

IMPACT OF THE ECONOMIC CRISIS ON THE HIGHER EDUCATION: THE CASE OF PORTUGAL

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Abstract

This research focuses on economic crisis analysis to understand their impact on the annual evolution of the students number enrolled in Higher Education Institutions (HEI) in Portugal. The Portuguese higher education system is binary, including 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 polytechnics are vocationally or professionally oriented and do not carry out fundamental research as the universities do; and the universities conducted applied research. 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. This differentiation mission between the two types of HEI justifies the promotion of diverse socially responsible policies to support students with financial difficulties. Methodologically, this research presents two research approaches. The theoretical framework is based on literature review of arguments to mitigating the adverse economic and social impact of the crisis, in the context of the austerity imposed by the Memorandum of Understanding (2011) that launched Portugal into a deep recession that had devastating impacts on some sectors of the economy, as the higher education system. The empirical framework is based on descriptive statistical analysis, supported on the statistical information provided by National Statistical Institute and Portuguese Ministry of Education and Science, providing important insights into higher education system evolution in Portugal. Through the connection of both frameworks and research findings, HEI are able to improve their contribution to society in result of social support to students and public funding following a CSR strategy. The results of the research show that economic crisis severely affected Portugal. On one side, has a significant impact on the resources available for education, making that the HEI restructures its organization in consequence of the austerity measures that oblige to salary cuts of personnel, less posts in school management and a rationalizing of regional educational system. On the other side, has a significant impact on families that have significantly lower incomes and less purchasing power, justifying the decrease of students on the higher education system.

Keywords: Economic crisis, Education system, Higher Education Institutions, State, Portugal.

1 INTRODUCTION

The prognosis for the Portuguese economy was negative even before the global financial crisis began [1]; Portugal was a country in serious trouble, with anaemic growth of productivity, very low economic growth, a large budget deficit and the likely prospect of competitive disinflation [2]. Portugal not had manoeuvre space to adapt to the crisis since it had its own pre-crisis economic constraints. Thus, the austerity imposed in 2011 by the Memorandum of Understanding launched Portugal into a deep recession that had devastating impacts on some sectors of the economy, as the education [1]. Indeed, the fiscal policy in 2011 had as objective reduce costs in the area of education, with the aim of saving EUR 195 million by rationalising the school network by creating school clusters; lowering staff needs; centralising procurement; and reducing and rationalising transfers to private schools in association agreements [3]. Also, the fiscal policy in 2013 enforces the measures introduced in the 2012 Budget Law with a view of reducing expenditure (EUR 175 million) in the area of education and school network rationalization [3]. This implied a reduction of expenditure on education and other general services in total expenditure on gross domestic product (GDP), implying fewer teachers, educators and researchers. In this sense, this research focuses on economic crisis analysis to understand their impact on the annual evolution of the students number enrolled in higher education institutions (HEI) in Portugal.

This research follows two methodological research approaches. The theoretical framework is based on literature review of arguments to mitigating the adverse economic and social impact of the crisis, in the context of the austerity imposed by the Memorandum of Understanding (2011) that launched Portugal into a deep recession that had devastating impacts on some sectors of the economy, as the higher education system (HES). The empirical framework is based on descriptive statistical analysis, supported on the statistical information provided by National Statistical Institute and Portuguese Ministry of Education and Science, providing important insights into higher education system evolution in Portugal. Through the connection of both frameworks and research findings, HEI are able to improve their contribution to society in result of social support to students and of public funding.

The structure of the research is organized as follows. Section 2 gives an overview of the impact of austerity on the Portuguese economy, analyzing the causes, consequences and responses of the Government, in general, and of the citizens, in particular. Section 3 focuses on Portuguese higher education system, reviewing major public initiatives on education, which have been the result of core social measures taken by successive governments. Finally, in the section 4 the authors discuss the impact of the economic crisis on the annual evolution of the students number enrolled in higher education institutions in Portugal and summarize the principal conclusions.

2 PORTUGAL AND THE ECONOMIC CRISIS

The European crisis has evolved three phases [4]: financial (March-December 2008), economic (December 2008 to February 2010) and budgetary (from February 2010 onwards). These phases have a direct correspondence in Portugal, with the adoption of successive anti-crisis measures. In the first phase, the European Institutions faced the crisis as ‘turbulence on the financial markets’ [5] and focused on the design of targeted measures to prevent the collapse of the financial system [6]. Thus, the Euro Area Countries defended the concerted actions given the persistent problems of bank financing and the contagion from the financial crisis to the real economy. For example, in Portugal was reinforced the financial sector stability, through which the Government prevented systemic risk to the financial system and took measures such as injecting capital into financial institutions, offering state guarantees for borrowing of banks and even nationalizing two troubled banks (BPN - *Banco Português de Negócios* and BPP - *Banco Privado Português*) [4]. Additionally, the Government streamlined the state-owned CGD - *Caixa Geral de Depósitos*, as well as strengthened the bank resolution framework and reinforced the Deposit Guarantee Fund and the Guarantee Fund for Mutual Agricultural Credit Institutions [3]. Table 1 shows the measures to reinforce financial stability.

Table 1. Measures to reinforce financial stability

Measures	Objectives
Extraordinary concession of personal guarantees by Government [7]	<ul style="list-style-type: none"> • Extraordinary concession of personal guarantees by Government to all credit institutions established in Portugal which comply with the solvency criteria established by law
Improved information and transparency [8]	<ul style="list-style-type: none"> • Provide information to the supervisory authorities; • Enhance the information available on complex financial products; • Report necessarily to supervisory authorities stakes held by financial institutions; • Extend the liability of legal persons; • Strengthen the powers of the National Council of Financial Supervisors.
Reinforce the guarantee of deposits [8]	<ul style="list-style-type: none"> • Amending EUR 25 million coverage limit for EUR 100 million.
Timely intervention to ensure financial stability [9]	<ul style="list-style-type: none"> • Nationalize the <i>Banco Português de Negócios</i> (BPN)
Reinforce the financial soundness of credit institutions [10; 11]	<ul style="list-style-type: none"> • Approve the legal framework for direct state intervention in the recovery process and sanitation credit institutions with lower levels of capital to the legal minimum
Reviews the sanctions regime [12]	<ul style="list-style-type: none"> • Update the penalties and offenses; • Define the rules of the remuneration policy of the members of the administrative and inspection.

In the second phase, was reinforced the investment and employment, through which the Government increased public consumption and public investment in order to support both domestic demand and enterprises in the real economy at a time when the latter were facing the dual problem of the collapse of external demand owing to the decline in international trade and severely restricted access to credit owing to the difficulties of the financial system [1]. In this sense, the Portuguese government approved the Initiative 'Employment Programme 2010' [13], which provides a set of extraordinary measures to ensure the maintenance of jobs, encourage the integration of young people into the labour market, and create jobs for those who currently are unemployed and combat unemployment. Table 2 presents the measures, approved by Law nº 10/2009, March 10 [14], to reinforce investment and employment in Portugal.

Table 2. Measures to reinforce investment and employment

Measures	Objectives
Modernize schools	<ul style="list-style-type: none"> • Reconstruction and modernization of more than 100 public schools, over the horizon 2009-2011 [15].
Promoting renewable energy, energy efficiency and energy transport networks	<ul style="list-style-type: none"> • Support the installation of solar panels and wind micro generation; • Improve the energy efficiency of public buildings; • Encouraging investment in energy transport infrastructure; • Develop electric car platform [15].
Modernising technological infrastructure - new generation of broadband networks	<ul style="list-style-type: none"> • Upgrade existing network infrastructure; • Support the expansion of optic fiber networks [16].
Special support to economic activity, exports and small and medium enterprises (SMEs)	<ul style="list-style-type: none"> • Improve the financing of Small and Medium Enterprises (SMEs) • Increased exports; • Encourage private investment in agriculture and agro-industry; • Support the restructuring of the economy by supporting the financing of corporate restructuring operations creating conditions for domestic SMEs to grow and strengthen their competitive positions in the domestic and the international markets; • Fiscal Investment Support Scheme in 2009; • Reduction of the VAT refund threshold; • Reduction in the minimum limit of the special payment on account [15].
Stepped-up measures to boost active welfare and employment policies	<ul style="list-style-type: none"> • Reduction by 3 percentage points of contributions to the social charges employers that are micro and small enterprises for workers with more than 45 years, during the year 2010; • Reduction by 1 percentage point and during the year 2010 the contribution rate for social charges of employers; • Support for hiring young people without term looking for their first job and unemployed for more than six months to 35 years or more than nine months, with more than 40 years; • Program of work placements for young holders of professional and technological courses; • Internship programs for graduates in specific areas including the environment, civil protection and renewable energy; • Requalification of 5000 graduates in low employment areas; • Reinforcement of specific and subsidized credit line with the aim of supporting business creation by unemployed [13].

Following this, the stimulus package and the associated growth in public consumption succeeded in reversing the deeply negative economic trend but exacerbated the public deficit [4], whereby the government's main concern was no longer the structural weakness of the financial sector and the risk of recession but the sustainability of public finances, i.e. Portugal improved their fiscal sustainability position by consolidating their public finances. Thus, in the third phase, was approved an adjustment programme under the mechanisms of European Union (EU) mutual budget surveillance – the

«Programa de Estabilidade e Crescimento» (PEC 1 - March 2010) [4], that influenced the 2010 budget. Later, the Government was forced to adopt additional restrictive measures in May 2010 (PEC 2) and in the 2011 budget (PEC 3). Under the PEC 2, Portuguese authorities approved, by Law nº 12-A/2010, June 30 [17], a set of additional consolidation measures to strengthen and accelerate the reduction of excessive deficit and controlling the public debt growth foreseen in the stability and growth Programme (see Table 3).

Table 3. Measures to budget consolidation

Measures	Objectives
Increasing revenue	<ul style="list-style-type: none"> • Increase by 1 percentage point of each of the value-added tax (IVA, in Portugal) rates (become, respectively 6%, 13% and 21%); • Additional taxation on personal income tax (IRS, in Portugal) by an increase corresponding to 1 percentage point the general rates, as well as a corresponding increase in the IRS withholding tax rates that are now 21.5%; • Additional taxation of corporate income tax (IRC, in Portugal) by applying a surcharge corresponding to a state surcharge of 2.5 percentage points to companies whose taxable income exceeds EUR 2 million; • Increasing taxation of seal tax in consumer credit concession.
Reducing expenditure	<ul style="list-style-type: none"> • Reduction in transfers to the State Business Sector; • 5% reduction in the remuneration of political office holders, public managers and similar; • Strict control of recruitment of workers in public functions.

Under the PEC 3, Portuguese government approved, by Decree-Law nº 137/2010, December 28 [18], others additional measures to reduce spending for fiscal consolidation in the stability and growth Programme for 2010-2013, as: reduction of personnel expenses (e.g., reduced to 10% of 2013 GDP); reduction of social benefits expenditures (e.g., acceleration of convergence of the *Caixa Geral de Aposentações* pension scheme with the general Social Security; change of the unemployment benefit scheme with the aim of promoting a faster return to work); reduction of intermediate consumption expenditure (e.g., improvements in the management of education and justice, either as regards the management of the network and processes, both with regard to the management of each unit); reduction in interest expenditure and capital expenditure (by regulating the public debt growth); reducing the tax expenditure and increased tax revenue (for example, reduction of deductions and tax benefits - tax expense; entry of capital gains transactions to a personal income tax rate of 20% - tax revenue) [19]. However, in March 2011 the newly revised version of the PEC (called PEC 4) was rejected internally, and the Memorandum of Understanding negotiated with the Troika (a tripartite committee formed by the European Commission, European Central Bank and International Monetary Fund -EC, ECB and IMF) gives rise to an austerity-oriented economic adjustment programme.

Nevertheless, the recession had an immediate impact on employment, i.e. the labour force decreased. Since 2008, on the other hand, jobs have been destroyed in all segments of the labour force (see Table 4); between the second quarter of 2008 and the second quarter of 2014, total employment was down 13.6 per cent (corresponding to 713.5 thousand individuals), while the self-employed segment was down 25.3 per cent (corresponding to 303.6 thousand individuals), compared with a fall of 9.6 per cent in the permanent work force (corresponding to 383 thousand individuals). On the one hand, the Portuguese labour force includes a high percentage of precarious workers, as is the case of temporary workers (14.1 per cent of the occupied labour force, in the second quarter of 2008), as well as the self-employed (22.9 per cent of the occupied labour force, in the second quarter of 2008), which has an increased risk of rapid job loss when economic conditions change.

Table 4. Measures to budget consolidation

	Q2/2008		Q2/2014		Rate of change Q2/2014-Q2/2008
	10 ³	%	10 ³	%	
Employees	3,978.4	76.1	3,595.4	79.7	-9.6%
On permanent contract	3,053.4	58.4	2,830.2	62.7	-7.3%
On temporary contract	738.8	14.1	630.1	14.0	-14.7%
On other type of contract	186.2	3.6	135.1	3.0	-27.4%
Self-employed	1,199.2	22.9	895.6	19.8	-25.3%
Family workers	50.5	1.0	23.6	0.5	-53.3%
Total	5,228.1	100.0	4,514.6	100.0	-13.6%

Source: Adaptation of [20; 21].

In this context, Portugal is confronted with the current specifics of its youth unemployment and the risk of losing the best-qualified generation it has ever had; while the crisis has affect all segments of the labour force, its negative impact has been felt most by youths and precarious workers [1]. Indeed, despite the decrease of workers with permanent contracts have been less than the decrease by precarious workers, between the second quarter of 2008 and the second quarter of 2014, which does not mean that currently employment is less precarious but that a greater number of precarious workers have become unemployed. Thus, economic crisis induces complex changes on the economy, whereby causes strong reductions of the State Budget for Education and then HEI must redefine its role and adapt their curricula to be able to compete on an equal footing in the international market [22].

3 PORTUGAL AND THE HIGHER EDUCATION SYSTEM

The Portuguese HES is binary, including 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 polytechnics are vocationally or professionally oriented and do not carry out fundamental research as the universities do; and the universities conducted applied research [23]. 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 [24]. This diversification of the HES increased the qualification of the Portuguese's in particular, and of the European citizens in general, and its knowledge base in an international context [25]. As [26] refer: "(...) a lack of qualifications in some sectors has already been observed (...) and all elements indicate a growing need of engineers, scientists and technicians in the future, and the fear is that educational systems and vocational training systems are not prepared to meet the required number and the range of final year degree students".

Table 5 reflects the annual number of students enrolled on Portuguese higher education by subsystem and type of education from the academic year of 2003/04 to 2013/14 (last decade). In Portugal, the HES is based on tree-cycle diplomas: first cycle - license (*Licenciatura*), second cycle - master (*Mestrado*), and third-cycle - doctor (*Doutoramento*). The duration of these levels change according with the degree and field of study. On average, the license 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 [27]. Between the academic year of 2003/04 and the academic year of 2013/14, the number of students enrolled on Portuguese higher education decreased 8.3 per cent (corresponding to 32,863 individuals at an annual average decrease of about 3,000 individuals), in direct consequence of the significant fall of annual number of students enrolled on private subsystem, which decreased more than 43.3 per cent in the period. Moreover, the public subsystem grown 4.6 per cent in the period, justified by the largest increase of the university subsystem (12.2 per cent, corresponding to 21,553 individuals), while the polytechnic subsystem has registered a decrease of 7.4 per cent (corresponding to 8,208 individuals).

Table 5. Higher education enrolled, by subsystem and type of education (2003/04 to 2013/14)

Subsystem	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Public	288,309	282,273	275,521	275,321	284,333	282,438	293,828	307 978	311,574	303,710	301,654
University	176,827	173,897	171,575	169,449	175,998	175,465	183,806	193,106	197,912	197,036	198,380
Polytechnic	111,482	108,376	103,946	105,872	108,335	106,973	110,022	114,872	113,662	106,674	103,274
Private	106,754	98,664	91,791	91,408	92,584	90,564	89,799	88,290	78,699	67,290	60,546
University	72,774	66,478	61,197	60,094	60,732	60,230	60,174	60,452	55,147	48,716	44,495
Polytechnic	33,980	32,186	30,594	31,314	31,852	30,334	29,625	27,838	23,552	18,574	16,051
Total	395,063	380,937	367,312	366,729	376,917	373,002	383,627	396,268	390,273	371,000	362,200

Source: Adaptation of [28]

Table 6 shows the annual number enrolled on Portuguese higher education graduates by gender from the academic year of 2003/04 to 2013/14. Among both men and women, the number of students enrolled in the HES for those years 2003/04 to 2013/14 was decrease 8.3 per cent, reflecting this overall decrease mainly the reduction of women in higher education, which decreased 12.4 per cent (corresponding to 27,548 individuals) since the number of men enrolled showed a slight decrease of 3.1 per cent (corresponding to 5,315 individuals). This decline of women in higher education justifies the decrease in the relative importance of women in the total number of students enrolled annually in the higher education institutions. However, women are still responsible for the majority of students in the Portuguese HES.

Table 6. Higher education enrolled, by gender (2003/04 to 2013/14)

Gender	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Men	173,567	168,884	164,520	168,821	175,177	174,000	179,151	184,627	181,515	173,745	168,252
Women	221,496	212,053	202,792	197,908	201,740	199,002	204,476	211,641	208,758	197,255	193,948
Total	395,063	380,937	367,312	366,729	376,917	373,002	383,627	396,268	390,273	371,000	362,200

Source: Adaptation of [28]

Table 7 presents the annual number enrolled on Portuguese higher education by level of education from the academic year of 2003/04 to 2013/14. In the period, the third cycle (corresponding to doctoral courses) presents the most significant growth (corresponding to 13,906 individuals at an annual average growth of about 1,250 individuals), while annual number enrolled on the second cycle was down 54.9 per cent (corresponding to 147,118 individuals at an annual average decrease of about 13,350 individuals), compared with an increase of 83.3 per cent in the first cycle (corresponding to 100,349 individuals at an annual average growth of about 9,100 individuals).

Table 7. Higher education enrolled, by level (2003/04 to 2013/14)

Degree	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
First cycle	120,510	116,150	108,483	162,448	230,077	244,085	253,316	255,523	246,211	231,528	220,859
Second cycle	268,214	257,799	250,324	194,696	135,496	115,488	113,934	122,452	124,849	120,001	121,096
Third cycle	6,339	6,988	8,505	9,585	11,344	13,429	16,377	18,293	19,213	19,471	20,245
Total	395,063	380,937	367,312	366,729	376,917	373,002	383,627	396,268	390,273	371,000	362,200

Source: Adaptation of [28]

Table 8 illustrates the annual number of Portuguese higher education graduates by level of education from the academic year of 2003/04 to 2012/13, that reflect the same tendency of the annual number enrolled on Portuguese higher education (see Table 7). As expected, between the academic year of 2003/04 and the academic year of 2012/13, the third cycle presents the most significant growth of graduates (corresponding to 3,260 individuals at an annual average growth of about 325 individuals), being the graduates students of the first cycle the responsible by the significant grown of the

graduates in Portugal. However, comparing the annual number enrolled on higher education with the annual number of graduates, is possible to conclude that only a small percentage of students finish its course; in the academic year of 2012/13, 22.2 per cent of the first cycle students, 32.7 per cent of the second cycle students and 21.3 per cent of the third cycle students.

Table 8. Higher education graduates, by level (2003/04 to 2012/13)

Degree	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
First cycle	19,022	18,233	16,867	30,147	44,718	44,098	51,252	51,539	51,019	51,508
Second cycle	48,751	50,756	53,867	51,860	38,006	31,202	25,943	33,505	40,368	39,204
Third cycle	895	998	1,094	1,269	1,285	1,267	1,414	2,085	2,877	4,155
Total	68,668	69,987	71,828	83,276	84,009	76,567	78,609	87,129	94,264	94,867

Source: Adaptation of [28]

Table 9 reflects the evolution of teachers employed by subsystem of higher education and type of education from the academic year of 2003/04 to 2013/14, displaying that 7.9 per cent of the teachers (corresponding to 2,874 individuals) became unemployed or retired, particularly the teachers of the private subsystem, whose number of teachers employed in the period decreased by 24.3 per cent (corresponding to 2,825 individuals, i.e. 98.3 per cent of the total). Exceptionally, the number of teachers employed on the Portuguese university subsystem grown 5.2 per cent (corresponding to 758 individuals) although this increase was not enough to reverse the negative trend of teachers' employment.

Table 9. Teachers employed, by subsystem and type of education (2003/04 to 2013/14)

Subsystem	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Public	24,794	25,368	26,214	25,415	24,831	24,728	25,092	26,410	25,849	25,528	24,745
University	14,590	14,858	14,984	14,738	14,566	14,466	14,803	15,506	15,538	15,563	15,348
Polytechnic	10,204	10,510	11,230	10,677	10,265	10,262	10,289	10,904	10,311	9,965	9,397
Private	11,608	11,405	11,220	10,654	10,347	10,652	11,123	11,654	11,229	9,954	8,783
University	7,339	7,176	7,027	6,605	6,331	6,479	6,899	7,195	7,030	6,388	5,704
Polytechnic	4,269	4,229	4,193	4,049	4,016	4,173	4,224	4,459	4,199	3,566	3,079
Total	36,402	36,773	37,434	36,069	35,178	35,380	36,215	38,064	37,078	35,482	33,528

Source: Adaptation of [28]

Table 10 shows the evolution of teachers employed on the HEI by gender from the academic year of 2003/04 to 2013/14, proving the importance of the men teachers' unemployment or retired. Indeed, in the period 2003/04 to 2013/14, the decrease of number men teachers was greater than the decrease of number women teachers, less 11.2 per cent and less 3.3 per cent, respectively in the period. This reality was degraded especially after 2011, confirming (as noted in the previous section) the austerity imposed in 2011 by the Memorandum of Understanding, which had negative impacts on some sectors of the economy, as the education.

Table 10. Teachers employed, by gender (2003/04 to 2013/14)

Gender	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Men	21,154	21,319	21,321	20,500	19,973	20,016	20,459	21,414	20,836	19,854	18,783
Women	15,248	15,454	16,113	15,569	15,205	15,364	15,756	16,650	16,242	15,628	14,745
Total	36,402	36,773	37,434	36,069	35,178	35,380	36,215	38,064	37,078	35,482	33,528

Source: Adaptation of [28]

However, men teachers are still responsible for the majority of teachers' employment in the Portuguese HEI (see Table 10), in contrast with the importance of students enrolled, being the

students women who outweigh the students men (see Table 6). This resulted of an improvement in the schooling and the experience profile of employed women, in consequence of the constitutional principle consecrated in the Constitution of the Portuguese Republic of April 2, 1976, related to the equality of access opportunities to the higher education and to the school success. According to article 74 [29], the State must “guarantee to all citizens, according to its capacities, the access to higher education degrees, to scientific research and to artistic creation”.

Table 11. Higher education institutions, by subsystem and type of education (2013/14)

	Total	University			Polytechnic		
		Total	Public	Private	Total	Public	Private
Continent	286	127	75	52	159	94	65
North	100	43	20	23	57	25	32
Centre	58	19	12	7	39	32	7
Lisbon city	96	55	35	20	41	18	23
Alentejo	20	4	4	-	16	14	2
Algarve	12	6	4	2	6	5	1
Azores	5	3	3	-	2	2	-
Madeira	4	1	1	-	3	1	2
Portugal	295	131	79	52	164	97	67

Source: Adaptation of [28]

Table 11 presents the distribution of the higher education institutions by subsystem and type of education in the academic year of 2013/14 (last year with data available), in which Madeira and Azores Autonomous Region had the lowest number of these HEI. The region of Lisbon city, possibly for being the Portugal's capital and largest city, presents in terms of universities the greater number, focusing on the whole (public and private), about 42.0 per cent, which justify a representative sample of 63.6 per cent of public institutions and 36.4 per cent of private institutions. In turn, the region of North presents in terms of polytechnic the greater number, focusing on the whole (public and private), about 34.8 per cent, which justify a representative sample of 43.9 per cent of public institutions and 56.1 per cent of private institutions. The discrepancy in the distribution of institutions

On the north of the country (North region) the representation of HEI in the regional universe is higher (corresponding to 100 institutions, being 43.0 per cent and 57.0 per cent, respectively in university and polytechnic) while in the south of the country (Alentejo and Algarve) HEI's representation in the regional universe is lower (corresponding to 32 institutions, 31.3 per cent and 68.7 per cent, respectively in university and polytechnic). However, Lisbon city and the south region concentrate the highest percentage of HEI in national total (32.5 per cent and 10.8 per cent, respectively), justifying the rationalizing of regional educational system. Following this question the OECD [30] argues that “the economic crisis has reinforced the value of education. While educational attainment has always had a huge impact on employability, the financial crisis has strengthened this effect even further.”

Table 12. Unemployment Total Rate and With Higher Education by gender (2008/2014)

Gender	Portugal - June 2008				Portugal - June 2014				June 2014 / June 2008			
	Total of Unemployment		Unemployment with Higher Education		Total of Unemployment		Unemployment with Higher Education		Total of Unemployment		Unemployment with Higher Education	
	N.º	%	N.º	%	N.º	%	N.º	%	N.º	%	N.º	%
Men	148,384	40.0	10,140	30.3	279,551	48.1	25,021	33.4	131,167	62.5	14,881	35.8
Women	222,465	60.0	23,333	69.7	301,128	51.9	49,999	66.6	78,663	37.5	26,666	64.2
Total	370,849	100.0	33,473	100.0	580,679	100.0	75,020	100.0	209,830	100.0	41,547	100.0

Source: Adaptation of [31; 32]

Table 12 presents the unemployment rate between 2008 and 2014 by gender and the main result was the strong increase of unemployment with higher education. One of reasons has been the economic crises, because the Educational Higher Institutions, in OECD countries, are mainly publicly funded and State Budget that has been reduced and this faces, in past decades, strong opposition, because education has been given top priority in national budgets in a large majority of OECD countries [33]. Another problem, in Portugal was the increase of the tuition fees charged by HEI and the reduction of the scholarships. Indeed, Table 12 presents the increase of unemployment with Higher Education due to the introduction of the Bologna Process that has improved harmonization among the higher education systems on Europe by shifting away from longer programmes in favour of three-year programmes. But, this question has increases the number of graduates in the labour market and the level of unemployment growth.

4 DISCUSSION AND CONCLUSIONS

Initially, the Portuguese government focused on saving the financial sector from collapse and only after increased the domestic economy, refocusing exports, freezing collective bargaining and reducing wages, cutting social benefits and social services, and privatizing public assets. However, through the adoption of successive anti-crisis measures, Portugal was impotent to prevent the growth in the public debt after 2008. The results of the research show that economic crisis severely affected Portugal. On one side, has a significant impact on the resources available for education, making that the HEI restructures its organization in consequence of the austerity measures that oblige to salary cuts of personnel, less posts in school management and a rationalizing of regional educational system. On the other side, has a significant impact on families that have significantly lower incomes and less purchasing power, justifying the decrease of students on the higher education system. Several students go home and have been classified as “inactive” due the fact that they neither study, neither work. These processes go in a spiral process and enlarge the complexity, because they do not promote networking, they do not contact with nobody neither organizations that may need workers, so they stay long time unemployment.

The Portuguese economic crisis affects higher education into two aspects: decrease of students enrolled, and decrease of teachers employed. On the on hand, the number of university students increased and the number of polytechnic students decreased as result of the demographic decline, i.e. in presence of younger population, polytechnics only fill their places after filled the places in universities. Also the consequences of the Memorandum of Understanding, as financial difficulties of families, explain the highest school abandonment of higher education system. Thus, the two types of Portuguese HEI, based in its different mission, justify the promotion of diverse socially responsible policies to support students with financial difficulties. On the other hand, the negative evolution of teachers employed on the HEI is result of the reduction in the share of expenditure on education in total expenditure on GDP; cuts in education expenditure, cuts in the number of workers in this sector, as well as less social protection, are consequence of the crisis.

In summary, this research was focused on economic crisis analysis to understand their impact on the annual evolution of the students number enrolled in HEI in Portugal. Indeed, HEI have strong pressures for fighting unemployment and increase skills-upgrading knowledge, attitudes and broadening contribution, as well as, lifelong learning is moving higher up institutional strategic agendas of the society, in general, and the citizen, in particular. Thus, the authors aim to reinforce that policy-makers, governments, presidents of the board of companies, markets, citizens, as a whole, must fight against the negative situations that affect the society and leave new opportunities to face the future in a more positive tendency.

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