far above the European average. The percentage of women is 44%, one of the highest in Europe.
- These results reflect the continuous public support for R&D in the last 5 years. In fact, for the first time, the total public budget for R&D exceeded 1% of GDP in 2008 (compared to 0.85% in 2006). Analysis of other national experiences worldwide clearly shows that this is critical to foster private investment and to guarantee the modernization of the Portuguese science community;
- Scientific employment has been promoted through a new programme launched in 2007 which supported contractual arrangements for around new 1 200 PhD researchers up to 2009. It is expected that this will foster major changes in the academic community and facilitate the renewing of teaching and research staff;
- A strategic programme of international partnerships in science, technology and higher education was initiated in 2006 and by September 2007 the first doctoral and advanced studies programmes were officially launched, together with research activities, bringing together several Portuguese universities and leading universities worldwide, including MIT, Carnegie Mellon University, Harvard University and the University of Texas at Austin. Unprecedented in Portugal, these programmes facilitated the creation in 2007 of effective thematic networks of science and technology involving a large set of Portuguese institutions in collaboration with companies and internationally renowned institutions.

The essence of the reform considers greater openness to society and to new social groups of students, as well as greater quality and international recognition and a more advanced, diversified and responsible system of autonomy and quality assurance.

1/ TEACHING	**Portugal**										
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Academic staff per 1000 inhabitants relative to the average	:	:	1.91	:	:	:	2,7	2,7	2,7	2,6	2,6
Number of students per 1000 inhabitants	:	:	:	:	:	:	:	:	:	:	:
Number of students (graduate and post-graduate) per 1000 inhabitants	34,4	35,2	36,7	37,8	38,4	38,5	37,7	36,2	34,8	34,6	35,5
From public institutions	22,4	23,5	25,0	26,7	27,6	27,9	27,5	26,8	26,1	26,0	26,8
From private governement-dependent institutions	-	-	-	-	-	-	-	-	-	-	-
From private independent institutions	12,0	11,6	11,6	11,1	10,8	10,6	10,2	9,4	8,7	8,6	8,7
Ratio of students per academic staff	:	:	13.0	:	:	:	13.5	13.2	12,7	13,2	13,8
Number of graduates per 1000	4.6	5.1	5.3	6.0	6.2	6.6	6.6	6.6	6.8	7.9	7.9

inhabitants											
Ratio of graduates per 1000 academic staff	:	:	2.3	:	:	2.3	2.4	2.4	2.5	3.0	3.0
Standardized recruiter view indicator (graduates' employability as perceived by recruiters)	:	:	:	:	:	:	:	1.08	:	:	:
Standardized peer view country indicator (quality perceptions among peers)	:	:	:	:	:	:	:	1.15	:	:	:
PISA scores	:	:	456	:	:	:	:	:	:	:	:
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 (by year, 1000 Euros)	:	:	:	:	:	:	:	:	:	:	73,5

2/ RESEARCH											
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Publications per 1000 inhabitants	0.19	0.24	0.26	0.28	0.31	0.35	0.4	0.42	0.49	0.52	0.63
	1998-2002	1999-2003	2000-2004	2001-2005	2002-2006	2003-2007					
Quality of research (position in the ISI citation index)	2.69	2.92	2.91	3.07	:	:					
% of research done in cooperation with industry	:	:	:	:	:	:					

3/ EXPLANATORY FACTORS FOUND RELEVANT FOR EFFICIENCY											
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Main categories of composite indicator											
Funding Rules Indicator	:	:	:	:	:	:	:	:	:	7.8	:
Evaluation Indicator	:	:	:	:	:	:	:	:	:	4.6	:
Staff Policy Indicator	:	:	:	:	:	:	:	:	:	7.4	:

4/ EXPENDITURE											
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total expenditure on tertiary education institutions as a percentage of GDP	0.98	1.00	0.99	1.05	0.97	1.07	1.08	1.18	1.35	1.37	:
Total expenditure per student (ppp USD)		4802	4766	5199	6960	7200	7741	8787	9724	:	:
Private expenditure on tertiary education institutions as a percentage of GDP	:	:	:	:	:	:	:	:	:	:	:
Total expenditure on education as a percentage of GDP	5.36	5.42	5.42	5.61	5.54	5.57	5.29	5.40	:	:	:
Private expenditure on education as a percentage of GDP	:	0.08	0.08	0.08	0.09	0.09	0.13	0.42	:	:	:
Funds from non-public sources as % of total income (fees, earned income, investment, other)	:	:	:	:	:	:	:	:	:	:	:
Tuition fees as average of the cost of tuition	:	:	:	:	:	:	:	:	:	:	:

Percentage of funds received by private government-dependent institutions from public sources	:	:	:	:	:	:	:	:	:	:	:
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)	:	:	:	:	:	:	:	:	:	:	:

Source: Eurostat, OECD, UOE and Member States.

2. Structure of institutions and funding arrangements

Higher education is organised as a binary system, with university education oriented towards the provision of solid academic training, combining the efforts and responsibilities of both teaching and research units, and polytechnic education concentrates particularly on vocational and advanced technical training that is professionally orientated.

The organisation of the binary system must reflect the needs of the increasingly diversified demand for higher education that meets the requirements of those who complete secondary education and those who are seeking vocational and professional courses and lifelong learning.

The higher education system includes:

- Public higher education, consisting of the institutions that belong to the State and the public foundations it has set up;
- Private higher education, consisting of institutions belonging to private entities.

Under the Constitution, the State is obliged to create a network of public higher education institutions to meet the country's needs. The right to create private higher education institutions is guaranteed under the Constitution and under the legal regime of higher education institutions (Law n. 62/2007, dated 10 September). Higher education institutions or education programmes (study cycles) may not operate under franchise agreements.

Higher education institutions include:

- University education institutions, consisting of universities, university institutes and other university education institutions;
- Polytechnic education institutions, consisting of polytechnic institutes and other polytechnic education institutions.

Public higher education institutions are governed by public law. They may, however, assume the status of public foundations governed by private law, as introduced by the legal framework of higher education institutions (Law n. 62/2007, dated 10 September).

Two public universities (University of Porto and University of Aveiro) and one public university education institute (ISCTE in Lisbon) concluded in 2009 their transference from the general regime to the regime of public foundations governed by private law.

Public higher education institutions enjoy statutory, pedagogical, scientific, cultural, administrative, financial, asset and disciplinary autonomy with regard to the State, with the appropriate distinctions according to their nature. The statutory, scientific, pedagogical, administrative and financial autonomy of universities is recognised in the Constitution.

Private higher education establishments enjoy pedagogical, scientific and cultural autonomy with regard to their founding body and to the State.

Each higher education institution has its own statutes which, in terms of the law, describe their mission and pedagogical and scientific objectives, establish their autonomy and define their organisational structure.

The autonomy of the higher education institutions does not preclude guardianship or government supervision, depending on whether they are public or private institutions, or accreditation and external assessment as prescribed by law.

The complete description of the "Legal regime of Higher education Institutions" is available: Law 62/2007 of 10 September.

3. Governance and regulatory framework

Following the OECD evaluation report of December 2006, the reform of the legal-juridical system of higher education institutions (HEI's) was prepared by the Government, through the Ministry of Science, Technology and Higher Education, and submitted to Parliament by the end of May 2007. After a thorough debate and discussion, the new legal regime based on a single Act for the whole system of higher education (public and private, university and polytechnic) was approved by Parliament and published in the autumn 2007. It considers significant changes in the internal system of governance of HEI's (including the management structure), as well as in their external societal relations (including, internationalization, research partnerships and business links, as well as external evaluation and accountability).

The new Legal Regime of Higher Education Institutions ("RJIES", the acronym in Portuguese), approved by Law n. 62/2007, dated 10 September, establishes the organizational principles of the higher education system, the autonomy and accountability of institutions, setting up governing Boards with external participation, diversity of organization and legal status of public institutions, establishment of consortia, recognition of research centres as part of university management framework.

The new legal regime (RJIES) considers an effective institutional autonomy framework, including the terms for defining institutions' mission and organisation, beyond the framework of academic autonomy. It also considers the possibility to acquire independent legal status, in the form of public foundations governed by private law.

It is noted that three institutions - the Universities of Porto and Aveiro and ISCTE in Lisbon - concluded their transference to the regime of public foundation governed by private law, strengthening university autonomy under independent legal status. Other public institutions have expressed the intention to submit a similar application.

Following the concepts adopted in RJIES, the advantages university foundations can bring may be assessed from different perspectives: the institution and its constituency, the government, and the wider public, including the business sector. A university foundation has, potentially, the advantage of offering maximum autonomy to HEI's, namely to: borrow and raise funds; own building, equipment and other financial assets; full control of budgets to achieve objectives; set internal administrative and management procedures; set academic courses and evaluation procedures; employ and dismiss academic and other staff; set salaries and other remuneration and reward systems; and set criteria and size of student enrolment. But the biggest advantage offered by the foundations is the release of leadership potential to plan strategically with all the dynamism and innovation and entrepreneurial skills institutional leadership can muster.

The transition to a foundation status requires many support structures and arrangements. Some of the main issues include:

- tax treatment such as capital gains tax, and from income tax and corporation tax on income (other than from for-profit activities);
- philanthropy laws that make donations to the universities attractive to donors, for example, exemption from inheritance tax;
- regulations regarding the creation of monitoring bodies and ensuring that they do not infringe the autonomy;
- performance contracts (as for example those used in Japan, Germany and Austria, which do not infringe the autonomy that comes with the independent legal status);
- advisory service to assist foundations in developing strategic plans;
- expertise in asset management;
- leadership training (as for example the protocol developed for this purpose in Australia); and
- ensuring support structures for transition, as for example in dealing with staff adversely affected by a transition to the foundation status. It is essential to handle the fears, well founded or otherwise, attached to the transition, among staff as well as management.

The new legal regime (RJIES) strengthens the binary system. It leads to solutions that allow individuals with different needs and skills to have access to higher education, developing a higher education system that is, in itself, diversified, including several institutions with different trends. The new Law recognises that higher education diversity is beneficial, structuring higher education systems in different ways to promote that diversity. Above all, higher education institutions must excel through the differences between each other, even between universities, polytechnics and others, because each institution will offer a different set of programmes, qualifications and degrees, in different areas. Higher education entities must decide whether to develop, and with what objectives, research and development activities, so that the allocation of resources (human and financial) reflects those different options and so that institutions are evaluated against the objectives they have chosen to attain. It is clear that the search for quality is of exclusive responsibility of each institution, although it is evaluated by the State, as a guarantor of independence and the pursuit of public good.

Amongst other things, the Law facilitates networks amongst Portuguese and foreign institutions that lead to critical masses capable of promoting the international establishment of Portuguese institutions. Naturally, this strategy will also favour a better differentiation in terms of university and polytechnic education, therefore strengthening the specialisation of the higher education binary system, as well as better integrating university education in the activities of R&D centres and units.

It is also interesting to highlight that the new legal system facilitates institutional reform, namely at organisational level, in a way that strengthens the participation of key players in decision making and strategic definition in main institutional bodies. Several solutions have been implemented, mainly in English speaking countries (namely in the shape of “Boards of Trustees”), where the institutions take responsibility for the level of integration of those players and for the effective implementation of organisational schemes that guarantee links to society. The procedures adopted in the new Portuguese Law were designed to foster an adequate transition to a new regime of increased societal participation, by providing for the President and 30% of the members of the General Council to be external to the Institution.

The profound reform of the higher education system steering and coordination has also considered the following main issues beyond the new legal regime:

- The creation of the necessary conditions for the national and international mobility of students and graduates, including the new rules on readmission, change of course and transfer, which facilitate: *(i)* increased mobility between higher education institutions in Portugal; *(ii)* the readmission of students who had abandoned higher education studies; *(iii)* the admission to higher education in Portugal by higher education students from abroad; and *(iv)* the award of credits for academic education acquired.

- The new rules on the recognition of foreign degrees, enabling graduates who obtained their degrees abroad to exercise their profession in Portugal, and introducing a new mechanism for the recognition of degree classifications.

This profound legal reform of higher education, which also reflects the current European movement to modernise higher education, has been driven by policies aimed to:

- Extend the recruitment base and the number of students in higher education;
- Reinforce the top of the system, by fostering the internationalization of research universities and their specialization;
- Promote the binary system, with polytechnic education concentrating upon professionally-oriented and vocational training. University education should be further concentrated on postgraduate education.

The progress achieved by Portugal in the implementation of this reform was highlighted by OECD in its 2008 report "Higher education for the Knowledge Society" – thematic and comparative review of higher education policies in 24 countries. This report recognizes the important progress in *(i)* the reinforcement of the autonomy of HEI's, in particular regarding the option for the creation of public foundations governed by private law; *(ii)* the extension of the recruitment base of higher education, including the new system of loans to higher education students; *(iii)* the reinforcement of the internationalization of higher education institutions and its scientific community; *(iv)* the increased openness of higher education institutions to society and the labour market; *(v)* the reform of the evaluation and accreditation system; and *(vi)* the reinforcement of its scientific capacity.

In the following paragraphs a summary of the Legal Regime of higher education institutions is presented. The complete legal framework could be consulted at: *Law 62/2007 of 10 September*.

Public higher education institutions are collected persons governed by public law which may, however, assume the status of public foundations governed by private law under the terms stipulated in the legal regime of higher education institutions (*Law 62/2007 of 10 September*, Section III Chapter VI).

In all matters which do not contradict this law and the various special laws, with the exception of the provision in Section III Chapter IV of *Law 62/2007 of 10 September*, public higher education institutions are subject to the system applicable to the various legal persons governed by administrative public law, namely the framework law for public institutions, which serves as subsidiary legislation in areas which do not conflict with the provisions of this law.

The founding bodies of private higher education institutions are legal persons governed by private law and these establishments do not have the status of separate legal individuals.

Private higher education institutions are governed by private law in all matters that do not conflict with current law or any other applicable legislation, notwithstanding the fact that they are subject to the principles of impartiality and justice in their institutional relations with teachers and students, particularly with regard to career promotions procedures for such teachers and admission and assessment procedures for such students.

The following matters are subject to specific regulation, observing the provisions within the legal regime of higher education institutions and in general laws that are applicable:

- Admission to higher education;
- The academic degree system;
- The terms under which tenured professorships are awarded;
- The terms under which the academic title of specialist is awarded;
- The system of equivalences and recognition of academic degrees and other qualifications;
- The creation, modification, suspension and abolition of study cycles;
- The accreditation and evaluation of study cycles;
- The financing of public higher education institutions through the State budget and the setting of tuition fees for these institutions;
- The system and career structure for teaching and research staff in public institutions;
- The system for teaching staff in private institutions;
- Student social services;
- Official bodies representing public higher education institutions.

In addition to the legal and statutory norms and the various regulations governing them, higher education institutions may also define codes of good practice for pedagogical matters and codes for good governance and management.

Diversity of institutional organisation is ensured within the context of higher education. Within the framework of their autonomy and as prescribed by law, higher education institutions are organised freely and in the manner they consider most suitable for their mission and specific context.

The universities and polytechnic institutes may include autonomous organisational units which have their own bodies and staff, namely:

- Teaching or teaching and research units, hereinafter referred to as schools;
- Research units;
- Libraries, museums and other similar units.

Schools and research units may avail themselves of self-governing bodies and self-management, under the terms of the law and the statutes of the appropriate institution.

On their own initiative or following the decision of the institution's governing bodies, organisational units may share material or human resources and organise joint initiatives including study cycles and research projects.

University schools may be named faculties or higher institutes or may adopt another suitable name under the terms of the statutes of the respective institution. Polytechnic institute schools may be named higher schools or higher institutes or may adopt another suitable name under the terms of the statutes of the respective institution.

Whenever justified and if approved by the supervising minister following a favourable opinion from the Coordinating Council for Higher Education, polytechnic schools may, when duly justified and under exceptional circumstances, be integrated into universities whilst maintaining their polytechnic status for all due effects and purposes including the career structure of the teaching staff, since mergers between universities and polytechnics are not permitted.

In order to coordinate training and human and material resources, public higher education institutions may establish consortiums among themselves and with public or private research and development institutions.

The consortiums may also be created by government initiative through an order from the supervising minister, on the recommendation of institutions.

Public higher education institutions may also enter into agreements amongst themselves for the regional coordination of activities, which may also be determined by the supervising minister, on their recommendation.

The consortiums and agreements do not compromise the identity and autonomy of each participating institution.

Public higher education institutions possess their own governing bodies, as prescribed by law and the terms of their statutes.

Universities and university institutes are governed by the following bodies:

- The General Council;
- The Rector;
- The Management Board.

With the aim of ensuring cohesion within the university and the involvement of all organisational units in its management, the statutes may provide for the creation of an academic Senate consisting of representatives of the organisational units, which acts as an obligatory advisory body to the Rector on matters defined in the institution's own statutes.

Polytechnic institutes are governed by the following bodies:

- The General Council;
- The President;
- The Management Board.

Other institutions are governed by the following bodies:

- The General Council;
- The Director or President;
- The Management Board.

In addition to these bodies, the statutes of higher education institutions may also envisage the existence of other consultative bodies.

Additionally, higher education institutions must include the following bodies:

- In schools:
  - In universities, a Scientific Council and a Pedagogical Council;
  - In polytechnics, a Technical-Scientific Council and a Pedagogical Council;
- In organisational research units, a Scientific Council.

The role and the mission of these bodies are fully detailed in the legal regime of higher education institutions (*Law 62/2007 of 10 September*, Section III Chapter IV).

Higher education institutions enjoy the right to create study cycles leading to the awarding of degrees. The following are responsible for creating study cycles leading to the awarding of degrees:

- In public higher education institutions, the Rector or President, on the recommendation of the Scientific or Technical-Scientific Council and the Pedagogical Council;
- In private higher education institutions, the founding body, on the recommendation of the Rector, President or Director, the Scientific or Technical-Scientific Council and the Pedagogical Council.

The commencement of study cycles leading to the awarding of degrees requires accreditation by the Evaluation and Accreditation Agency ('A3ES') for Quality Assurance in Higher Education and subsequent registration with the supervising ministry.

The system for accreditation and registration of study cycles applies to all higher education institutions and distinguishes between "licenciatura" (1st cycle), masters (2nd cycle) and Doctorate study cycles (3rd cycle) (the latter only in university education institutions).

As a final remark, it should be stressed that the evaluation and accreditation of higher education institutions and their study cycles is ruled by the new legal system of tertiary education degrees and diplomas (Decree-Law 74/2006 of 24 March), the new legal framework for the evaluation of higher education (Law 38/2007 of 16 August) and the Higher Education Evaluation and Accreditation Agency ('A3ES') (Decree-Law 369/2007 of 5 November).

Accreditation is mandatory and aims at ensuring that minimum requirements are met which lead to the official recognition of higher education institutions and their study cycles. The accreditation of higher education establishments and their study cycles within the quality assurance system framework is based on quality assessment.

4. System's strengths and weaknesses

A thorough legal reform of the Portuguese higher education system was completed about three years since the OECD's Education Policy Committee met in Lisbon to review Portugal's higher education policy in December 2006. It has made a number of steps to follow up on the Committee's recommendations that have modernised the Portuguese higher education system.

The essence of the reform has been in line with the current European movement to modernise universities and polytechnics to support the development of knowledge societies and economies. It has been driven by policies aimed to*: i)* extend the recruitment base and the number of students in higher education*; ii)* reinforce the top of the system, by fostering the internationalization of research universities and their specialization; and *iii)* promote the binary system, with polytechnic education concentrating upon professionally-oriented and vocational training and with university education to be further concentrated on postgraduate education.

It considers greater quality, greater relevance, greater international recognition, a more advanced, diversified and responsible system of autonomy, and greater openness to society and to new social groups of students. Today, this reform is internationally recognised as a model of progress, and it is an undeniable factor of the country's affirmation abroad.

If a single conclusion can be taken at this moment, it is that there is a consensus about the need, and the opportunity, to accelerate reform of higher education institutions in order not only to stimulate progress across the whole higher education system, but also to foster the emergence and strengthening of our institutions which can demonstrate their excellence at international level. This requires building-up a new set of relationships between higher education institutions and society at large, in a way that is facilitated by the new legal framework introduced in Portugal in 2007.

To cope with such a variety of demands and with a continuously changing environment, it is imperative that higher education systems are diversified. But the challenge of establishing modern higher education systems requires effective networks and a platform of research institutions, notably for stimulating the political debate among the various stakeholders and for assisting in the networking of national constituencies promoting the positioning of our institutions in the emerging paths of brain circulation worldwide.

The achievement of the ambitious goals of the Portuguese reform agenda requires a broad and active networking of dispersed actors, and the joint efforts of students, teachers, Polytechnics, Universities, research groups, scientific institutions, industry and civil society. Within this perspective, our analysis calls for policies that consider long term approaches of dynamic environments, which require to be continuously monitored and evaluated. Emphasis has been given to the need to foster advanced human resources and knowledge integrated communities as drivers of a modern society, as well as to broaden the social basis of higher education. This requires a continuous public effort, but also a better understanding of the effectiveness of the mix of public support mechanisms and private incentives for the development of knowledge networks and a knowledge-driven society.

Some strengths and weaknesses, both at a system level and at institutional level, are summarised as follows.

System level

Strengths:

- Large expansion and degree of diversification
- Persistent high returns, despite significant expansion
- Good employability prospects with some focused exceptions
- Diversification of funding and introduction of cost-sharing
- Improvements on equity and access
- Development of a Loan System
- Strong investment on research and improvements in research output and internationalization

Weaknesses:

- High variability of returns to education.
- Limited offer on Lifelong learning, despite the low level of qualifications of the labour force
- Lack of financial planning and degree of uncertainty
- Difficulty in attracting FT students (mainly from Portuguese-speaking countries)

Public Universities

Strengths:

- Good programmatic diversity
- Strong capacity to diversify funding sources
- Improvements, though heterogeneous, on research intensiveness

Weaknesses:

- Limited cooperation, though improving, in research and advanced degrees

Public Polytechnics

Strengths:

- Consolidated sector despite its more recent creation
- Good geographical distribution
- Important contribution to broaden access to non-traditional groups
- Development of short-term vocational programmes

Weaknesses:

- Problematic Academic drift
- Some cases with limited attractiveness
- Excessive proliferation of programmes with low enrolments

Private Institutions

Strengths:

- Administrative and Financial Flexibility.
- Enlarging access in a context of high levels of demand

- Some good examples focusing on mature and part-time students

Weaknesses:

- Very fast development over the last decades and lack of very effective regulation.
- Basic emphasis on teaching and almost absence of research activities.
- Lower levels of qualification of academic staff.
- Limited degree of programmatic and geographical diversification, focused on low-risk/low-cost/high demand markets.

Explanatory factors for efficiency

1. Staff Policy

1.1. Hiring/Firing

In public institutions: general regime

In the general regime of public institutions, the recruitment and careers of faculty is ruled:

- In university education institutions, by a specific legal framework for university education careers - Decree-law No. 205/2009 of 31 August.
- In polytechnic education institution, by a specific legal framework for polytechnic education careers - Decree-law No. 207/2009 of 31 August.
- Faculty entering a higher education career are recruited (through contracts) by institutions after a public call, for an experimental period of time with a specific duration, depending of the category (between 1 or 5 years). After that period, and after evaluation by the institution, the contract is celebrated with an undefined duration or is cancelled.

Faculty can also be recruited in part-time basis (below 60%) to fulfil specific necessities, for a fixed period of time (with renovation allowed) without a process of public call.

When during a public call no candidates have applied, institutions can recruit faculty in a full time basis without another public call, but with a contract limit of 4 years.

The number of faculty that could be recruited is basically restricted to the budget availability of the institution.

There are also legal rules that establish equilibrium between faculty with contracts with undefined duration (and within these the ones with tenure) and faculty with contracts in the part-time regime.

The termination of contracts is a responsibility of the higher education institution and is ruled by the specific legal frameworks for university and polytechnic education careers and the general framework of public administration contracts as well.

In Public institutions: foundations regime

Higher education institutions with status of public foundations are ruled by private law.

Faculty is recruited by higher education institutions following the framework of the national general labour laws.

Faculty hired before the transition to the foundation regime have the right to maintain their careers within the general regime of public institutions.

In Private institutions

Faculty is recruited by higher education institutions following the framework of the national general labour laws.

1.2. Wages

In public institutions: general regime

Following a very recent reform of the legal regime of public administration wages:

- For each category there is an interval of possible wages;
- The progression in terms of wages is dependent on the evaluation of activities during a period of time, within the legal frameworks for university and polytechnic education careers and regulated specifically by each higher education institution;
- In new contracts, the institution can negotiate the wages within the interval defined for each category.

In Public institutions: foundations regime

Higher education institutions with status of public foundations are ruled by private law, thus with the capacity of freely defining the wages of their faculty.

Faculty hired before the transition to the foundation regime when maintain their careers within the general regime of public institutions also have this regime for wages matters.

In Private institutions

Private institutions can freely define the wages of their faculty.

2. Output flexibility

2.1. Student choice

Higher education institutions enjoy the right to create study cycles leading to the awarding of degrees. The following are responsible for creating study cycles leading to the awarding of degrees:

- In public higher education institutions, the Rector or President, on the recommendation of the Scientific or Technical-Scientific Council and the Pedagogical Council;
- In private higher education institutions, the founding body, on the recommendation of the Rector, President or Director, the Scientific or Technical-Scientific Council and the Pedagogical Council.

The launching of new study cycles leading to the awarding of official degrees requires the prior accreditation by the Evaluation and Accreditation Agency (‘A3ES’) for Quality Assurance in Higher Education and subsequent registration with the supervising ministry.

The system for accreditation and registration of study cycles applies to all higher education institutions and distinguishes between “licenciatura”, masters and Doctorate study cycles (the latter only in university education institutions).

In fact, within the Framework for Qualifications in the European Higher Education Area (FQ-EHEA), the term 'cycle' is used to describe the three sequential levels identified by the Bologna Process (first cycle, which can include short cycle qualifications, second cycle and third cycle) within which all European higher education qualifications are located. In broad terms, the first cycle corresponds to undergraduate degrees (i.e., Licenciatura degrees[1]), and the second cycle and third cycles to postgraduate degrees (i.e., master's degrees and doctoral degrees, respectively) (see table 1 for details).

Similarly to several National Frameworks of Qualifications in Europe, including Portugal, the FQ-EHEA has generic qualification descriptors for each cycle, called the 'Dublin descriptors'.

[1] The *Licenciatura* degree is the first academic degree, conferred after completion of a first cycle programme, lasting 3 or 4 years.

These illustrate the typical abilities and achievements associated with qualifications that signify the completion of each cycle (descriptors are fully described in the legal system of higher education degrees and diplomas - Decree-Law 74/2006 of 24 March).

Table 1: Typical higher education qualifications of the FHEQ-Portugal and the corresponding level of EQF and cycle of the FQ-EHEA

Higher education qualifications of the FHEQ-Portugal	Corresponding FQ-EHEA cycle	Corresponding EQF levels
Doctoral degrees	Third cycle qualifications	8
Doctoral course diplomas	-	-
Master's degrees	Second cycle qualifications	7
Integrated Master's degrees		
Master's course diplomas	-	-
Licenciatura degrees	First cycle qualifications	6
Higher education short cycle diplomas	Short cycle qualifications (within or linked to the first cycle)	5
Technological specialisation diplomas	Short cycle qualifications (within or linked to the first cycle)	

In many other European countries, as in Portugal, some higher education qualifications are available to students who have undertaken a programme of study within the FQ-EHEA first cycle, but which do not represent the full extent of achievement for this cycle. These qualifications are referred to as higher education short cycle diplomas (within or linked to the first cycle) and may prepare students for employment (also providing preparation for the subsequent completion of the first cycle).

At a post-secondary level, higher education institutions can also provide qualifications associated with Technological Specialisation Courses (CETs), leading to a technological specialisation diploma. By their nature and objectives, these qualifications are short cycle programmes, with the main goal of preparing students for employment, but also providing preparation for, and access to, the first cycle.

Table 1 also indicates the relationship between the levels of the FHEQ-Portugal, the levels of European Qualifications Framework for Life-long Learning (EQF), and the cycles of the FQ-EHEA.

In terms of the autonomy to design and set education programmes (study cycles) and their specific contents, the legal and officially authorised body of each higher education institution approve the standards regulating the following matters, regarding “licenciatura” degrees:

- Specific entry conditions;
- Working conditions;
- Curricular structure, study programmes and credits;
- Knowledge assessment;
- Precedence system;
- Prescription system regarding the right to enrol;
- Weighting coefficients and procedures for the calculation of the final classification.

Regarding “masters” degrees, the legal and officially authorised body of each higher education institution approve the standards regulating the following matters:

- Admission rules for the cycle of studies, especially the academic and curricular conditions, application procedures, selection and ordering criteria, and the process of establishing vacancies and deadlines for applications and making them public;
- Working conditions;
- Curricular structure, study programmes and credits;
- Precedence and knowledge assessment systems for the Masters course;
- Prescription system regarding the right to enrol;
- Process of appointing the supervisor or supervisors, conditions for admitting co-supervisors and rules that must be adhered to;
- Rules for the presentation and delivering the dissertation, the project work or the professional work placement report and its analysis;
- Deadlines for the public defence of the dissertation, the project work or the professional work placement report;
- Rules regarding jury composition, appointment and practices;
- Rules for the defence of the dissertation, the project work or the professional work placement report;
- Procedures for awarding the final classification;
- Deadlines for issuing the course letter, its certificates and supplement to the diploma;
- Monitoring procedures by the pedagogical and scientific bodies.

And finally, regarding doctorate degrees, the legal and officially authorised body of each higher education institution approve the standards that regulate the following matters:

- Admission rules for the cycle of studies, especially the academic and curricular conditions, application procedures and selection criteria;

- The existence of a doctorate course and, when applicable, its respective curricular structure, study programme and credits;
- Procedures for appointing the supervisor or supervisors, conditions for the admission of co-supervisors and rules that must be followed;
- Registration of the thesis subject;
- Conditions for developing the thesis;
- Rules for the presentation, delivery and analysis of the thesis;
- Deadlines for carrying out the public defence of the dissertation, the project work or the professional placement report;
- Rules regarding jury composition, appointment and practices;
- Rules regarding the thesis defence;
- Procedure for awarding the final classification;
- Deadlines for issuing the doctorate letter and its certificates and the supplement to the diploma;
- Monitoring procedures by the pedagogical and scientific bodies.
- The implementation of the entire regulation that aims to bring higher education in Portugal in line with the Bologna process was carried out very successfully, including the opening of higher education to new publics and the development of post-secondary education through the Polytechnic sub-system (i.e., Technological Specialization Courses – CETs).

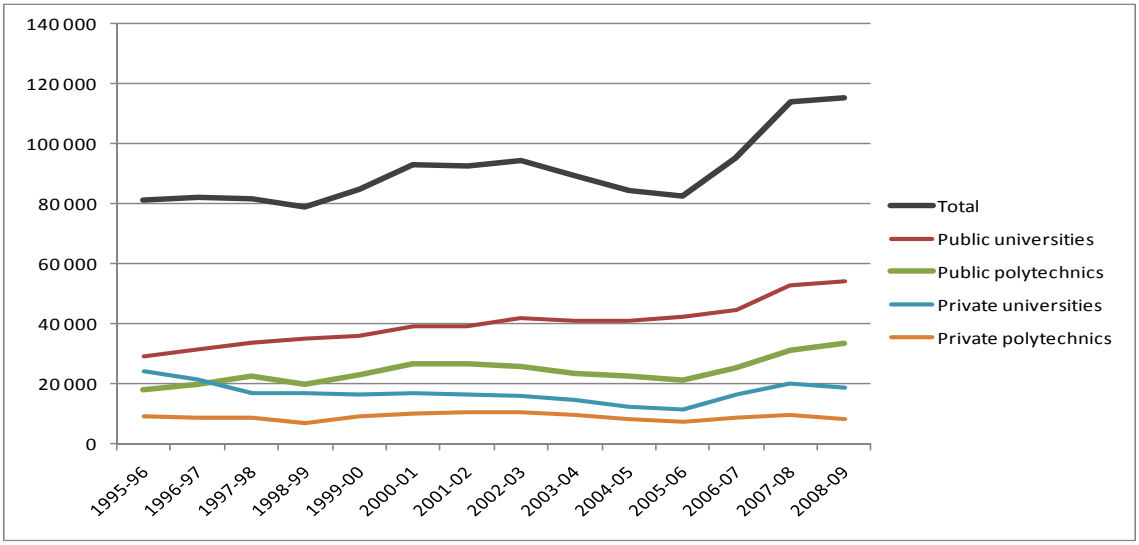
In this manner, the autonomy to set course content, design study programmes and subject contents, define educational methods, select methods of evaluation, and new pedagogical experiments is entirely within and dependant of higher education institutions. There are cases where courses are established in a more flexible way for each programme (although usually concentrated in the final part of the study cycles), but there are also cases with a curriculum structure more rigid.

Overall, the success of the reform is accounted for by a significant increase in the number of students enrolled in higher education. In fact, the declining trend in new students in higher education observed in the OECD Review Report of December 2006 was reversed in the academic year 2006-2007 (95 431 in 2006-2007, compared to 84 363 in 2004-2005 and 82 720 in 2005-2006). This trend accelerated in 2007-2008 and continued in 2008-09 with an increase in the access to public higher education (see figure 1).

Total enrolments in higher education of people aged 20 have increased 20% over the last 3 years (2005-2008), reaching about 36% of the corresponding age population (compared to 30% in 2005). In other words, more than one in each three 20-year olds in Portugal is enrolled in higher education. This is similar to the average European figures, although still lower than that for most industrialized countries and regions.

Total enrolments in higher education of adults aged 30-34 years has increased about 20% over the last 3 years (2005-2008), reaching about 4.1% of the corresponding age population (compared to 3.5% in 2005).

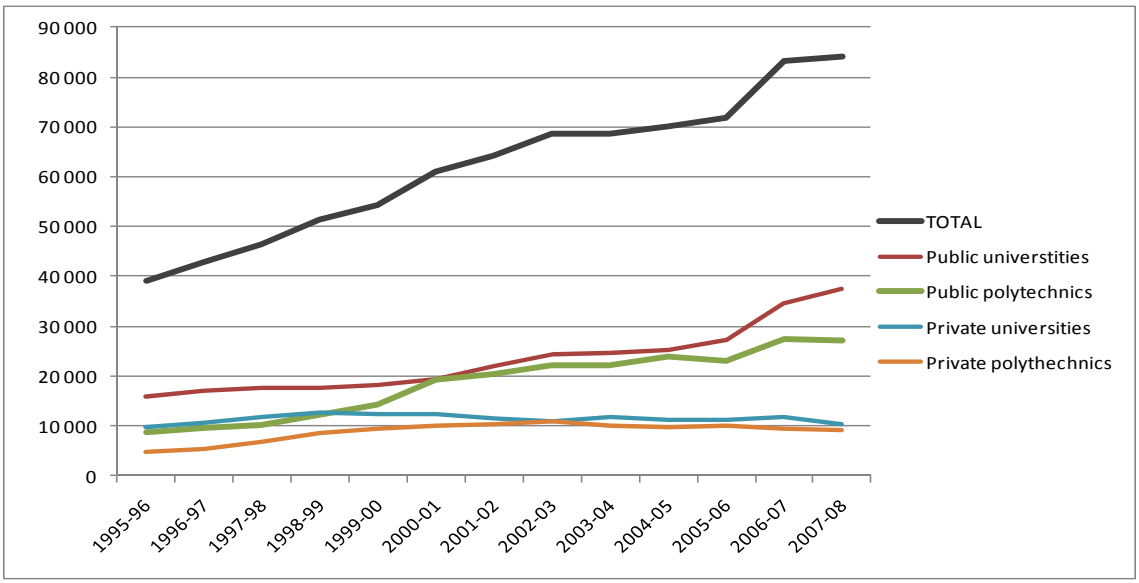
Figure 1: New enrolments (in 1st year and 1st time) by year – all Tertiary Education cycles



Source: Planning and Statistics Office - GPEARI from the Ministry of Science, Technology and Higher Education.

The total number of graduates per year increased about 20% over the period 2005-2008 (see figure 2), with graduates in science and technology rising in recent years to a figure of 21 per thousand of population aged 20-29 years, one of the highest levels in Europe.

Figure 2: New graduates by year – all Tertiary Education cycles



Source: Planning and Statistics Office - GPEARI from the Ministry of Science, Technology and Higher Education.

At the same time, the number of new PhDs in science and engineering per thousand of population aged 25-34 increased to 0.45 in 2008, compared to only about 0.3 in 2001.

In terms of differentiated student choice paths, it should be emphasised that the opening of higher education to new publics through the new access regime for students aged over 23 years (Decree-Law 64/2006 of 21 March), resulted in the number of adults entering higher education by this means rising to roughly 11 775 in the 2007-2008 academic year, compared to 10 850 in the 2006-07 academic year, up from around just 900 adults that started higher education in the 2005-06 academic year (before the reform). This improved specific access framework fostered the right of access to higher education for individuals that do not possess a secondary course, or equivalent, but who demonstrate their capacity to attend higher education by means of especially appropriate examinations, giving the responsibility of selecting adult students to each of the institutions (giving privilege for an applicant's professional experience).

Additionally, in 2009, around 230 Technological Specialization Courses (i.e., post-secondary education) were provided in institutions of higher education, mostly in Polytechnic Institutes, involving around 7 000 students (compared to around 1 200 students in 2005).

Table 2: Enrolments in Technological Specialization Courses (2004-2008)

Subsectors	2004-05	2005-06	2006-07	2007-08	2008-09
Public higher education	277	1 017	1 913	4 359	5 149
University education	217	546	118	59	223
polytechnic education	60	471	1 795	4 300	4 926
Private higher education	17	242	340	452	683
University education	0	211	326	430	590
polytechnic education	17	31	14	22	93
TOTAL	**294**	**1 259**	**2 253**	**4 811**	**5 832**

Note: In 2009, there are around 7 000 enrolments counted up to October.
Source: Planning and Statistics Office - GPEARI from the Ministry of Science, Technology and Higher Education.

2.2. Numerus clausus

Regarding quantitative limits of access to higher education, the maximum annual number of new admissions is fixed annually in advance by the higher education institutions, taking the resources of each institution into consideration, namely the teaching staff, premises, equipment and finances.

This procedure is subject to limits resulting from the legal criteria established for the operation of educational establishments and for accreditation of study cycles, including any limits set when accreditation was awarded.

With reference to public higher education institutions, this process is also subject to the general guidelines established by the supervising Minister, taking into consideration the rationalisation of the education network, national policy on human resources and resources available.

Higher education institutions annually inform the supervising Minister of the figures set for "licenciatura" study cycles and those integrated with Masters courses under the terms of the previous points, accompanied by their respective justification.

In the event of a lack of express and sufficient justification for the amounts set, any infringement of the applicable legal norms or any failure to comply with the general guidelines, the figures referred to in the previous points may be altered by official order issued by the supervising minister and published in the *Diário da República* (Official State Gazette).

The figures set out under the terms mentioned may not be transferred to other higher education institutions.

Another aspect closely related to this matter is the funding condition implemented after academic year 2006-07 by the Ministry of Science, Technology and Higher Education regarding the fulfilment of a minimum enrolment level in previous years for study cycles. This condition excludes from public funding new students admitted in study cycles which didn't comply with a minimum of 20 students in the last year and a minimum of 40 students in the last 3 years (accumulated), with the exception of specific areas (such as arts) and other cases duly justified. This mechanism don't imply the closure of such study cycles by higher education institutions, but cancel the respective public funding for new enrolments associated with those programmes.

2.3. Regional/ European/ global mobility

In order to promote national and international mobility of students and graduates, the reform of the higher education system in Portugal has included the implementation of a series of measures which seek to ensure the effective and less bureaucratised national and international mobility of students and graduates, aimed at attracting and encouraging the settlement in Portugal of qualified human resources, both Portuguese and foreign. Mobility of students and graduates depends on the recognition of their prior learning and qualifications, which is required when they move between qualifications or cycles in order to access more advanced programmes.

First, new regulations were introduced for mobility of students between national higher education institutions, from the same or different subsystems, as well as between national and foreign higher education institutions, based on application of the European Credit Transfer and Accumulation System (ECTS). These regulations are based on the principle of mutual recognition of the value of training undertaken and competences acquired. This purpose was specifically set out in the Legal Framework for Degrees and Diplomas (Article 45 of Decree-Law no. 74/2006, of 24th March) which establishes that higher education institutions will take into account the level of credits and the academic area in which they were obtained and will:

- credit within their cycles of studies training undertaken within the scope of other higher education cycles in national or foreign higher education institutions;
- credit within their cycles of studies training undertaken within the scope of Technological Specialisation Courses (CETs) under the terms fixed by the respective statute;
- recognise, through the award of credits, professional experience and post-secondary training.

Second, new regulations were implemented for re-entering higher education, changing programmes and transferring between higher education institutions (Ministerial Order no. 401/2007, of 5th April), by means of which all obstacles are removed to re-entry for those who have interrupted their higher education studies, and the procedures for transfer or change of course are altered, integrating students coming from both national and foreign institutions into a single system, extending limits to admission and simplifying procedures.

Third, a new regime was implemented for the recognition of foreign academic degrees of the same level and nature (and with the same objectives) as Licenciatura, master's and doctoral degrees awarded by Portuguese higher education institutions, entitling holders to all the rights associated with these academic degrees (Decree-Law No. 341/2007, of 12 October).

This new regime is based on the extension to Licenciatura and master's degrees of the system established for doctoral degrees in 1997 (Decree-Law no. 216/97, of 18th August). It is based on the principle of reciprocal trust that should be adopted by the international academic community, replacing, in all cases where applicable, the process of equivalence based on the academic re-assessment of work carried out with the aim of obtaining a foreign degree.

The simplified mechanism for the recognition of foreign degrees is entrusted to a committee, chaired by the Director-General of Higher Education, and including one representative each of the bodies representing higher education institutions (the Council of Portuguese University Rectors, the Coordinating Council of Polytechnic Institutes and the Portuguese Association of Private Higher Education), and a fifth member, co-opted by the others.

For the purposes of the simplified recognition process, a number of foreign degrees are recognised after consultation with the above-mentioned committee, and this group is then constantly updated and extended. The recognition process includes (i) academic degrees awarded by foreign higher education institutions of a state signatory to the Bologna Process, following a first, second or third cycle organised in accordance with the Bologna Process and accredited by an accreditation body recognised within the scope of that process, and (ii) all academic degrees awarded by foreign higher education institutions which, through a decision from the above-mentioned committee, are classified as such. The recognition mechanism also includes a simplified mechanism to convert the final classification.

This has removed a serious obstacle to the free circulation of diploma holders who wish to study in Portugal after obtaining their academic degree abroad, and are now welcomed without the bureaucratic impediments and delays that hitherto existed.

Fourth, with the aim of ensuring greater flexibility in accessing and attending higher education, new norms were introduced (Decree-Law no. 107/2008, of 25th June), in order (i) to enable any interested citizen to enrol in individual curricular units, with a guarantee of both certification and accreditation in the case of successful completion and when they enrol in a cycle of studies that includes it; and (ii) to enable students enrolled in a higher education cycle of studies to enrol in curricular units which are not part of their cycle of studies and in any higher education institution, with a guarantee of certification in the case of successful completion, and inclusion in the diploma supplement.

Finally, similarly to the practices in other countries, particularly in the USA, and to promote diversity of academic and educational backgrounds for candidates applying for higher education programmes in Medicine, a new regime for access to 'Licenciatura' degrees in this area was created (Decree-Law no. 40/2007, of 20th February) specifically designed for undergraduates with a diploma in a related scientific field (such as biology, physics, or chemistry), thus broadening the areas of training which will permit people to be admitted into a course of Medicine, although guaranteeing an appropriate level of knowledge in the core subjects which are an enrolment condition.

3. Evaluation

3.1. Institutional evaluation

The majority of Portuguese scientific research takes place in R&D Units financed and evaluated by the National Science and Technology Foundation (FCT), through international panels of evaluators.

The evaluation system comprises a periodic evaluation by panels of international experts of reports and activity plans including direct contact with the researchers through visits to all

units. This process culminates with the panel attributing a qualitative grade, which determines the amount of multi-annual funding to be received.

The evaluation exercise corresponding to the 2003-2006 period has been concluded. It has involved 383 R&D units excluding Associate Laboratories which have their own evaluation system.
In fact, the legal Framework of research institutions also established the existence of Associate Laboratories as research units which demonstrate, in particular through the results of evaluations, capacity to cooperate, in a stable, competent and effective manner, in carrying on specific objectives of the scientific and technological policy laid down by the government. There are currently 25 Associate Laboratories.
Meanwhile, FCT has launched the international evaluation process of all Associate Laboratories for the period 2003-2007. Although already planned by the legislation which established the attribution of the rank of Associate Laboratory, the current evaluation exercise, following the one for all other R&D units, targets establishing a global view of the national scientific system funded by FCT. Among its characteristics are not only the methods which became norm in Portugal in the last decade, namely transparency, public access to decisions, classifications using a comparable well defined standard, existence of an appeal track, but also the policies of selectivity and critical mass increase needed by the insertion of Portuguese research in a global international framework.

All evaluation exercises are publicly available through FCT´s website.

By the other hand, Higher education institutions have a specific quality assessment system, through the legal framework of quality assurance of higher education (*Law 38/2007 of 16 August*) and the higher education evaluation and accreditation Agency – A3ES (*Decree-Law 369/2007 of 5 November*).

The object of the assessment is the quality of performance of higher education institutions by measuring the degree to which they fulfil their mission through performance parameters related to their operation and to the results that arise therein.

In defining and applying the performance parameters, the evaluation takes into special consideration the difference between the objectives of university education and those of polytechnic education.

The assessment uses best international practices as a reference in this area. The assessment applies to higher education institutions and their organisational units, and their study cycles.

The accreditation of higher education establishments and their study cycles within the quality assurance system framework is based on the quality assessment. Accreditation aims at

ensuring that minimum requirements are met which lead to the official recognition of higher education institutions and their study cycles.

The quality assessment of higher education institutions adheres to the following principles:

- Compulsory and periodic assessments, which takes place within the framework of the European system of quality assurance in higher education;
- Participation of teachers, students and external entities;
- Existence of an external evaluation system characterised by institutional and functional independence from the entity under evaluation;
- Internationalisation;
- Participation of the bodies under evaluation in external assessment procedures;
- The ability to appeal against decisions.

Quality assessment takes the forms of (a) Self-assessment and (b) External assessment. Self-assessment is carried out by each higher education institution. External assessment that forms the basis of the accreditation procedures is carried out by the Higher Education Evaluation and Accreditation Agency – 'A3ES' for quality assurance in higher education.

The quality assessment system ensures student participation by means of:

- Their integration in self-evaluation procedures, specifically through the compulsory involvement of educational councils and student union associations;
- Their participation in anonymous educational surveys of the teaching staff and courses which form a compulsory part of the self-evaluation process;
- Interviews given during external evaluation procedures;
- The appointment of student association representatives to the agency body.

4. Funding rules

4.1. Public funding

Public funding for higher education, including teaching and research activities, is based on the following mechanisms:

Public funding of higher education institutions:

- Direct basic funding of public institutions (through funding formula);
- Contractual funding of institutions (through contracts for specific issues);

- Direct funding of social support services (through funding formula since 2006) for: i) direct funding to students (i.e., social support of individual grants); and ii) indirect funding to students (i.e., meals, accommodation, sports, healthcare).

Public funding for science and technology, S&T:

- Direct funding of institutions through R&D units based on their periodic evaluation and number of PhD researchers, through the National Science and Technology Foundation, FCT, defined upon evaluations every 3 years (see details in answer to 3.1);
- Contractual funding of Associate Laboratories (see details in answer to 3.1);
- Competitive funding for R&D activities, through R&D projects;
- Competitive funding for people, through individual grants for research students and contracts for researchers.

Public funding for infrastructures (i.e., buildings and equipment)

Public funding for the diffusion of information and communication Technologies

Public funding of higher education institutions is implemented through central administration offices at the level of universities, polytechnic institutes and/or their schools (depending on internal autonomy levels) and includes the three main components mentioned above.

To specify some of the details of this funding mechanism, it should be stressed that direct basic funding of public institutions has been based on a formula since the early 90s, which was used to distribute the overall annual budget among public universities and polytechnics to cover for their running costs. The initial formula was designed in close collaboration with the Council of Rectors, CRUP, and the Coordinating Council of the Portuguese Polytechnics Institutes, CCISP, and it has evolved with time based on successive negotiations with CRUP and CCISP.

The distribution of funding through the formula is related with the costs supported by higher education institutions in their teaching activity, related to the number of enrolled students. The formula also accounts to specific costs of each institution, namely regarding the qualifications of teaching and non-teaching staffs and the field of study (i.e., protecting some degrees that need more practical or laboratory classes, e.g., medical sciences and engineering). In general, some of the main criteria of the formula include:

- Teacher/student ratio;
- Non-teaching staff/teacher ratio;
- Expenditure (and structure) of central administration (based on central administration;
- Number of students per scientific area;

- Differentiated weights for scientific areas depending on their relative standard cost structures;

To ascertain the funding of higher education, the analysis should consider all the revenue of higher education institutions and, with respect to the direct contribution of students, the expenditure incurred. In 2005 and 2006 the funding of Portuguese higher education, both public and private, totalled 1.4% of the GDP, equal to the OECD average and greater than the EU average.
The total revenue of public higher education institutions, excluding investment in new infrastructures (PIDDAC) amounted to €1 871 million in 2008. The amount spent under the PIDDAC with respect to higher education infrastructures varied between €61 million and €90 million in the last four years. As a percentage of the GDP the total revenue remained fairly constant over recent years at 1.2% (see table 3).

It should be noted that these figures do not include the direct financing of the high-speed internet network (*i.e.*, "RCTS") and of the on-line scientific library (*i.e.*, "B-On"), both of which were partially supported by the institutions before 2007 and, as of 2007, are fully paid directly by the Ministry of Science, Technology and Higher Education.

Table 3: Total revenue of public higher education institutions (2005-2008)

	2005	2006	2007	2008
Total revenue, excluding investment in new infrastructures (in million euros)	1 712	1 790	1 806	1 871
Total revenue, including investment in new infrastructures (in million euros)	1 807	1 862	1 867	1 935
Total revenue, excluding investment in new infrastructures (in % of GDP)	1,15%	1,15%	1,11%	1,13%
Total revenue, including investment in new infrastructures (in % of GDP)	1,21%	1,20%	1,14%	1,16%
Revenue through tuition fees (in million euros)	184	207	231	254
% of fees in total revenue (excluding investment in new infrastructures)	10,7%	11,5%	12,8%	13,6%

Source: Planning and Statistics Office - GPEARI from the Ministry of Science, Technology and Higher Education.

Overall, fees collected by public higher education institutions increased from €184 million in 2005 to €239 million in 2007. However, part of the fees are paid directly by Government institutions to the higher education institutions, especially those borne by the Science and Technology Foundation, which rose from €3 million in 2005 to €13 million in 2007. Thus, the

top-up fees paid directly by the students accounted for just 10.6% and 12.5% of the total financing (excluding the PIDDAC).

To summarize, the analysis shows that, as a percentage of GDP, the financing of higher education in Portugal is identical to the average of the OECD countries. The revenues of the higher education public sector have grown over the past three years in absolute terms, and have remained stable as a percentage of the GDP. The reform of the higher education system in Portugal, directed at increasingly responding to the challenges of scientific, professional and cultural development of the country, will lead, once the public accounts have been consolidated, to a strategic reinforcement of the financing of higher education.
It must be noted that, in spite of a period of demanding budget consolidation, the higher education system accomplished significant achievements: to take on new students and to grow, to generate more and better R&D results, to diversify and specialise, to internationalise many of its institutions and programmes, and to become associated far more closely with the processes of corporate and organisational innovation – generating new funding and reforming its cost structure, collecting more revenue and managing to maintain its overall weight as a proportion of the GDP. In this context, the priority given by the government to Science and Technology has made a significant contribution, the results of which are now clear in many fields.

The commitment to raise the public investment in higher education infrastructures has been confirmed through the call for tenders issued for the attribution in 2008, within the National Strategic Reference Framework (2007-2013), of around €130 million of public funds, both national and from the EU, for priority works and equipment, to which national funds will be added that are not co-financed. These are investments of great importance to the development of higher education to be undertaken in various parts of the country.

Concerning student support mechanisms, two main lines of action have guided policy initiatives to improve access, foster equity and help accelerating the reform of higher education, namely:

- The guarantee of an annual increase of the overall public budget devoted to student grants and social support to students; and
- The introduction of a new innovative student loan system, which was implemented through a mutual guarantee underwritten by the State.

The Public Budget for social support to students through grants increased about 3% per year since 2006, covering about 21% of the total number of students in 2008.

Although income-contingent loan systems are becoming a typical reference worldwide, as clearly acknowledged by the OECD, it should be noted that their applicability is particularly dependent on the characteristics of the tax system. This is why the Portuguese Government

has decided to design and introduce an innovative system of student loans with mutual guarantee underwritten by the State, which complements the system of public grants, thereby improving access to higher education for all students, with a minimal governmental intervention.

About 7.000 loans have been contracted in the initial two years through the new loan system, namely between November 2007 and August 2009, and this represents an important new achievement for Portugal and the Portuguese families, which follows current practices in modern societies at the OECD level.

According to Michael Gallagher, "the Portuguese initiative satisfies the key policy criteria: it is a horizontally equitable scheme; it represents good value for students; it is financially sustainable at higher volumes of student take-up; it is low risk for government and financial institutions; it avoids the need for additional administrative infrastructure. The loan facility reduces disincentives to study by covering reasonable living costs while deferring repayment obligations till after graduation. The 10% guarantee offsets lack of collateral in financing human capital investments. The allowable repayment period (twice the period of study) is normally sufficient to permit students to make loan repayments without committing a disproportionate share of their income after graduation".

Still regarding the new Portuguese Loan System, Nick Barr has recently "applaud the facts that: *1)* the scheme is universal; *2)* supplements existing grants rather than replacing them, hence extends students' options; *3)* has no blanket interest subsidy; *4)* has a very innovative mutuality element, which is the key that makes it possible for the scheme; *5)* makes use of private finance". The loans scheme has also incidental benefits, by virtue of the progression requirements and the incentives for improving grade point averages. In particular, it should encourage students to progress with their studies and complete their degrees, and it may encourage students to undertake courses that are more likely to lead to positive employment outcomes.

5. Impact on Employability

According to the legal framework of higher education institutions (*Law 62/2007 of 10 September*), and within the context of social responsibility, it is incumbent upon higher education institutions to:

- Support student involvement in working life in conditions that also enable them to develop their academic work;
- Reinforce conditions which develop the supply of part-time professional activities for students by the institution, under conditions that also enable them to develop their academic work
- Support the entry of their graduates into working life.

Each institution is obliged to collate and disseminate information on the employment of its graduates, in addition to information on their career paths. The State is responsible for guaranteeing public access to this information and/or its quality and comparability, specifically through the adoption of common methodologies.

At the same time, within the legal framework of quality assurance of higher education (*Law 38/2007 of 16 August*), quality evaluation must consider the results arising from the activity of higher education institutions, specifically the integration of graduates into the labour market, among others.
It then states that as part of the self-evaluation process, higher education institutions should regularly publish quantitative, qualitative, up-to-date, impartial and objective information regarding:

- The study cycles that they offer and the degrees and diplomas that they confer;
- Monitoring the progression of their graduates for a reasonable period of time with the aim of analysing their employability.

Additionally, the Ministry of Science, Technology and Higher Education, through its Planning Office, GPEARI, started in 2007 the periodic publication of unemployment reports concerning higher education graduates. These reports, published twice a year (covering a 6 months period each) are based on data on unemployed higher education graduates looking for a job (gathered by the national network of employment centres), and identify and compare unemployment rates among higher education graduates relative to other qualification levels, durations, different education areas, and institutions and education programmes (study cycles).

It should be emphasised that the main conclusions of the reports have shown that the national job market is positively recognising higher education qualifications. These conclusions pointed to the returns of a higher education qualification and include:

- An inferior unemployment rate of higher education graduates, systematically below the levels of unemployment of other qualifications: in April 2009 the unemployment rate of higher education graduates was 8.2% of total unemployment, below the level of 17.6% of citizens with upper-secondary qualification;
- The significant inferior intensity of unemployment between higher education graduates, since the average unemployment duration is below 8 months for this group, which is around half relating to other levels of qualification;

- The relevant difference in salaries relative to other levels of qualification, considering that the salary award for higher education graduates in Portugal is the higher among

OECD countries, achieving 98% above those who only have a upper-secondary qualification.

6. Recent and planned reforms of the tertiary education system

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

After the thorough legal reform of the higher education system in the last 4 years, duly described in previous answers, policy steering is still focused on opening the base of higher education to new publics, standing on a diversified system with increased autonomy, and on the capacity of the top of the system, through an increasing qualified academic and research staff. At the same time a follow-up of implemented measures and their practical effects is needed. In this context, some of the main priorities and policy measures very recently announced by the government are guided to:

- Reinforce the binary system strengthening the diversity of education areas.
- Reinforce the conditions of internships for students and graduates following an increased engagement between education and professional activity.
- Reorganise the education supply of public higher education network, specifically by promoting the establishment of consortia between institutions that potentiate the capacity and the response quality to new social demand in terms of access and allow an effective coordination of their human and material resources.
- Reinforce international partnerships of higher education institutions and research laboratories and promote the affiliation of innovative companies to those international networks.
- Foster the continuity of the priority of opening up the access to higher education. In particular:
    - Developing distance learning higher education in Portugal and in the area of Portuguese spoken countries, promoting the supply of new education programmes that are well-matched with existing social demand and supported by models duly evaluated and accredited. A goal of multiply by four the number of students enrolled in distance learning was set to the next four years;
    - Promoting a wide expansion of supply of Technological Specialisation Courses (post secondary) by polytechnic institutions. A goal of multiply by three the number of students enrolled in Technological Specialisation Courses was set to the next four years;
- Keep the current trend in the increase of social support mechanisms, considering direct support (mainly based on grants) and indirect support (including the expansion of accommodation facilities).
- Promote student international mobility, with a defined goal of doubling the number of outgoing Erasmus students (up to 12 000 each year) in the next four years.

- Promote the creation of offices for employment and entrepreneurship in all higher education institutions, encouraging their networking and liaisons with the national system for the promotion of employment and the entrepreneurship supporting institutions.
- Attain a level of public funding that guarantees the existing necessary resources of institutions (through a funding formula), but at the same time promotes their capacity to attract other funding and to establish new liaisons with the economic and social environment.
- Promote new mechanisms for competitive public funding, with clear and measurable goals, and in line with objectives of expansion and qualification of higher education.