

## 6. Portugal

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### 6.1 Overview of the Portuguese higher education system

The Portuguese higher education system has a considerable degree of diversity. It is a binary system with universities and polytechnic institutes and with public and private institutions.

Since the early 1980s, governmental policies were directed at expanding higher education and the participation rate increased from about 7% in 1974 to about 40% in 1998. The country's difficult economic situation after the 1974 Revolution has led to the emergence of a private sector of higher education. Probably this was the reason why most of the expansion of the Portuguese higher education system was initially the result of the government's decision to encourage the development of private higher education institutions.

The government, in 1989, by lowering the requirements for entering higher education promoted a massive increase in demand thus creating market conditions for fast development of private institutions. In the academic year 1991/92 the number of new vacancies at private institutions became larger than the number of new places at public institutions.

From 1998 the government became more concerned with quality than with quantity, and more demanding conditions for access to higher education were again introduced. These conditions, associated with a sustained decrease in birth rates produced a sharp decrease of the number of candidates to higher education, shrinking the market for private institutions. The total number of vacancies offered by the public sector is now approaching the total number of candidates, thus creating large difficulties of recruitment for the private sector.

A prospective analysis of the number of students in secondary education (Amaral & Teixeira, 1999) shows that due to the decrease in birth rates over the last two decades the number of candidates to higher education will continue to decrease for at least the next ten years creating a crisis that may force the collapse of many private institutions. Caught in their own game of political lobbying for the uncontrolled creation of new private institutions and the approval of new study programmes, private institutions have started to blame the government for not having resisted those pressures and allowing for the continuous development of the public sector.

In the new game of "market-like" competition for students private institutions have everything to lose: they are more expensive for students, their recruitment is very local and their social prestige is not very strong.

Over the last decades, governments have promoted the internationalisation of the system, on the one hand by supporting the development of higher education in the former Portuguese speaking colonies, and on the other hand by creating closer links with foreign higher education institutions, namely those of the EU countries. The 1960s and 1970s policy for the career development of academic staff (every year a large number of young academics were given scholarships for obtaining PhD degrees in the best universities abroad) has contributed to support this policy.

## **6.2 Views and rationales underlying the current national policy**

Kälvermark and Van der Wende (1997) distinguish four different rationales that underlie national policies of internationalisation of higher education: the political, cultural, academic/educational and economic rationale. In the Portuguese case, the predominant rationales are basically the political, cultural and more recently the economic rationale.

The process of internationalisation can be regarded as the result of improving quality and reorganising the system, and it assumes particular importance at this stage of the system's consolidation and adaptation. In order to better understand the development of the process of internationalisation one should mention the fact that in 1968 the government established a policy of grants, which: "... allowed the training of a significant number of academic staff at postgraduate level in countries like United Kingdom, the USA or France. The changes introduced to the academic staff careers structure in 1979/80 and the salary increase based on the exclusive dedication option in 1987 made it possible for holders of postgraduate degrees to make a career in higher education teaching and research and to be involved in research projects with foreign institutions" (Eurydice, 2000: 451).

The political rationale for internationalisation is based on the perception that "it is not possible to vindicate the quality of the education system isolated from the international, and in particular the European, context" (Ministry of Education, 1999: 47).

The cultural rationale is rooted in the Portuguese language as one of the most spoken all over the world and in the cooperation with Portuguese speaking countries: "After some difficulties in relations between Portugal and its ex-colonies just after the independence of these countries, relations have progressively improved and Portugal and Portuguese higher education institutions have significantly increased their cooperation with these countries" (Eurydice, 2000: 451).

Cooperation with countries where Portuguese is the official language (Angola, Brazil, Cape Verde, Guinea-Bissau, Mozambique, São Tomé e Príncipe, the so-called PALOPs, and East Timor), strongly contributes to the internationalisation of Portuguese higher education. Portugal is the first choice of most students from the former African colonies when they consider studying abroad.

The opposite situation exists in the rest of Europe, where Portuguese is one of the least widely taught and widespread languages, which is a serious hindrance for attracting students to Portugal, in the scope of European mobility programmes. In the 2000 report of the ERASMUS unit of the SOCRATES National Agency (The Portuguese participation in ERASMUS – 1987/1999), this linguistic issue is pointed to as a barrier to the mobility of European students to Portugal. To overcome it, the Portuguese HEIs have been promoting language courses for incoming students, and Portugal has been an active participant in the intensive language preparation of ERASMUS students project by organising intensive Portuguese language and culture courses.

More recently, there is a trend of increasing importance of the economic rationale, as a basis for the emergence of a competitive paradigm in higher education. The economic rationale may involve: "... generating income from international activities, but national-level economic arguments are also at stake. This is most clearly seen in strategies for the recruitment of foreign students" (Van der Wende, 2001: 251).

In Portugal, the profit argument is not valid, as institutions do not make a profit by teaching students from the former colonies. Consequently there is not yet a shift from the cooperation to the competition paradigm.

However, there are economic arguments linked to other policy areas such as quality management. To guarantee levels of quality adequate to the labour market's needs in an increasingly competitive and global economy the focus is on the adoption of internationalised criteria to improve the quality of the system. As stated in the programme of the government (1995-1999): "It is important to increase the national commitment to higher education in order to meet the demands of the country – which is in a crucial phase of its development –, by fulfilling standards of qualification and motivation compatible with the construction of the European Union, promoting higher levels of qualification, recognising and rewarding the quality and competitiveness of the higher education sub-system, aiming at increasing internationalisation, thus answering the demands of the Portuguese population (...) It is also necessary to guarantee the participation of the most qualified by establishing proper incentives for dedication, commitment and excellence in order to attain quality levels of teaching comparable to international standards" (Programme XIII Constitutional Government).

One can identify in the Portuguese HE system a relationship between internationalisation and quality of education. Van der Wende (1996: 15) studying this relationship has distinguished three different dimensions:

- ◆ the quality (assurance) of internationalisation activities as such
- ◆ the contribution of internationalisation to the improvement of the quality of higher education in a broader sense
- ◆ the international aspects of quality assurance (systems) in higher education.

Arguably, these different dimensions are present in the development of Portuguese HE as internationalisation started as a means to promote quality and to develop new areas of knowledge and scientific research. Therefore internationalisation “is becoming a central strategic issue at the institutional level and an important dimension in national higher education policy” (Van der Wende, 2001: 250).

Simão et al. (2003) consider internationalisation a good instrument to promote quality at very different levels (teachers’ and students’ performances, professional careers, teaching/learning methods, curricular development and increment of the critical mass as result of studies aiming at comparing and exchanging good practice models) and to establish new areas for research.

### **6.3 Current policies and regulatory frameworks aimed at internationalisation**

Following the Portuguese membership of the (then) EEC in 1986, one can identify national objectives associated with European education: free circulation of people and the role of higher education within the European context and its challenges – social cohesion and economic development in an enlarged European Union, and development of research and technology in competition with USA and Japan (Veiga, 2003).

Portuguese HE has specific aspects that make it more difficult answering these challenges and removing the barriers to internationalisation. Graça Carvalho, Director of GRICES (International Office for Science and Higher Education), which reports to the Minister of Science and Higher Education, identifies several problems or barriers to mobility (Interview with Graça Carvalho):

- ◆ low internal mobility of Portuguese students due to the difficulty in establishing cooperation links among the Portuguese institutions
- ◆ low mobility of international students due to the lack of attractiveness of Portugal in the European context (linguistic barrier – most undergraduate courses are taught in Portuguese)
- ◆ administrative and legal instruments that hamper free circulation of people (foreign services, social services)
- ◆ need to reform the fiscal system in order to create incentives for investments in higher education and research.

In this context she advocates: “We should act to promote excellence and to eliminate these barriers in a very short period of time. We have created some inter-ministry groups to deal with questions related to social services and foreign services, in order to create synergies which will lead to a much more attractive system. The other problem we have is the funding of higher education and research” (Interview with Graça Carvalho).

In April 2003, the Ministry of Science and Higher Education published a policy paper entitled *A Quality Higher Education*. This document is part of the public debate on the main aspects of the higher education system, such as its structure, access of students, institutional governance, funding, autonomy and regulation, and research. The policy paper assumes lifelong learning as the new paradigm for defining a degree structure that would promote mobility of students (national and international), comparability of qualifications and employability of graduates, bearing in mind the quality of teaching. Thus, the policy areas directly connected with the internationalisation of Portuguese HE are:

- ◆ quality evaluation and accreditation allowing for the definition of criteria of transparency and comparability with the other European countries' higher education systems
- ◆ a strategy that would make more flexible the mobility (vertical and horizontal) of students
- ◆ a research policy (which should include a closer relationship with the private sector) that would increase the participation of Portuguese research centres and universities in international projects
- ◆ reinforcement of cooperation with PALOP countries and East Timor.

The Law 1/2003, approved on 6<sup>th</sup> January, deals extensively with the quality of higher education, and creates an accreditation system, but does not make explicit reference to the internationalisation of Portuguese higher education.

The Europeanisation policy of Portuguese higher education goes along with the European Union policies, which also provides its main financial instruments. This is evident from the statement of the GRICES director: "With the new strategy of mobility to be developed under the framework of Erasmus Mundus, the concepts of e-learning and distance learning, linked to the idea of life long learning would allow a plan of action. (...) With the Erasmus Mundus I can claim for flexibility and efficiency (...)" (Interview with Graça Carvalho).

The European Union has set for 2010 an ambitious target of 3% of the GDP for investment in research activities, 2% coming from the private sector and 1% coming from public sources. This EU target will influence the Portuguese internationalisation policy for research, even if it is far beyond the immediate economic capacities of the country. At present Portugal invests only 0.85% of the GDP in research, with a private sector contribution of only 0.2%. Part of the research investment is supported by European structural funds, a contribution that is guaranteed only until 2006. After 2006 the state will probably need to compensate for the loss of those funds, thus creating further difficulties to meet the targets of the economic stability pact.

Future efforts for increasing public and private contributions for research and development will run in parallel to efforts to attracting alternative funds. These can come from the European Union through participation in the

framework programmes for research and development. With this objective in mind a programme has been established at national level creating incentives for researchers willing to submit proposals to the 6th framework programme (Interviews with Ramôa Ribeiro and Graça Carvalho).

Ribeiro also considers that although the Portuguese scientific community in some areas is well known and has a very good reputation, some links with international organisations, such as CERN and ESA, need to be worked out to improve the visibility of Portuguese researchers.

Until 2000, the education component of the higher education institutions budget was allocated from the Ministry of Education while the research component was allocated from the Ministry for Science and Technology. At present, a single Ministry – Ministry for Science and Higher Education – is responsible for both teaching and research activities. This creates the opportunity to try to integrate strategies and define goals more clearly.

The policy for information and communication technologies (ICT) in Portugal is being established under the framework of the programme for the information society (2000-2006) funded by structural funds from the EC and aims at disseminating the information and knowledge society in Portugal. This initiative will be connected to the e-learning programme of the EC, aimed at developing education and training system based on ICT. Participation at institutional level will determine changes in open and distance learning. The most recent ICT project is the electronic university based on the idea of a virtual campus for implementing online services for students in all Portuguese universities. Since this process is more centred on competition than cooperation, one can say that globalisation in the field of ICT is the driving force for innovations in policies and the organisation of Portuguese higher education.

#### **6.4 Main effects of internationalisation policies**

Portuguese internationalisation policies intend to promote in the institutions, teachers, students and researchers an attitude favouring participation in internationalisation activities. Considering the autonomy of higher education institutions, those policies aim to create opportunities for the development and management of these activities. This is clearly stated in the 2002 Activities Report elaborated by GRICES: "The Institute's activity (...) was focused in international cooperation actions aiming at creating opportunities for the scientific community, national and international, to meet and to work together, through the administration of several international agreements in the areas of science and technology. Through the implementation of GRICES, higher education emerged as a new area of activity to be added to the other areas..." (GRICES Activities' Report, 2002).

According to Teixeira et al. (2003), Portuguese higher education institutions, especially public universities, have strengthened their institutional autonomy

during the last thirty years, which makes it almost impossible to introduce top-down changes suggested by the European Union or determined by the national government without their agreement through negotiation. Higher education institutions are responsible for the curricular organisation of study programmes. Therefore, European programmes such as ERASMUS, TEMPUS, PHARE and ALPHA do not immediately give rise to curricular changes, as institutions can decide whether they adhere to them and how they are going to develop and manage the internationalisation activities embedded in them.

Van der Wende and Huisman (2003), when referring to the stronger focus of the SOCRATES programme towards the development of a European (internationalised) curricula, state that: "The step towards cooperation at the curriculum level proved to be an interesting but a difficult one. (...) Many European, innovative, and interdisciplinary approaches were developed. However, the actual institutionalisation of these new programmes (or their acceptance as a new part of the regular curriculum) turned out to be quite difficult" (Van der Wende and Huisman, 2003: 4)

This statement describes what happened in Portugal, where according to Teixeira et al. (2003) the influence of these programmes was diffuse and thus far they have not produced any visible, concrete and systematic results. However if 'direct' cooperation at curriculum level has not been very successful, the support for student mobility did have an important impact: Students' mobility provided a source of information that is being slowly integrated by institutions, thus leading to more flexible attitudes on curricular organisation. At the same time, institutions have been forced to establish new administrative and academic structures dealing with student exchange.

Another example of the exercise of institutional autonomy is the establishment of an ECTS type credit system by some institutions as a result of their participation in European programmes. This was an initiative of the institutions without the need of legal imposition and may be seen as a response to Europeanisation, insofar as it allows for credit accumulation and transfer, as a tool for mobility.

This last statement gives a clue towards explaining the contribution of internationalisation policies to convergence in higher education institutions. On the one hand all the Portuguese higher education institutions tend to develop their internationalisation strategies in order to be able to participate in the EU programmes, thus converging towards certain common issues. On the other hand, the mobility of students, teachers and researchers is a very important source of information on good practices of curricular organisation and organic structure that eventually are "copied" by every institution. The establishment of new administrative and academic structures for student exchange is a good example of convergence between all Portuguese higher education institutions.



#### **6.4.1 Mobility: trends, patterns, and geographical focus**

Based on the premise that mobility of teachers, students and researchers can be an adequate indicator of internationalisation, then Portuguese higher education is each year becoming more international, because the mobility of students, teachers and researchers, especially within Europe, is increasing. The main reason for this increase in mobility has been the EU mobility programmes, which provided grants to support at least part of the mobility costs. This is primarily the case of the ERASMUS programme, later integrated into SOCRATES, and also of the LEONARDO and other SOCRATES actions. Although it can be argued that “on the whole, SOCRATES did not have the snowball effect which would lead to a new stage of cooperation within higher education in Europe” (Van der Wende and Huisman, 2003: 4), the promotion of the mobility of teachers and students has helped to open Portugal towards Europe, and has provided a rationale for the internationalisation policies.

##### *Student mobility*

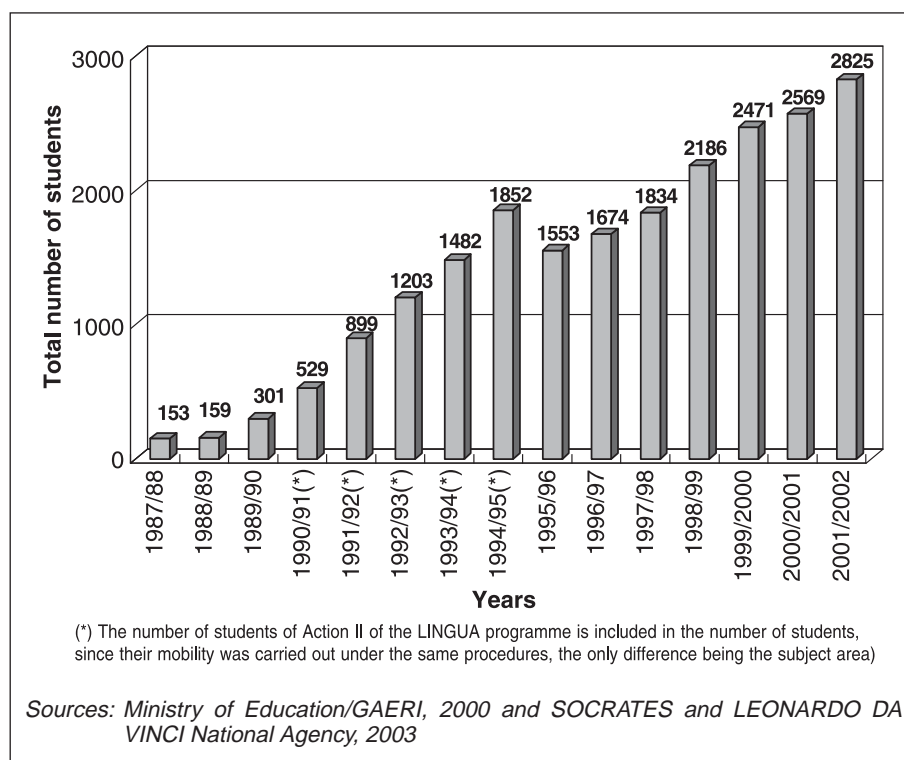
The data on outgoing Portuguese students within the framework of ERASMUS shows (Figure 6.1) that their number has consistently increased, from 153 in 1987/88 to 2,825 in 2001/02, with the exception of 1995/96 when there was a decrease relative to the preceding year. Portuguese students have a stable pattern of preferences with Spain, France, Italy, Germany and the United Kingdom being the major destination countries. This is probably due to both linguistic and cultural aspects as well as economic ones. Spain is the neighbour country, which means low travel costs and the absence of a real language barrier. The UK, France and Germany are Portuguese references in the higher education area and Italian is a Latin language. The preferred disciplines in terms of enrolment are the social sciences, engineering and technology, and languages and philological sciences.

The number of incoming students under the ERASMUS exchange programme has also increased steadily (1,382 in 1997/98, 1,754 in 1998/99 and 2,236 in 1999/2000), being more or less equivalent to the number of outgoing students. The main countries of origin of these students were Spain, Italy and France, which can be explained by geographic and cultural proximity.

Recently students have enrolled as normal to follow a full study programme, and not under one of the temporary EU exchange programmes for mobility. The OECD has published data (years 1998 and 2000) on the number of Portuguese students enrolled in tertiary education in other countries as a percentage of the total number of students that are enrolled in this level of education in Portugal. The total percentage in 2000 was below 3%, the first country of destination being France (0.8%), followed by the UK (0.6%), Germany (0.5%), Spain (0.2%) and USA (0.2%) (OECD, 2002), the results for 1998 being quite similar (OECD, 2000). These statistics can perhaps be explained by Portuguese immigration.



**Figure 6.1 Number of Portuguese students in the ERASMUS programme**



The OECD data shows that in 2000 the total number of foreign students enrolled in Portugal was about 1% of the total student population, the main countries of origin being Switzerland (0.3%), Belgium (0.2%), France (0.2%) and the UK (0.1%) (OECD, 2002). Data for 1998 is not consistent with the above results as they show a very strong participation of students from Luxemburg (5.6%), a result that needs to be seen with suspicion despite the large Portuguese emigration to that country (OECD, 1998).

#### *Teacher mobility*

The SOCRATES programme is the main origin of the mobility of Portuguese higher education teachers, and the total enrolment has been rising since 1997/98. The majority of these teachers have chosen Spain, France, Germany, the UK and Italy as preferred countries of destination, which are the same countries chosen by the students. This is not surprising as the choice made by professors certainly influences the choices of the students.

### *Researcher mobility*

The Foundation for Science and Technology (FCT) linked to the Ministry of Science and Higher Education awards grants for postgraduate and post-doctoral studies in Portugal or abroad, and is the main source of the mobility of researchers. As this programme is partly financed through the framework programme, Portugal is considered both a host country for incoming students and the country of origin of outgoing Portuguese researchers. The available data comprises the total number of PhD, post-doctoral and other types of grants awarded until 19th May 2003 to both outgoing Portuguese researchers and to incoming foreign researchers.

The available data on the Portuguese researchers that leave the country to study abroad show that a large percentage has until now chosen the USA (21%) and the UK (37%) as preferred countries for postgraduate studies. More recently Spain is also emerging as a major destination country. The President of FCT referred to this new trend: "We have a large number of post-graduate students with scholarships... (...) namely in the UK, which is the country with more scholarships, followed by the United States and at present France and Spain on equal footing, and this is a new development. Until recently the Portuguese would not go to Spain, probably because of some rivalry between the two countries, etc." (Interview with Ramôa Ribeiro).

The President of the FCT also considers that the choice of the countries for PhD studies is largely influenced by tradition. He refers to the case of the UK, where universities have a long tradition regarding PhD studies, which probably can explain the choices of Portuguese researchers: "However, in the case of PhD degrees tradition counts a lot. The British universities have an enormous tradition and consequently many academics from Portuguese universities have obtained their doctoral degrees in the UK" (Interview with Ramôa Ribeiro).

The data also shows that the type of grant awarded influences the preferred scientific areas of outgoing Portuguese postgraduate students. In the case of PhD grants, Portuguese researchers have mainly chosen the social sciences (25%) and the natural and environmental sciences (23%). For postdoctoral students, the most relevant areas are the natural and environment sciences (36%) and the exact sciences (24%). For other types of grants, social sciences (24%) and exact sciences (29%) are the most chosen areas. These latter grants represent only a small percentage for medical sciences. For the fields of science & technology management and research in consortium, the number of grants is negligible whatever their type.

Foreign researchers who have chosen Portugal as their host country for postgraduate studies come from a large number of different countries, the most common being Brazil (especially for researchers with a PhD or other types of grant) and China (especially in postdoctoral studies). France, Spain and Russia

– in each case depending on the type of grant the students have – are also home countries of a significant percentage of the incoming foreign researchers.

The scientific areas chosen by incoming postgraduate students show a variation over time, although in medical sciences their participation (in percentage) is rather low independently of the type of grant awarded. Nevertheless there are in general important differences between the types of grants awarded. For PhD grants, engineering and technology (40%) is the most popular area, followed by social sciences (15%) and exact sciences (12%). For postdoctoral grants, exact sciences becomes the most popular choice (34%), closely followed by engineering and technology (32%), with natural and environment sciences occupying third place (23%), and all other areas enrolling less than 10% of all researchers. The other types of grants are quite well divided across the different scientific areas, exceptions being the already mentioned medical sciences and the science & technology management and research in consortium (these last two with null percentage whatever the type of grant).

The Gulbenkian Foundation is an important source of grants for outgoing students, awarding an average of thirty grants each year, in subject areas that include the social sciences, exact sciences, human sciences and life sciences. The USA is the first choice, followed by the UK. Germany and France were also countries chosen by a relevant percentage of students in the years 1999 and 2000, but the trend seems to be the option for the USA or the UK as host country, probably due to the prestige of some of their universities, especially for postgraduate studies. Another possible explanation lies in the fact that the Gulbenkian Foundation gives preference to the USA in order not to overlap with other programmes, which in general avoid the USA due to longer duration of studies and higher costs.

The Gulbenkian Foundation has also a short duration grants programme (maximum three months), which finances visits of Portuguese students to other countries in the scope of their research work (on average around 100 grants per year).

The Marie Curie Fellowships, available under the 5th Framework programme for Community activities in research, technological development and demonstration (1998-2002), which will continue to be available under the 6th Framework Programme (2002-2006) are an additional source of funding for postgraduate activities. However, at least in the Portuguese case, the Marie Curie Fellowships play only a minor role in the promotion of the researchers' mobility and consequently in the internationalisation of the national system of higher education.

#### **6.4.2 Cooperation with and mobility from developing countries**

According to Van der Wende (2002: 2) "the process of de-colonization in the 1950s and 1960s resulted in new forms of mobility and cooperation aimed at the development of a new intellectual stratum in the former colonial nations".

In Portugal the de-colonization happened only during the early 1970s, and since then the country has felt a particular responsibility towards the development of its former African colonies, and more recently also East Timor. This sense of responsibility is translated in the Portuguese external policy and includes a particular concern with education and training of their young people as well as their top administrative staff. According to one of our interviewees, the main goal of this policy is giving those students adequate education and training and then trying to enable them return to their own countries, where they can be fundamental building stones of development. "The Portuguese foreign policy towards scholarship holders from PALOP countries is to encourage them to return to their home country, as it represents an additional help to development, and we have to maintain this relationship. (...) to ensure that Portugal is the first host country for students from Portuguese speaking countries and that it remains their first choice. But also to ensure that most of them return to their countries trained to play a socially useful role" (Interview with Graça Carvalho).

There are three special regimes for access to higher education of PALOP students (depending e.g. on the educational background of the student) that provide special earmarked vacancies, both in public and private higher education institutions. The number of successful candidates has been increasing steadily since 1998. This trend confirms the efforts of the Portuguese government to help in the qualification of human resources and the important role that cooperation with and mobility from developing countries plays in the internationalisation process.

The majority of African students have come from Cape Verde, a trend that was very accentuated during the last two years. The preferred subject areas were engineering and technology, social sciences, business studies and management sciences, law and medical sciences. Although this panorama has not changed dramatically over the last four years, it is worth noticing that in 2001 and 2002 the percentage of students enrolled in engineering and technology increased from 18% to 25%, and the percentage of enrolments in law and medical sciences decreased, becoming approximately equal to the percentage of students in education and teacher training.

Besides the existence of the three special access regimes, the Portuguese government also awards some grants to undergraduates. There are also programmes that award grants to citizens and residents of the PALOP countries who are willing to do postgraduate studies – master and PhD degrees – as well as a programme to support the postgraduate fieldwork of Portuguese students that are doing research on African studies.

Several bilateral cooperation agreements have been established, namely with Cape Verde and Mozambique to promote research cooperation with these developing countries. A bilateral cooperation agreement has also been signed with Brazil.

The Gulbenkian Foundation also plays an important role by annually awarding grants for PALOP students, both for undergraduates and for postgraduate specialisation. Over the last four years, the grants were mainly awarded to undergraduate students (about four times the number of grants awarded to postgraduate students), their total number being quite stable over time. The grants were mainly awarded to students of social sciences, business studies and management sciences, medical sciences, law and engineering and technology, and this pattern has been quite steady over all the years considered.

### **6.4.3 The mobility effect: brain gain/brain drain**

Due to the increasing mobility of students, teachers and researchers from and to the country, we can speak of a brain drain situation. In fact, and according to one of our interviewees, it is a goal of the Portuguese government that undergraduate and postgraduate Portuguese students that make part or all their studies abroad return to the country, contributing to its own development. Nevertheless it is recognised that the presence of Portuguese students and researchers abroad also contributes to the internationalisation of Portuguese higher education and especially of its research, namely by contributing to the easier establishment of networks. The president of FCT considers that it might be useful for some researchers to stay in the host country to establish links. However the majority should return and there are several programmes that support their integration in the private sector. Integration in the public sector is more difficult because budgets of universities do not allow for the integration of a sizeable number of researchers: "I believe that it is important that some of our PhD holders remain abroad. It is even very important (...). It is much easier to establish relationships with research groups where those Portuguese PhDs are integrated than with those where there are no Portuguese. However, it is evident that most of them should return to Portugal, as we are making an investment in them, so it is important that they return. It is also true that there are programmes aiming at the integration of masters and PhD holders in enterprises and in the scientific system..." (Interview with Ramôa Ribeiro).

The director of GRICES mentioned also the need to attract the best students from other countries, namely from China and India: "We would very much like to have conditions for attracting the Portuguese who are abroad, and we need to create those conditions. There are, for instance, several Marie Curie initiatives that are very interesting for this purpose. On the other hand, we would like to attract the best students from India or China. And we would like to see them following their careers in Portugal, in Europe. (...) So we have to attract the Portuguese who are abroad following their careers there, and to attract students, good students from all over the world." (Interview with Graça Carvalho). The Ministry of Science and Higher Education wants to create mechanisms allowing Portuguese institutions to become more competitive,

namely by allowing them to pay additional salaries to reward scientific excellence and to hire well reputed foreign scientists for teaching and research.

#### **6.4.4 Main effects of the internationalisation of research**

In 1995, the XIII Constitutional Government created a Ministry of Science and Technology, with the main goal of promoting scientific research in Portugal, increasing its quality and relevance and promoting Portuguese international cooperation in this domain. It is worth noting that at that time the Portuguese scientific and technological system, especially at the structural level, was less developed than those of most European countries.

In the framework of this new Ministry, an Institute for International Scientific and Technological Cooperation (ICCTI) was created, with the objective of creating conditions for the development of one of the Ministry's priorities, namely the "evaluation, reform and expansion of the Portuguese scientific and technological system and the reinforcement of its ties with the international scientific and technological community and with the Portuguese society" (ICCTI Activities' Report, 1998: 1). Its mission included: "Management, orientation and coordination of the international cooperation activities, supporting the Ministry of Science and Technology in all activities relating to the participation of Portugal in the areas of Science and Technology as EU member state, and orientation of the national representation in the international bodies in these areas" (ICCTI Activities' Report, 1998: 1-2).

This idea of supporting internationalisation is again reinforced by ICCTI in 2001: "The activity of the ICCTI aims preferentially at answering the demands of the scientific community (national and international), in order to guarantee appropriate conditions for meetings and work by using opportunities created from diverse international agreements. In this sense, the activity of ICCTI is mainly focused in the preparation of regulation instruments of internationalisation and in creating opportunities for scientific cooperation." (ICCTI Activities' Report, 2001: 1)

The Portuguese internationalisation policies – in the present case for the research and technological system – tend to foster the development and management of internationalisation activities in the scope of the research centres themselves, most of them being organic units integrated in higher education institutions. The activities of the ICCTI essentially covered three large domains (ICCTI Activities' Report, 1998):

- ◆ the Portuguese participation in the EU science and technology programmes, namely in the framework programmes
- ◆ the development of scientific and technological or cultural relationships in the framework of bilateral agreements, with special emphasis in bilateral cooperation with Portuguese speaking countries
- ◆ the participation of the Portuguese scientific community in large laboratories and international organisations with confirmed relevance for science

and technology, and the participation in international or multilateral scientific programmes and networks besides those of the EU.

In 2002 ICCTI was replaced by GRICES but its main activities were continued. In what follows an overview will be given of European and bilateral cooperation and the participation in international laboratories and institutions. The president of FST considers that: "Consequently, we are indeed internationalised from the point of view of our scientific community. There are some international relationships that must develop through some specialised international organisations such as CERN, or ESO (...). And we need also to use the bi-lateral agreements that exist at the level of some countries. (...) And we must recognise that there are some people of great quality among the young people that we train." (Interview with Ramôa Ribeiro).

#### *European cooperation*

The Framework Programmes have been a very important and relevant means for promoting the internationalisation of the Portuguese scientific and technological system. The ICCTI states that they are a "privileged base for accessing international knowledge networks and, on other hand, for connecting national institutions to the technology international market" (ICCTI Activities Report, 1998: 5). This was confirmed by the interviews: "... our first objective is Europe and the framework programmes. At present a new framework programme, the 6th framework programme is being implemented and it is a great challenge for Portugal" (Interview with Graça Carvalho) and "It is important that we participate more and more in the framework programme... if for no other reason, because we are now facing a decrease of the structural funds and we need to obtain alternative funding from the state budget, private companies and also the European Commission through the framework programme" (Interview with Ramôa Ribeiro).

Under the 4th Framework Programme, more than 800 institutions participated in a total of 992 projects (290 were enterprises, in 470 projects). Portuguese institutions were project leaders (ICCTI Activities Report, 1998: 5) in 108 of them.

Under the 4th Framework Programme in 2001, Portugal submitted 2,220 proposals, and signed 479 contracts divided by the following specific programmes: 80 in Quality of Life, 79 in Information Society, 157 in Sustainable Growth, 74 in Energy and Environment, 10 in Nuclear Energy, 27 in International Role, 8 in Innovation and SME's and 44 in Human Potential. Contracts were signed with 135 higher education institutions, 116 research centres, 159 private organisations and 69 with other types of beneficiaries. The contracts signed in 2001 enabled the establishment of 4,631 cooperation links between Portugal and other countries, 4,082 of them with EU countries (with special relevance for the UK, Germany, France and Italy) and the others with candidate and associated countries (Commission of the European Communities, 2003).



By September 2002 Portugal had participated in approximately 900 projects signed, divided by the following thematic programmes: 30% in Information Society, 22% in Sustainable Growth, 14% in Quality of Life, 14% in Environment, 9% in Energy, 7% in Human Potential, 3% in International Cooperation and 1% in Innovation. Considering the type of beneficiary, the data indicates that 30% were higher education institutions, 32% were enterprises, 21% were non-profit private institutions, 9% was the State and 8% were other types of beneficiaries.

Other European programmes and initiatives in which Portugal participates and co-operates are the European Platform of Clinical Tests in the areas of AIDS, Malaria and Tuberculosis and CRAFT (Cooperative Research Action for Technology). Portugal is also a participant in the EUREKA initiative; as all EUREKA projects have to be developed between national entities associated to foreign enterprises or entities, this initiative plays a special role in internationalisation (ICCTI Activities Report, 1998: 6).

#### *Bilateral cooperation*

Bi-lateral cooperation results from Scientific and Technological Cooperation Agreements between Portugal and other countries; Cultural Agreements, coordinated by the Camões Institute of the Ministry of Foreign Affairs, which includes interchanges of researchers; and Protocols and Agreements with science and technology institutions in other countries (ICCTI Activities Report, 1998: 7).

The GRICES 2002 Activities Report noted that this type of cooperation has allowed for an interchange of researchers through about thirty agreements established with foreign institutions or countries (there were more than 500 applications with an approval percentage of 73%; in 2001, more than 500 applications were received, 85% of them being approved; in 2000, again 500 applications were received, about 430 being approved). The most significant exchanges over recent years have been with France and Brazil. Under the Cultural Agreements, 43 scientific interchange missions were funded (in 2001 this number was 53 and in 2000 it was 40) (data collected in the Activities Reports of ICCTI, 2000 and 2001, and of GRICES, 2002).

#### *Participation in international laboratories and institutions*

In the last fifty years several large international laboratories have emerged, contributing to new scientific perspectives by making available instruments, observation means and scientific infrastructures whose costs exceed the financial possibilities of a single country.

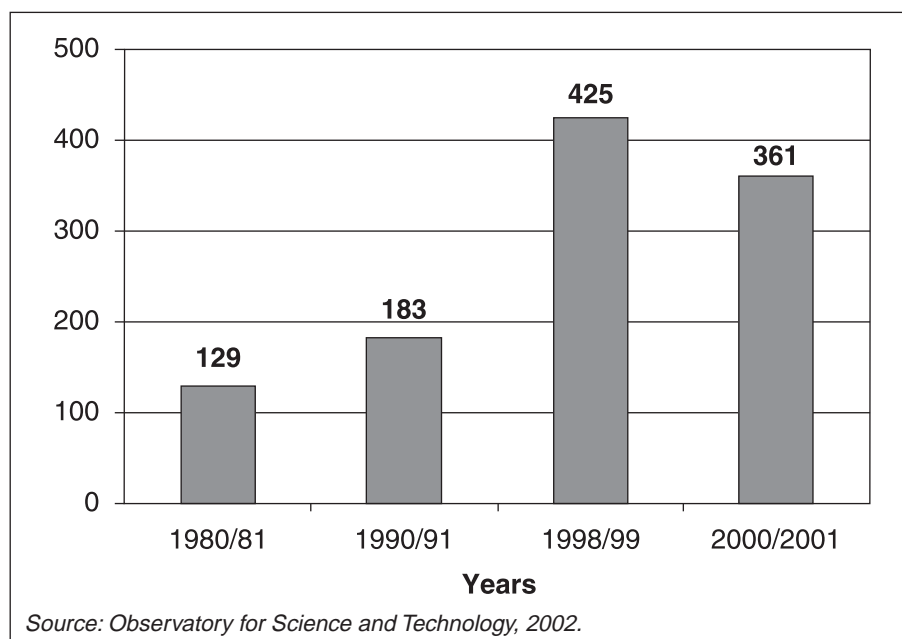
These laboratories need the participation of scientists from many countries in order to develop their scientific potential. Since joining CERN in 1985, Portugal has developed a sustained policy of participation in the activities of

the majority of these international institutions (ICCTI Activities Report, 1998). Nowadays, Portuguese participation includes the CERN, EMBC, EMBL, ESA, ESO, ESRF, ESF, COST, CYTED, CGIAR and INVOTAN Commission.

The numbers of Portuguese scientific publications in co-authorship with institutions of foreign countries increased from 1990 to 2001, with a small decrease in the last year (Observatory for Science and Technology, 2003). The major percentage of these publications (considering the total number from 1981 until 2001) resulted from cooperation with institutions from England, USA and France.

Finally we present the number of doctoral degrees completed abroad and recognised in Portugal, which is also an indicator of the degree of internationalisation of Portuguese research. From 1980/81 to 1998/99 this number almost tripled. However, in 2000/01 the number slightly declined (Figure 6.2).

**Figure 6.2 Number of doctoral degrees concluded abroad and recognised in Portugal from 1980/81 until 2000/01**



### 6.5 The policy context – major recent trends and changes

The major changes in the Portuguese higher education system occurred in the last thirty years, after the April 1974 Revolution. It is true that 25th April 1974 is in all aspects a milestone in recent Portuguese history, and the major

trends and changes in the Portuguese higher education system, namely its massification, diversification (both by implementing a binary system and by allowing the emergence of a large private sector) and scientific and technological development only took place after the demise of the dictatorial regime of Salazar.

During the period immediately after the 1974 Revolution “the political pendulum swung violently to the extreme left”, but: “... as the revolutionary fire died down and integration into the European Union emerged as an attractive possibility (integration of Portugal dates from 1986), soon the pace was set towards a ‘normalisation’ process along a convergent path with the other European countries”(Amaral and Carvalho, 2003:1)

This convergence towards Europe made the country move from a model of state control towards a model of state supervision, as happened in almost all other western European countries. In 1988 the University Autonomy Act was passed and in 1990 it was the time for the Statute and Autonomy of Polytechnic Higher Education Institutions Act, both conferring a considerable degree of autonomy to public higher education institutions. Nevertheless: “These acts clearly contain those elements of hybridism that characterise the participation of the government through the Ministry in charge of higher education as the main regulator of the system” (Amaral & Carvalho, 2003).

Despite the almost complete administrative and financial autonomy of private institutions, they are considerably less autonomous than public universities in other issues such as pedagogical autonomy (Amaral & Carvalho, 2003).

Expansion and massification of the system was another recent change. With an increasing demand from students completing secondary education and with some artificial mechanisms inducing demand (namely the 1989 elimination of minimum requirements to enter higher education), the system was forced to expand, increasing enrolments in public institutions and promoting the emergence of a large private sector.

The fact that the public sector could not answer the explosive increase in demand, combined with legislation allowing teachers of public institutions to teach simultaneously in private institutions, and lack of control over quality helps to explain the fast development of the private sector. The government supported this development as it allowed an increase in the number of vacancies in higher education (satisfying the growing pressures from the society) without an equal increase in public expenditure. Under these conditions it is no wonder that the private sector has developed very fast and in an unbalanced way, either in the scientific areas of the degrees awarded – basically the development was based upon the multiplication of degrees in scientific areas such as management, law, economics, human sciences, all characterised by low investment and running costs, or its geographical localisa-

tion in the country – most private institutions were established in Lisbon and Porto, thus giving rise to a distortion of the higher education system as a whole.

One very recent change, which may have an impact on the internationalisation of the higher education system, is the systematic decrease in the number of candidates to higher education over the last years. This decrease was indeed a surprise to higher education institutions fully committed to a strategy of expansion, and is now giving rise to a very difficult situation, especially for the private institutions, but also for public polytechnics and even for public universities located in the interior of the country. This situation may act as a stimulus for higher education institutions to start looking for different “clients”. These may be international students. This will demand an effort from the institutions, which can obviously be helped by the state, in order to promote themselves and their degrees in other countries.

A recent document published by the Ministry of Science and Technology establishes that higher education institutions are entitled to define the level of the fees to be paid by foreign students, while for national students institutions they can only set the level of fees between a minimum and a maximum value established by the Ministry. This of course excludes special situations that result from international agreements of the Portuguese state (such as the ERASMUS programme, EU students and students protected by bilateral agreements). This measure could in a certain way contribute to a greater effort of the institutions to promote their degrees in other countries, trying to enrol a larger number of foreign students.

It is not going to be easy, because of cultural and linguistic issues, and also because students increasingly prefer higher education institutions close to their parents' home. And of course, success will also strongly depend on the excellent reputation of the degrees, something that not every institution can offer.

In Portugal the relationship between HEIs and the state follows a model of state supervision, which confers on the institutions a considerable degree of autonomy. This means that steering institutions towards increased internationalisation might be difficult. However Portuguese HEIs, despite their autonomy, or because of that same autonomy, are very aware of the importance of the internationalisation process and have been making efforts in order to become more international. They participate in the EU programmes on higher education, they are making efforts to ensure their degrees are compatible with the ECTS system, they have institutionalised special units in their organic structures to deal with international issues and they are starting to think how to get more foreign students beyond those coming through the standard mobility programmes. Some of them are even launching graduate and postgraduate programmes together with foreign institutions, especially those from Portuguese speaking countries.

## 6.6 The relationship with policies developed at the European level

### 6.6.1 Implementation of European policies

European policies are one of the most relevant inputs for the definition of Portuguese higher education policies for internationalisation. The implementation of European policies is an assumed priority at the highest level in the Ministry of Science and Higher Education and its agencies. One of those agencies is the FCT, which is responsible for the implementation of science and research policies and for funding the research units established in the higher education system. The other agency is the GRICES, which has responsibility for implementing the internationalisation policies for Science and Higher Education, and for being the liaison between the Ministry and the higher education system.

The National Agency for European Programmes is responsible for the management of decentralised actions under the SOCRATES and LEONARDO programmes. The Ministry of Work and Social Security and the Ministry of Education also participate in this structure, together with the Ministry of Science and Higher Education.

One can identify a strong convergence of interests between policies developed at national level and policies developed at European level. It's important to understand: "[that in] the process of international convergence of higher education systems, one cannot ignore neither the dynamics of globalisation and the hegemony of neo-liberal discourses and policies (Torres & Schugurensky, 2002) nor the role of national governments in trying to establish the conditions that will allow the national economy to prosper and the nation to be part of the winners of the game of globalisation" (Amaral, 2002: 9).

### 6.6.2 Implementation of the Bologna process

As in many other European countries, the Bologna process has been the opportunity for heated debates and for the emergence of diverse proposals aimed at adapting the Portuguese higher education system to the new degree structure and criteria of transparency and comparability that result from the Bologna declaration.

At present the Portuguese higher education system is a binary system of universities and polytechnics. Polytechnics award a two-tier degree: *bacharelato* (three years) and one or two additional years (equivalent to *licenciatura*) and universities award the *licenciatura* (four to six years) and all post-graduate degrees (*mestrado* and *doutoramento*).

There is no consensus on the duration of the first cycle. While the Council of Rectors wants four years to be the minimum duration of the first degree (traditionally *licenciaturas* are four to six year degrees), the Council of

Polytechnics is strongly in favour of a three-year first degree (the traditional length of the bachelor degree).

The national opinion is also strongly divided on the new degree structure. While some people propose to eliminate the degree of bacharel, others prefer to eliminate the degree of licenciatura, and others want to eliminate the degree of mestrado. Recently, there were proposals for defining two different mestrados: one year at universities and polytechnics and two years only at universities.

There is also strong disagreement on the duration of the two cycles (from three to six years for the first cycle and one or two years for the second short cycle).

Also, there is no consensus on the criteria for defining which institutions can confer the degrees. Some propose a clear separation of universities and polytechnics with the latter being limited to the first cycle, and eventually the short mestrado. Others consider that the type of degrees an institution is entitled to confer should not be determined by the designation of the institution (university or polytechnic) but by the institutional capacity, eventually in result of an accreditation system.

Changing the degree structure is not easy because the present structure was defined in the Fundamental law on the education system, an Act of Parliament, and any change will need another Act of Parliament. This explains why so far none of the Portuguese HEIs have taken steps to change their programmes following the Bologna declaration.

The government has recently presented a proposal of a new Fundamental law, but other political parties in opposition have reacted by presenting alternative proposals. Given the fact that the present Minister resigned in October 2003, it is difficult to guess what the final law will look like.

## **6.7 The influence of the changes in the international context**

According to the director of GRICES, the Portuguese position regarding the GATS proposals is very much against the idea of considering higher education a tradable commodity. The Portuguese government also intends to safeguard the specificities of national language and culture, and recent legislation contains provisions against franchising education activities.

Following the Lisbon declaration on mutual recognition of diplomas there is a system for automatic recognition of foreign doctoral degrees, which however excludes recognition of degrees conferred under franchising activities.

In November 2002, the National Evaluation Council also made a statement containing several recommendations, such as:

- ◆ increasing public awareness about transnational education
- ◆ revising the national regulation framework in order to define the basic requirements for recognition of HEIs
- ◆ including transnational education under the framework of the national evaluation agencies
- ◆ promoting the internationalisation of evaluation teams and defining a “code of good practice” at national level
- ◆ implementing the diploma supplement
- ◆ defining the national position along the concerns expressed.

Finally, the new 1/2003 Act forbids franchising activities, namely the establishment of education institutions operating under franchising.

## **6.8 Conclusion**

From the present analysis it is possible to state that Portugal is committed to the internationalisation of its higher education and research system.

One cannot forget that by history Portugal is an emigration country. On the one hand the government supported with grants the training of its postgraduate students in countries such as France, United Kingdom and Germany; on the other hand the labour force went abroad seeking better life conditions. After integration in the EU the Portuguese economic situation improved and at present there are earmarked vacancies in higher education for special kinds of students (sons of Portuguese emigrants and the students coming from the Portuguese-speaking African countries). There are also European students coming to Portuguese HEIs for a short period of time and not enrolled in the system. The European programmes give Portuguese students the most important opportunity for mobility.

It is worth mentioning the co-operative relationships established with all the countries that were former Portuguese colonies. Several special programmes and agreements exist between Portugal and these countries with the main goal of supporting their cultural, economic, technological, scientific and educational development. In this context, there are both special places in Portuguese universities and polytechnic institutes, public and private, for students coming from these countries, as well as several grants programmes to support the costs of mobility. Obviously it should be mentioned that in this context the language is a very important issue in order to promote the internationalisation of the Portuguese higher education system (in all these countries Portuguese is the official language).

There is a great effort to make Portuguese higher education more international through the participation in programmes launched at European level, specially the SOCRATES programme. It can be concluded, by the analysis of the data collected, that this effort is leading to some visible effects and results. Nevertheless, Portugal has some characteristics that make the inter-



nationalisation of its higher education system problematic. One of them is obviously the language, as Portuguese is one of the least spoken and known languages in Europe. Another important drawback is the fact that it is not a rich country and the costs inherent to the mobility of students, teachers and researchers are not easy to support, even with the financial help of the grants from the available programmes.

Thus, one can identify the cultural/linguistic issues that play an important role in the internationalisation process of higher education. On the one hand Portuguese is important to attract people from former colonies, and on the other hand English is becoming the lingua franca for communication in international scientific community. The balance between these two alternative poles needs to be managed by the organisations at institutional level in consonance with their internationalisation strategy. Under this framework the process of Europeanisation that will lead to changes with the implementation of the programme ERASMUS World will be very interesting to analyse. With the adoption of this programme the institutions to raise funds for their master courses will have to correspond to certain demands such as the use, at least, of two languages spoken in the member states. One should also mention that this possibility of obtaining European funding for the master courses could be connected to the decrease of responsibilities of the state for post-graduate studies.

Recently an effort has been made towards the internationalisation of the Portuguese research and technological development system, as Portugal can develop its scientific research only through cooperation with other countries. Therefore, the Portuguese participation in the European programmes is becoming a priority because higher education institutions should increasingly ensure diversified funding sources.

In that sense Portugal is now an active participant in the majority of the important European laboratories, having also bilateral and multilateral agreements with large number of countries within and outside Europe. Besides this international cooperation, the scientific system is periodically under quality evaluations made by international experts, and some incentives to innovation have been put in place. Portugal is also trying to establish cooperation agreements with countries such as China and India, where it had a quite important presence some centuries ago. The recent sharp increase in the number of Portuguese researchers has created a reasonable critical mass in some fields of study, thus contributing to future research development. Nevertheless it must be said that it is still very hard for Portuguese research centres and their researchers to find partners in the national industry, which is obviously a barrier to the development of the scientific and technological system.

To conclude, the processes of Europeanisation, internationalisation and globalisation of Portuguese higher education and research can be regarded more as reaction than anticipation. Thus, those processes can be conceived

as a lever (McBurnie, 2001) to introduce changes. In this respect the Ministry of Science and Higher Education states that: "The educational policy defined by the XV Constitutional Government is based on issues and concerns expressed by other European countries, namely: autonomy, funding and quality control. Under this framework the European Union programmes and the Bologna process are opportunities for reform and for improvement of quality in education and research, but not as an instrument used to achieve the quality in higher education" (Interview with Pedro Lynce).

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