THE RELATIONSHIP BETWEEN HIGHER EDUCATION AND EMPLOYMENT IN PORTUGAL

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Abstract

The purpose of this research is to discuss the relationship between higher education and employment in Portugal. The Constitution of the Portuguese Republic of April 2, 1976, gives women (and men) a right to equal opportunities for school success, to access to the higher education and to better working conditions. However, despite the expansion of the education system, showing the rapid progress in improving baseline qualifications, women's educational attainment in certain areas remains a challenge. Thus, this research explores the development of the higher education system, examines the nature and implication of organizational change for graduates and assesses what attributes graduates will need in the next decade.

Methodologically, this research relies on two different approaches. The first approach takes the form of a literature review, based on the legal regime of the Portuguese higher education system, considering that, according to Decree-Law n° 402/73 of August 11, Portugal promoted the democratization of education that was been consolidated in the expansion and diversification of higher education to match the need to ensure economic development of the country, requiring an ever higher number of technicians and administrators with higher education. The second approach takes the form of a descriptive statistical analysis, supported on the information provided by the Portuguese Public Employment Service (in Portuguese, *Instituto do Emprego e Formação Profissional* - IEFP) web portal, to provide a glimpse of the 'employability' agenda in Portugal. Additionally, supported on the statistical information provided by National Statistical Institute (in Portuguese, *Instituto Nacional de Estatística* - INE) and Portuguese Ministry of Education and Science that show the diversification of the higher education system and it increases the qualification of the Portuguese citizens, in general.

In this sense, the research provides empirical evidence about the social dimension of the higher education system at the same time highlighting the influence of this aspect in the nature and implication of organizational change for graduates and assesses what attributes graduates will need in the next decade. Indeed, the results of the research show: young women hold a higher qualification than men with the same age; gender differences still exist in certain fields, with more men studying science, informatics and engineering, and with women dominating education, health and social protection; despite their higher educational attainment, young women still have lower employment rates than men; women with higher education earn lower of their male peers' earnings, in consequence of the under-representation of women in some fields of higher education, which are highly rewarded by the labor market. Thus, these results confirm those presented by the Organisation for Economic Co-operation and Development (OECD) in March of 2015 on a study with 36 countries.

Keywords: Education, Higher education, Employment, Portugal.

1 INTRODUCTION

Presently, the market offers many employment options for people with various levels of education, but there is a very high competition and citizens must, in addition to traditional education (primary, secondary, higher or apprenticeship), have a constantly updated training. However, it is important that organizations also recognize the need to invest in training and education of its employees in order to empower its human capital and enhance their knowledge and performance. Thus, this research explores the development of the higher education system, examines the nature and implication of organizational change for graduates and assesses what attributes the graduates will need to satisfy the 'employability' agenda.

In that sense, the purpose of this research is to discuss the relationship between higher education and employment in Portugal. The Constitution of the Portuguese Republic of April 2, 1976, gives women (and men) a right to equal opportunities for school success, to access to the higher education and to

better working conditions. Specifically, the article 74 of the Constitution of the Portuguese Republic argues that State:

...guarantee to all citizens, according to its capacities, the access to higher education degrees, to scientific research and to artistic creation [1: 4654].

However, despite the expansion of the education system, showing the rapid progress in improving baseline qualifications, women's educational attainment in certain areas remains a challenge.

Methodologically, this research relies on two different approaches. The first approach takes the form of a literature review, based on the legal regime of the Portuguese higher education system, considering that, according to Decree-Law no 402/73 of August 11 [2], Portugal promoted the democratization of education that was been consolidated in the expansion and diversification of higher education to match the need to ensure economic development of the country, requiring an ever higher number of technicians and administrators with higher education. The second approach takes the form of a descriptive statistical analysis, supported on the information provided by the Portuguese Public Employment Service (in Portuguese, *Instituto do Emprego e Formação Profissional* - IEFP) web portal, to provide a glimpse of the 'employability' agenda in Portugal. Additionally, supported on the statistical information provided by National Statistical Institute (in Portuguese, *Instituto Nacional de Estatística* - INE) and Portuguese Ministry of Education and Science that show the diversification of the higher education system and it increases the qualification of the Portuguese citizens, in general

The structure of the research is organized as follows. Section 2 gives an overview of the Portuguese higher education system, in general, to understand as education is a powerful tool for reducing inequality as it can give people the ability to take control of their lives [3]. Section 3 presents the empirical analysis based on the public statistics of the education and employment system in Portugal, to understand as Portuguese 'employability' agenda is crucial to national successful. Section 4 summarizes main findings and presents the final conclusion.

2 LITERATURE REVIEW: PORTUGUESE HIGHER EDUCATION SYSTEM

The Portuguese higher education system (HES) consists of a dual system which includes university and polytechnic institutions that can be public or private. On the one hand, the university and polytechnic subsystems are mainly differentiated by their formative role in research: the universities guided by a constant promotion of perspective research and creation of knowledge, fosters the development of capabilities design, innovation and critical analysis; and the polytechnics guided by a constant research perspective applied and development, directed to the understanding and solution of concrete problems, imparting knowledge and its applications for the pursuit of professional activities [4]. On the other hand, specifically, the polytechnics institutions have as main objectives the regional development and a close interaction with its operational environment that provided a flexible reaction to changes in its environment [5].

In relation to degrees, initially in the Basis XV of the Law n° 5/73 defines that the polytechnic institutes gave solely a bachelor's degree [6]. Later, in Article 13 of the Basic Law of the education system, it is recommended that in higher education was conferred the Bachelor, Master and Doctor Degree [7]. In higher education, it can also be assigned degrees of specialized higher education, as well as, other certificates and diplomas for short courses. More recently, through the amendment introduced on the Basic Law of the Education System by paragraph 1 of Article 13 of Law n° 49/2005 [8], in higher education are awarded the degrees of Bachelor, Master and Doctor, integrated by cycles. In paragraph 2 of Article 7 of Law n° 62/2007 [9] it was decided that "polytechnic institutions confer the degrees of Master and Graduate, in law terms".

In addition, the recent development of the Bologna Process, approved by the Decree-Law n° 42/2005 of February 22 [10], has imposed a set of measures [11], including the establishment of the European Credit Transfer System (ECTS), which replaces the credit system establish in the Decree-Law n° 173/80 [12]. The new paradigm focuses on the student, giving him greater freedom in their training path and requiring him more responsibility. [13] considered that "the main actor is the student". This new system has the amount of work of an average student as unit of measure, which corresponds to the unit of credit. The duration of the different degree levels change according with the degree and field of study. On average, the graduate degree has 3 years (or 180 credits), but in fields of study such as engineering, law and architecture could be 5 years and in medicine till 6 years; the master degree has 2 years; and doctor degree has 3 years [8]. Thus, the diversification of the HES increased the

qualification of the Portuguese's citizens, in particular, and of the European citizens, in general, and its knowledge base in an international context [14].

Thus, the implementation and development of the HEIs are centred in a society of intensive knowledge that the demands in relation to the landing of qualifications and competences grew considerably, and in that the formation of higher level carries out a strategic function [15]. Effectively, the strategic function of higher education demands a constant adaptation of the conceptual field, especially in the social, economic and technological perspectives that will bring sustainable development. This assertion was met the principle of corporate social responsibility (CSR) proposed by [16: 239] that:

... sustainability is concerned with the effect which action taken in the present has upon the options available in the future. If resources are utilised in the present then they are no longer available for use in the future, and this is of particular concern if the resources are finite in quantity.

In this sense, the HES want, on one side, to promote the scientific and technological progress, and, on the other side, to develop the individual interests and qualified personnel's social needs. All these result in greater mobility, reinforcing the ability to compete, and quality improvement [17]. Effectively, the number of students currently in higher education determines, in part, a region's future competitiveness in terms of its ability to promote technological change and to create value [18]. After a period of relative decline (2002-03 to 2005-06), as show Figure 1, the HES underwent reforms which reinforced institutional autonomy and promoted new organizational formats.

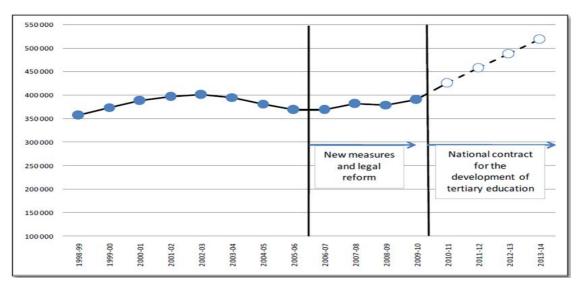


FIGURE 1. Evolution of the number of students enrolled in HEI, 1998-99 to 2013-14 Source: [18: 7].

In Portugal the binary system responds to society needs, which include rapid and unforeseeable changes in the structure of the employment market, adapting the HEIs training schemes and procedures to ensure effective development of their graduates' skills. A diversified system responds effectively to different demands, including the comprehensive nature of research and training covering the whole HES [18]. In this context, Table 1 shows that the number of student's enrolment in universities has grown 6.2 per cent between 2006-07 and 2013-14 and in polytechnics has decrease 1.6 per cent, with polytechnics concentrating on professional and vocational training and most universities concentrating their growth in 2nd cycle and doctoral programmes. Additionally, master's and PhD students in universities increased in 2013-14 to more than 3.1 times the number of 2006-07 and master's students in polytechnics increased 9.0 times the number. Also, the number of students enrolled in vocational short-term cycles (Technological Specialization Courses or, in Portuguese *Cursos de Especialização Tecnológica* - CETs) rose 308 per cent in 2013-14, relative to 2006-07, with polytechnics accounting for about 81.7 per cent of them. However, these short-term cycles still account for only 5.1 per cent of all polytechnic students and there is still a large potential for growth in polytechnics of short-term professional and vocational training.

TABLE 1. Number of students enrolled in HEIs by study cycle, 2006-07 to 2013-14

Universities	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Short-term cycles (CETs)	444	489	813	1,211	1,466	1,651	1,829	1,682
1 st cycle (graduate)	198,924	179,225	168,389	168,078	132,637	128,372	122,935	117,934
2 nd cycle (master)	21,034	46,161	53,877	59,525	102,573	105,119	102,935	104,343
Doctoral programmes	9,585	11,344	13,429	16,377	18,293	19,213	19,470	20,245
Sub-total universities	229,987	237,219	236,508	245,191	254,969	254,355	247,199	244,204
Polytechnics	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Short-term cycles (CETs)	1,809	4,322	5,019	5,003	5,766	5,788	6,006	7,503
1 st cycle (graduate)	135,537	135,710	128,022	125,664	123,679	117,780	108,514	102,831
2 nd cycle (master)	1,649	4,477	9,285	13,983	19,031	19,414	16,734	16,458
Sub-total polytechnics	138,995	144,509	142,326	144,650	148,476	142,982	131,254	136,792
Total	368,982	381,728	378,834	389,841	403,445	397,337	378,453	370,996

Source: [19].

The total number of graduates from HEIs (Table 2) increased by about 17.3% over the period 2005-06 and 2012-13. In relationship to the study cycle is possible to conclude that, on the one hand, the total number of graduates from short-term cycles reached 6,614 in 2012-13, increasing more than fifteenfold since the first batch of graduates in 2005-06. On the other hand, that the total number of graduates from doctoral programmes reached 2,463 in 2012-13, exclusively at universities, increasing to more than 2.3 times the number of 2005-06.

TABLE 2. Number of higher education graduates by study cycle, 2005-06 to 2012-13

Universities	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Short-term cycles (CETs)	173	241	209	258	609	573	688	693
1 st cycle (graduate)	30,973	36,866	33,886	30,716	31,001	29,814	29,783	29,946
2 nd cycle (master)	6,317	8,002	12,535	16,865	18,230	19,106	21,726	21,920
Doctoral programmes	1,094	1,269	1,285	1,267	1,414	1,608	1,859	2,463
Sub-total universities	38,557	46,378	47,915	49,106	51,254	51,101	54,056	55,022
Polytechnics	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Short-term cycles (CETs)	60	637	1,573	1,764	2,083	2,317	2,983	2,921
1 st cycle (graduate)	32,894	36,099	35,263	25,723	25,141	24,993	23,545	22,376
2 nd cycle (master)	550	1,040	1,040	1,996	2,779	3,264	4,447	4,194
Sub-total polytechnics	33,504	37,776	37,876	29,483	30,003	30,574	30,975	29,491
Total	72,061	84,154	85,791	78,589	81,257	81,675	85,031	84,513

Source: [19].

The central concept of the HEIs process is assumed causal relationship between quality and autonomy, the result of which is the introduction of a system of retrospective quality control combined with substantial increases in the autonomy of the HEIs by establishes new regulations equal in all European countries [20]. In this sense, the HEIs should cooperate in depth and consolidate, in Europe, the idea of networks as a mechanism to optimise the resources and scientific and technological European knowledge [21]. During the last four decades, all countries have increased the level of education of their whole population and this increase has been strongly driven by the increase in the proportion of women leaving education with a higher qualification [22]. As a result, even where the proportion of men with higher qualifications is superior to that of women among 55 - 64 year olds, this is no longer the case among 25- 34 year olds in 33 of 36 countries analyzed (see Figure 2) [22].

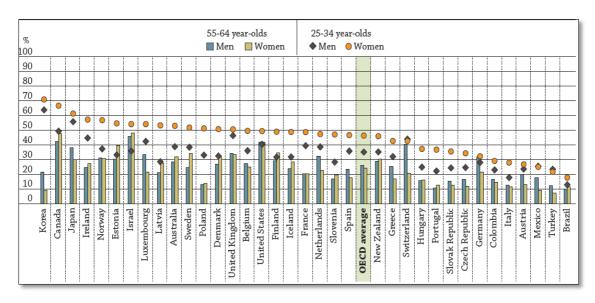


FIGURE 2. Percentage of 25-34 and 55-64 year-old population with higher education by country and gender, 2013

Source: [22: 3].

Comparing the growth rate of the number of higher education graduates between 1998 and 2012 in the European Union of 27 (EU-27) and other European and non-European nations of the Organisation for Economic Co-operation and Development (OECD), appears countries with a growth rate higher than Portugal as, in addition to the East countries, Iceland, Austria and Italy; and countries with a lower rate as Japan, Norway, Finland and Ireland, some of the Centre and the United States (Figure 3).

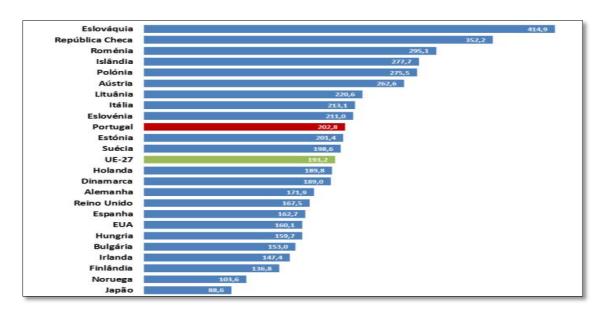


FIGURE 3. Growth rate of the number of higher education graduates by country, 1998/2012 Source: [23: 26].

In respect of education and training areas (ETA) is relevant to know the distribution of higher education graduates and how they evolved in the national and international levels (Figure 4). In t2012, the hierarchy distribution of ETA show that the graduates in the EU are more in the areas of Social sciences and law, Health and social protection and Engineering, processing industry and construction. Portugal follows the same pattern, except for the areas of Arts and humanities and Education, as the last precedes the 1st, and the Engineering, processing industries and construction and Health and social protection, which have the same weight.

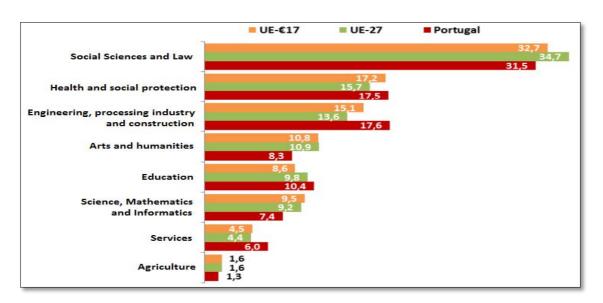


FIGURE 4. Percentage of higher education graduates by education and training areas, 2012 Source: [23: 37].

Given the above, Portugal is approaching more and more of the positions of the European average, with its citizens to have a growing concern with education and training. In parallel, to these two dimensions joins employability, which are a concern, whether citizens or the political agenda.

3 CASE STUDY: PORTUGUESE 'EMPLOYABILITY' AGENDA

The OECD [24: 5] notes that "facilitating the school-to-work transition and improving labour market prospects for all youth should remain at the top of the political agenda in all OECD countries". This, confirms the recommendation by the International Labour Office (ILO), which argues that "sustained support of young people, through expansion of the social protection system, long-term investment in education and training, hiring subsidies to promote employment of young people, employment intensive investment, sectoral policy etc. is needed now more than ever" [25: 7]. Thus, building links with the labour market [26]:

At a strategic level – simplifies opportunities for employers to work with young people who are NEET, engaging employers in strategy development and the design of offers, support planning officers to work with employers to create opportunities.

At a practice level – uses communication processes to improve opportunities for NEET young people, raise awareness of what employers can offer, identify links between initiatives for vulnerable young people, enterprise development and employer support.

In the survey of eight EU countries (France, Germany, Greece, Italy, Portugal, Spain, Sweden and United Kingdom), one-third of employers said that lack of skills cause significant business problems, in the form of cost, quality or time (see Figure 5). In addition, Sweden, Germany and United Kingdom have unemployment rates of young people more than 25 percent. Compared to unemployment in the general population, youth unemployment is stubbornly high in Europe; it is more than twice the rate of unemployment in the general population in all of the countries surveyed except for Germany [27]. Overall, in the EU countries, the youth unemployment rate has not dropped below 17 percent, not being the economic conditions responsible for the frustration of employers as they evaluate the skills of young applicants.

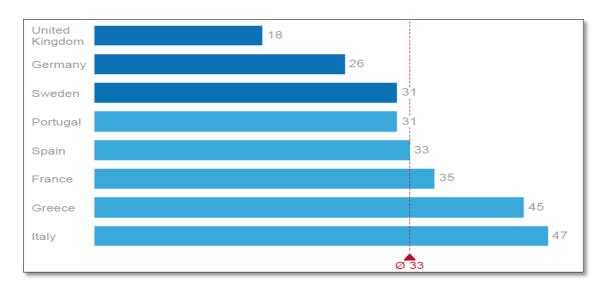


FIGURE 5. Percentage of employers who believe lack of skills cause significant business problems, by country, 2013

Source: [27: 9].

The proportion of employers that find a lack of skills is causing problems for their business is highest in the service industries, such as hotels and restaurants, and in public-service organisations, such as health care or education [27]. The barriers from education to employment combine to make young people doubt the benefit of continuing education after secondary school [27]. Only 42 percent of young people surveyed in the eight EU countries in analysis believed that post-secondary education improved their employment opportunities, compared to 50 percent of those in the global survey (see Figure 6).

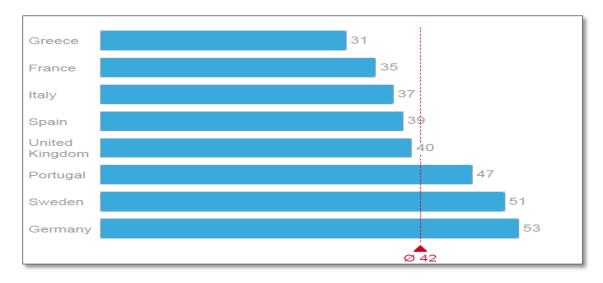


FIGURE 6. Percentage of youth that believe their post-secondary studies improved their employment opportunities, by country, 2013

Source: [27: 12].

In order to prevent disengagement and future youth inactivity, the HEIs curriculum should encompass a number of factors [26: 21]:

"It should be focused on learner needs and provide learning opportunities that are appropriate for different learning styles, and tailored to the needs of the individual.

It should be flexible to the needs and interests of the individual, with opportunities for young people to study the most appropriate qualifications for them at the most appropriate place.

Informal learning opportunities should be provided with varied, creative and innovative teaching methods. For example, learning experientially through football, dance or drama, as well as providing informal learning and extra-curricular activities outside the school.

Relevance to the world of work is important, and the curriculum should be closely linked to local economic/labour market opportunities".

Effectively, Governments and firms must transform education and skills into youth employment opportunities. [26: 12] defend that an effective policy-level strategy considered three core elements:

Macro-economic funding for youth training and employment opportunities is crucial; Governments must maintain adequate resources to invest in cost-effective youth labour market programmes;

Fiscal stimuli (such as a waiving of employers' national insurance contributions for young people aged fewer than 25) can help to incentivise employers to employ young people;

Central responsibility for, and coordination of, efforts to reduce the number of young people who are not in education, employment or training (NEET).

However, regarding the comparative evolution of the number of higher education graduates by education and training area, it is interesting to observe the respective growth rate in Figure 7. The areas of Education and Agriculture are the ones where there is a numerical decrease, rather than what happens in European countries; the areas that grow above the EU-27 values are the Social sciences and law, Science, mathematics and informatics, as well as Engineering, manufacturing and construction (respectively + 18%, + 32% and + 36%); and the remaining areas grow below the EU-27 values.

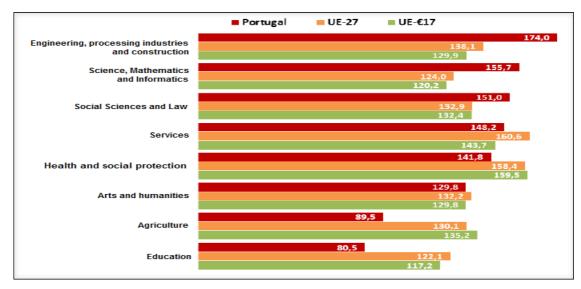


FIGURE 7. Growth rate of higher education graduates by ETA, 2004/2012 Source: [23: 46].

Following this, education creates the resources for employment and for growth in businesses (private initiatives), public service and, thus, the economy in general. Indeed, the students use education to get a good job and labour market flexibility can increase employability when the human capital level of people is sufficiently high [29]. In this sense, HEIs should provide training together with education, to favour smoother school-to-work transitions, focusing on student independence and encouragement to access technology that can be transferred to the workplace.

4 CONCLUSIONS

In recent years, Portugal increases the number of students enrolled in HEIs, as well as their graduates in result of, among other reasons: the extension of compulsory education to a minimum of 12 years; the growth of short-term cycles (CETs); the growth of distance learning; and the increase of young adults who will complete secondary and higher education later in their lives, simultaneously with the

employment. Consequently, the new higher education curricula emphasise the ability of HEIs to adapt to the social-economic context; the proximity connection with the productive and social entities; and the rehearsal of pedagogic methods that motivate the creativity, the initiative, the risk and the collaboration inter-specialties.

In this sense, the research provides empirical evidence about the social dimension of the higher education system at the same time highlighting the influence of this aspect in the nature and implication of organizational change for graduates and assesses what attributes graduates will need in the next decade. Indeed, the results of the research show: young women hold a higher qualification than men with the same age; gender differences still exist in certain fields, with more men studying science, informatics and engineering, and with women dominating education, health and social protection; despite their higher educational attainment, young women still have lower employment rates than men; women with higher education earn lower of their male peers' earnings, in consequence of the under-representation of women in some fields of higher education, which are highly rewarded by the labour market. Thus, these results confirm those presented by the Organisation for Economic Co-operation and Development (OECD) in March of 2015 on a study with 36 countries.

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