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# **Employability and Skills of higher education graduates: A Portuguese study**

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## **1. Introduction**

One of the great achievements of the 21<sup>st</sup> century is the fact that higher education is accessible to a wide part of the population. This is true for most developed countries, but it also begins to be true in many emerging countries. On the other hand, one of the major problems of market economies – unemployment – has been increasing in this century with an adjective: youth unemployment.

This is a paradoxical situation considering that contemporary literature on development emphasises the role of knowledge and, as a result of innovation, as being the driver of economy (Vence 2007). Higher Education Institutions, HEIs, in developed countries, particularly in the European Union, have never before graduated as many young people as now and they remain unemployed while companies are not able employ personnel with the necessary skills. There seems to be a clear mismatch between the training that these young people attain in universities and the skills required by companies and the labour market at large.

This problem is not new and has already been raised in several works of international organisations, as will be seen below, and has raised the following questions: what are, after all, the skills required by the labour market? Is it possible to meet them with just the reform of school curricula, or is an innovative pedagogical proposal also necessary? What is the specific knowledge of an area required by that production sector, and that is necessary for a student to succeed in the labour market? How to make educational effort in the training needed to increase productivity and competitiveness of an economy? On the other hand, *The Future of Jobs Report*, recently presented at the World Economic Forum, emphasises the urgency to face this issue and calls for a joint effort of businesses, educational institutions and governments before it reaches what is considered to be the worst case scenario: companies with a large unmet demand for highly skilled labour, and very high unemployment rates due to the inadequacy of the current workforce and an educational system that is unable to quickly respond to the problem (World Economic Forum 2016).

Most of the literature on this topic discusses the skills that these graduates will need to have so as to meet the demands of the labour market. In general, literature divides them into

technical professional skills and interpersonal communication skills, the so-called soft skills. The former are those basic skills in the technical training area. For example, in the area of economics, the fundamental knowledge of economic theory, econometrics, social and historical context for the understanding of the economic process, etc. Mastery of these skills is part of the educational process attained in HEIs. The latter, the soft skills, while being related to the personal abilities of interpersonal communication, have been initially considered as skills attained outside the school system. The current state of the debate considers that this argument is overcome. If, on the one hand, it is true that these skills are enhanced and developed throughout life, on the other hand, many of them may be developed within the educational system through appropriate pedagogical methods and techniques, being the Problem Based Learning – PBL – one of the most cited ones. Thus, the so-called soft skills can and should be developed within HEIs.

As public policy, the problem cuts across national and regional development, employment and education policies, reflecting also on new tasks for higher education assessment systems. In general, these systems are well equipped to assess technical and professional skills, but are seldom adequate to assess soft skills.

The aim of this paper is to make a brief review of the literature on employability of higher education graduates and soft skills. It is the first output of a project that seeks to replicate in Portugal a study already carried out in the European Union, considering the conditions of HEI graduates' employability, analysed from the employers' perspective. Two specificities stress the originality of this project. The first is the emphasis on the employers' perspective – seldom found in similar studies. The second is the methodology that enhances the practices of selecting and hiring, rather than simply ask employers about the ideal profile of the contracted. (Humburg, Velden, & Verhagen, 2013)

In this first stage of the work, a presentation is made of some statistical data on higher education graduates' employability in Portugal and a brief review of the literature that has discussed this problem. One of the conclusions is that, although the term soft skills is widely used, there is no consensual interpretation of it; furthermore, it is often confused with the concept of competence, which, in turn, is related to the social and historical context analysed.

## **2. The framework of employment of Portuguese higher education graduates**

In 2013/2014, 88,503<sup>1</sup> students concluded their programmes or graduated in Portuguese higher education. Ninety-eight percent of them were located in the continental part of the

country, and the vast majority was in the North (35%) and in the Lisbon Metropolitan Area (36%), followed by the Centre region (21%), the Alentejo and the Algarve. More than half of these graduates held the 1<sup>st</sup> cycle of higher education (54%) and over a quarter held the 2<sup>nd</sup> cycle (27%). Universities accounted for 67.5% of these diplomas, whereas polytechnic institutions accounted for 32.6%.

In turn, over 80% of graduates had come from public schools, and in some cases, such as students of the 3<sup>rd</sup> cycle and Other levels, this percentage exceeded the ninety percentage points. This absolute participation of public higher education is present in all regions, particularly in the islands. It weakens a little in the North (77%) and in the Lisbon Metropolitan Area (77%), due to the higher concentration of private institutions in these regions.

Most of these graduates were women (58.4%). The main areas of graduation were “Social Sciences, Commerce and Law” (30%), “Engineering, Manufacturing Industries and Construction” (19%) and “Health and Social Protection” (17.1%) (DGEEC 2016).

**Table 1. Conclusions/graduates in Higher Education, according to NUTS I and II in the 2013/2014 academic year**

NUTS I an+A2:N19d II Level	Portugal	Continent						Azores A.R.	Madeira A.R.
		Total	North	Centre	Lisbon M.A.	Alentejo	Algarve		
1	2	3	4	5	6	7	8	9	10
<b>Higher Education (1)</b>	<b>88 503</b>	<b>86 885</b>	<b>30 961</b>	<b>18 890</b>	<b>32 064</b>	<b>3 181</b>	<b>1 789</b>	<b>635</b>	<b>983</b>
1st cycle (2)	47 592	46 596	16 494	10 194	16 491	2 083	1 334	490	506
2nd cycle (3)	24 029	23 782	8 311	5 149	9 399	570	353	97	150
3rd cycle (4)	2 313	2 284	812	401	919	102	50	11	18
Other educational levels (5)	14 569	14 223	5 344	3 146	5 255	426	52	37	309
<b>Public Education</b>									
<b>Higher Education (1)</b>	<b>72 940</b>	<b>71 368</b>	<b>23 794</b>	<b>18 268</b>	<b>24 689</b>	<b>3 157</b>	<b>1 460</b>	<b>635</b>	<b>937</b>
1st cycle (2)	37 516	36 566	11 980	9 762	11 671	2 062	1 091	490	460
2nd cycle (3)	19 742	19 495	6 324	4 981	7 327	567	296	97	150
3rd cycle (4)	2 126	2 097	715	400	830	102	50	11	18
Other educational levels (5)	13 556	13 210	4 775	3 125	4 861	426	23	37	309

(1) The data concerning completions/graduates in higher education institutions refer to the 2013/2014 academic year.

(2) Includes the programmes: "Bachelor's - 1st cycle" and "Bachelor's of Master's integrated study cycle".

(3) Includes the programmes: "Master's - 2nd cycle", "integrated Master's", "integrated Master's" and "integrated Master's (terminal part)".

(4) Includes "Doctoral - 3rd cycle" programmes.

(5) Includes the programmes: "Bachelor's", "Post-Bachelor's specialisation", "Post-baccalaureate specialiaation", "Master's", "PhD", "Diploma of specialisation - Master's" and "Diploma of specialisation - PhD".

Source: <http://www.dgeec.mec.pt/np4/estatglobal/>. Accessed on 30/06/2016.

This is a significant effort, considering that, regarding the volume of new students in Portuguese HEIs in 2014/2015, those who enrolled in the first year, for the first time, totalled 110,738 students, 63.1% in universities and 36.9% in polytechnics (DGEEC 2016). As these values have not changed substantially over recent years, taken proper care, it can roughly be

said that about 80% of entrants are graduates. Once the diploma is attained, the graduate's next problem is to find a job.

Table 2 shows the substantial increase in the number of unemployed individuals registered in IEFP (Instituto de Emprego e Formação Profissional [Institute of Employment and Professional Training]) between 2007 and 2015. Although these figures are the total for the month of December and do not represent the higher education new graduates, they alone indicate a substantial increase in unemployment among higher education graduates in that period. This number amounted, in December 2014, to about 88% of graduates in the 2013/2014 academic year. In the second part of the table, the figures were transformed into index numbers, on the basis of the year 2011, which marks the beginning of the Portuguese economy's adjustment program. Although the increase in the unemployment occurs in all categories, it was higher among those with formal higher education, those who had secondary, post-secondary and higher education after 2011, countering the tendency of the period prior to 2011. These two categories, which, in 2008, accounted for about 28% of registered unemployed individuals, represent, in 2015, 38%. Moreover, the expansion of the number of unemployed graduates registered, which was, until 2011, the one with the lowest rates, becomes, after this year, the category with the highest growth rates.

**Table 2. Unemployed registered at job centres, according to the educational level, 2007-2015**

Year(1)	Registered Value			Index Number		
	Total	Secondary and post-secondary	Higher education	Total	Secondary and post-secondary	Higher education
2007	390 280	68 048	39 627	54,9	41,4	44,7
2008	416 005	72 746	38 018	58,5	44,2	42,8
2009	524 674	97 668	44 777	73,8	59,4	50,5
2010	541 840	107 766	49 826	76,2	65,5	56,1
2011	605 134	131 712	63 470	85,2	80,1	71,5
2012	710 652	164 425	88 741	100,0	100,0	100,0
2013	690 535	161 354	93 409	97,2	98,1	105,3
2014	598 581	141 098	77 730	84,2	85,8	87,6
2015	555 167	136 337	74 085	78,1	82,9	83,5

(1) Values in the month of December

Source: Instituto do Emprego e Formação Profissional, I.P. (Institute of Employment and Professional Training, I.P.)

It is worth remembering that interpreting these data should be done carefully. They reflect the totality of higher education graduates who sought employment placement services. It is also known that, after 2011, a high number of higher education graduates left the country (Observatório da Emigração [Emigration Observatory] 2015). However, the data unequivocally point towards a worsening of higher education graduates' employability in Portugal, above the general trend of the labour market.

Another source of information on the level of employment of higher education graduates is INE (Instituto Nacional de Estatística [Statistics Nacional Institute]), through its Survey on Employment. Table 3 depicts the estimates for the fourth trimester of 2015, and compared with

data from December of the same year provided by IEFP. The values are different because the methodologies to obtain data are also different. While INE obtains data through an estimate sample obtained from the economically active population, data from IEFP are administrative data, that is, are the record of the number of individuals who actually went to the service centres looking for a job. According to INE, the 114.8 thousand unemployed higher education graduates in the period analysed represented 9.4% of the economically active population with a higher education degree. Meanwhile, the 70.3 thousand higher education graduates recorded by IEFP represented 5.7% of the economically active population with a higher education degree. The difference between the two institutes is 3.6 percentage points. For the total of unemployed individuals this difference is only 1.6 percentage points.

This difference varies according to the category studied. Generally, it tends to be lower when the comparison refers to the total unemployed individuals than when it refers only to those who hold a higher education degree. Within this group the differences decrease as the age groups increase and are higher among men than among women.

Among unemployed graduates, both institutes consider that the highest proportion in relation to the economically active population is located in the North region, followed by the Centre region and the Alentejo. Both also agree with the higher proportion of unemployed in relation to the economically active population in the corresponding lower age groups (up to 34 years of age) and particularly for those under 25 years of age. They also agree that unemployment is higher among women than among men.

**Table 3. Comparison of unemployed figures collected by the Survey on Employment – INE (4th trimester 2015) and unemployed registered at IEFP (December 2015), by NUTS II, age group and sex. Continent, thousands of individuals**

NUTS II / Age group / Sex	With higher education degree						Total					
	Active population (1)	Unemployed (INE) (1)		Unemployed (IEFP) (2)		Unemployed	Active population (1)	Unemployed (INE) (1)		Unemployed (IEFP) (2)		Unemployed
	4th T 2015	4th T 2015	% INE/Active pop.	Dec/2015	% IEFP/Active pop.	Dif % INE-IEFP	4.thT 2015	4th T 2015	% INE/Active pop.	Dec/2015	% IEFP/Active pop.	Dif % INE-IEFP
<b>TOTAL</b>	1 226,4	114,8	9,4	70,3	5,7	3,6	4 943,4	599,4	12,1	521,6	10,6	1,6
<b>Region</b>												
North	367,9	45,5	12,4	30,1	8,2	4,2	1 821,5	245,3	13,5	231,0	12,7	0,8
Centre	272,7	25,6	9,4	15,1	5,5	3,9	1 156,4	104,7	9,1	98,2	8,5	0,6
Lisbon Metropolitan Area	471,0	31,2	6,6	19,2	4,1	2,5	1 399,6	175,2	12,5	130,4	9,3	3,2
Alentejo	70,1	8,2	11,7	3,7	5,3	6,4	347,2	46,1	13,3	35,8	10,3	3,0
Algarve	44,7	§	-	2,2	4,9		218,6	28,1	12,9	26,2	12,0	0,9
<b>Age group</b>												
Under 25 years	63,9	20,8	32,6	11,8	18,5	14,1	352,9	114,3	32,4	64,4	18,2	14,1
25 - 34 years	361,5	47,3	13,1	27,9	7,7	5,4	1 007,6	125,5	12,5	102,3	10,2	2,3
35 - 54 years	669,5	42,2	6,3	26,6	4,0	2,3	2 600,5	264,8	10,2	236,8	9,1	1,1
55 and more years	131,5	§	-	4,0	3,0		982,3	94,8	9,7	118,1	12,0	-2,4
<b>Sex</b>												
Men	490,0	44,3	9,0	24,3	5,0	4,1	2 540,5	302,0	11,9	248,6	9,8	2,1
Women	736,4	70,5	9,6	46,0	6,2	3,3	2 402,9	297,3	12,4	273,0	11,4	1,0

Conventional signs: § Value with associated sampling error higher than 20% , so it can not be disclosed.

Sources: (1) Instituto Nacional de Estatística I.P. (Statistics National Institute, I.P.), Inquérito ao Emprego (Survey on Employment); (2) Instituto do Emprego e Formação Profissional, I.P. (Institute of Employment and Professional Training, I.P.).

**Table 4. Unemployed graduates registered with indication of valid pair institution/programme, according to the situation of employment seeking, by NUTS II – Continent, December 2015**

NUTS II	Total		First job		New job		Percentage	
	No.	%	No.	%	No.	%	1st job	New job
<b>TOTAL</b>	<b>67 337</b>	<b>100,0</b>	<b>14 203</b>	<b>100,0</b>	<b>53 134</b>	<b>100,0</b>	<b>21%</b>	<b>79%</b>
North	29 026	43,1	7 826	55,1	21 200	39,9	27%	73%
Centre	14 640	21,7	3 314	23,3	11 326	21,3	23%	77%
Lisbon Metropolitan Area	17 984	26,7	2 145	15,1	15 839	29,8	12%	88%
Alentejo	3 602	5,3	703	4,9	2 899	5,5	20%	80%
Algarve	2 085	3,1	215	1,5	1 870	3,5	10%	90%

**Source:** (1) Instituto do Emprego e Formação Profissional, I.P. (Institute of Employment and Professional Training, I.P.); (2) Direção-Geral de Estatísticas de Educação e Ciência (General Directorate of Statistics on Education and Science).

**Notes:** We considered valid 95.8% of the records with pair institution/programme provided by IEFP.

Considering now only the IEFP data for unemployed graduates in December 2015, 21% of the total refers to the first job. These values vary significantly across regions. They are especially low among the unemployed in the regions of the Lisbon Metropolitan Area and the Algarve. Considering only those who have applied to the first job, the absolute majority was located in the North (55.1%), followed by the Centre region.

**Table 5. Unemployed graduates registered, with indication of valid pair institution/programme, according to the degree, by higher education subsystem – Continent, December 2015**

Higher education subsystem	Total		Bachelor's		1st cycle Undergraduate		Undergraduate		Master's		PhD.		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>TOTAL</b>	<b>67 337</b>	<b>100,0</b>	<b>3 013</b>	<b>100,0</b>	<b>26 274</b>	<b>100,0</b>	<b>26 531</b>	<b>100,0</b>	<b>11 138</b>	<b>100,0</b>	<b>381</b>	<b>100,0</b>	
Public	Total	45 891	68,2	1 886	62,6	19 330	73,6	15 765	59,4	8 547	76,7	363	95,3
	University	26 831	39,8	55	1,8	7 787	29,6	11 160	42,1	7 466	67,0	363	95,3
	Polytechnic	19 060	28,3	1 831	60,8	11 543	43,9	4 605	17,4	1 081	9,7	0	0,0
Private	Total	21 446	31,8	1 127	37,4	6 944	26,4	10 766	40,6	2 591	23,3	18	4,7
	University	14 109	21,0	329	10,9	4 282	16,3	7 267	27,4	2 213	19,9	18	4,7
	Polytechnic	7 337	10,9	798	26,5	2 662	10,1	3 499	13,2	378	3,4	0	0,0

**Source:** (1) Instituto do Emprego e Formação Profissional, I.P. (Institute of Employment and Professional Training, I.P.); (2) Direção-Geral de Estatísticas de Educação e Ciência (General Directorate of Statistics on Education and Science).

**Notes:** We considered valid 95.8% of the records with pair institution/programme provided by IEFP.

The polytechnic institutions integrated into universities are considered within the scope of polytechnic education.

Among the unemployed graduates, 78% hold a Bachelor's degree; the remaining degrees are a minority, except for the Master's (17%). On the other hand, 68.2% of the unemployed come from public education, of which 39.8% from universities and 28.3% from polytechnic institutes. Considering the proportion of graduates in both subsystems, of course that, proportionately, graduates from polytechnic institutes have increased difficulties in finding

a job. In the private system, which represents 31.8% of the unemployed, the difficulty in finding a job seems to be even greater (see Table 5).

**Table 6. Unemployed graduates registered with a degree concluded between 2011 and 2015 with indication of valid pair institution/programme (Continent – December 2015) and graduates in the 2010/11 to 2013/14 academic years, by higher education subsystem**

Higher education subsystem	Unemployed (year of programme conclusion)						Graduates				
	Total	2011	2012	2013	2014	2015	Total	2010/11	2011/12	2012/13	2013/14
<b>TOTAL</b>	<b>30 226</b>	<b>3 580</b>	<b>5 101</b>	<b>7 175</b>	<b>6 088</b>	<b>8 282</b>	<b>307 592</b>	<b>75 482</b>	<b>79 034</b>	<b>78 947</b>	<b>74 129</b>
Public	Total	22 727	2 450	3 619	5 458	4 662	6 538	237 970	56 309	62 169	59 568
	University	12 238	1 361	2 031	3 377	2 437	3 032	157 954	37 013	39 248	41 709
	Polytechnic	10 489	1 089	1 588	2 081	2 225	3 506	80 016	19 296	20 676	19 584
Private	Total	7 499	1 130	1 482	1 717	1 426	1 744	69 622	19 173	19 110	16 778
	University	5 091	745	985	1 251	991	1 119	46 547	12 012	12 723	11 520
	Polytechnic	2 408	385	497	466	435	625	23 075	7 161	6 387	5 258

Source: (1) Instituto do Emprego e Formação Profissional, I.P. (Institute of Employment and Professional Training, I.P.); (2) Direção-Geral de Estatísticas de Educação e Ciência (General Directorate of Statistics on Education and Science).

Notes: We considered as valid 95.8% of the records pair institution/programme provided by IIEFP.

The polytechnic institutions integrated into universities are considered within the scope of polytechnic education.

Tables 6 and 7 reinforce this argument and allow progressing towards the understanding of the problem. They relate unemployed by year of programme conclusion with graduates in close academic years from 2011 onwards. A general conclusion is that all indicators of unemployment among graduates increased in recent years. Secondly, this trend was lower among graduates from the public sector than from the private one. Moreover, it is higher among polytechnic graduates than among university ones.

**Table 7. Unemployed graduates registered with degree concluded between 2011 and 2015 (Continent – December 2015) and graduates in the academic years from 2010/11 to 2013/14, by higher education subsystem**

Higher education subsystem	% Unemployed / Graduates					
	Total	2010/11	2011/12	2012/13	2013/14	
<b>TOTAL</b>	<b>10%</b>	<b>5%</b>	<b>6%</b>	<b>9%</b>	<b>8%</b>	
Public	Total	10%	4%	6%	9%	8%
	University	8%	4%	5%	8%	6%
	Polytechnic	13%	6%	8%	10%	11%
Private	Total	11%	6%	8%	10%	10%
	University	11%	6%	8%	11%	10%
	Polytechnic	10%	5%	8%	9%	10%

Source: Data worked by the authors from the raw data of Table 6.

The data analysed in this section reinforce the general idea that employability of HEIs' graduates is becoming more difficult, particularly for those graduates of polytechnics and



private institutions. Holders of Bachelor's degrees have increased difficulties, even considering that this is the most numerous contingent. The North is the region where this problem is more intense. The crisis accentuated by the structural adjustment of the Portuguese economy from 2011 onwards accelerated these processes.

### **3. Competences and soft skills**

The effort to understand which competences and abilities are necessary for a full life in an effective society has intensified over recent decades. Different motivations have steered this work and, in recent years, the direction is turning towards the result of the HEIs' educational effort. In 1997 the OECD initiated the DeSeCo project (Definition and Selection of Competences), seeking to conceptualise what skills are necessary for a better performance of individuals and also the implications for social development. This work was essential for many important subsequent works, such as PISA and PIAAC. The fundamental question was: in a society that places complex demands, which key competences should an individual attain? It was understood that competence was a concept that encompassed the concepts of knowledge and abilities.

Those competences, albeit being determined by specific social and historical contexts, could be summarised in three major categories. The first was the interactive use of the instruments available. Included within it was the interactive use: of language, symbols and texts; of knowledge and information; of technology. The second category, interaction in heterogeneous groups, included the following competences: good relationship with others; cooperation, teamwork; conflict management and resolution. Finally, the third category, autonomous action, included: act within the extended social context; create and manage a life plan and projects; defend and ensure rights, interests, limits and needs (OECD 2005).

In another important work, the OECD's Survey of Adult Skills (PIAAC)<sup>2</sup>, the focus are the competences that adults develop, how they use them and the benefits they get from them (OECD 2013). About 166,000 adults participated in this survey in 24 countries, of which 22 belonging to OECD<sup>2</sup>. Information on three areas were collected: *literacy*, considering the competences of reading and writing for the use in various activities; *arithmetical calculations*; *ability to solve problems in contexts of intense technology*, basically the use of information technology to seek new information.

The starting point of the work is the finding that, in the contemporary labour market, employment opportunities are related to those activities that require higher abilities in the search for new information and that are non-routine activities.

The term soft skill, in turn, exists for quite some time; however, it is not always very clear. For example, in the DISCO project (DISCO 2015), much of which is attributed to the so-called soft skills is among *non domain specific skills and competences*, such as, for example, the groups of *managerial and organisational skills and competences*, *personal skills and competences*, *social and communication skills and competences*. To note that there is not a precise distinction between competences and soft skills.

Another important work, which also inspired similar work in Portugal (COTEC – F.C.K. – everis 2014), is the McKinsey report (Mourshed, Farrell & Barton 2013). Over 8,000 interviews were carried out in nine countries with students and graduates, employers and universities. In the authors' opinion, the university system does not work satisfactorily, in terms of employability, for most young people and employers. One of the critical points is the definition of which skills are needed for the labour market and how to provide them. Establish a curriculum that meets the technical needs of a particular area of knowledge is a difficult task because it involves an intense collaboration between employers and educators. However, even more difficult is the definition of other non-technical skills (soft skills), highly valued and often decisive for employers. This definition, however, varies according to the sector and depends on the meaning that each area ascribes a given skill (Mourshed, Farrell & Barton 2013, p. 67). Although the authors do not conceptualise these soft skills, they relate them to *team spirit*, *ability to communicate* and *individual values*.

From among the few countries that legislated on the matter, in 2006 Malaysia has made it mandatory for all public universities in the country to introduce soft skill elements and their incorporation in the curricula of undergraduate programmes (Shakir 2009). The soft skills to be incorporated into university curricula fall into seven broad skill groups: *communication*; *critical thinking and problem solving*; *ability to work in teams*; *continuous learning and information management*; *entrepreneurship*; *moral values and professional ethics*; *leadership*.

Two projects were critical for the evolution of the debate and for the focus on higher education. The Reflex project (Research into Employment and professional FLEXibility) and its successor, the Hegesco project (Higher Education as a Generator of Strategic Competences).

The former was launched in 2003, with a final report in 2011, and the latter was started in 2007 (Allen & van der Velden 2011; Hegesco 2016).

Both projects have conducted major surveys involving thousands of respondents and several countries. Two basic questions steered the work. The first was: *Which competences are necessary for higher education graduates to be better equipped for the world of work and active citizenship?* The second was: *How can higher education institutions contribute to the development of these competences?*

The Reflex project was funded by the 6<sup>th</sup> Framework Programme of the European Union and involved partners from 16 countries<sup>3</sup>; it was coordinated by the Research Centre for Education and the Labour Market of the Maastricht University. In total, more than 70,000 respondents who attained their degrees between 2000 and 2001 were heard in 2005, that is, about five years after their graduation. Five large groups of competences were considered in the drafting: *professional expertise; functional flexibility; innovation and knowledge management; mobilisation of human resources; international orientation*. Each one of them, in turn, was composed of a subset of competences.

The Hegesco project is also based, in addition to the results of the Reflex, on a survey with over 30,000 graduates and on qualitative interviews to employers and HEIs of the five participating countries, Lithuania, Poland, Hungary, Slovenia and Turkey. Data collection was carried out in 2008, when people who had graduated in 2002/2003 were interviewed.

Most of these works uses methodologies that do not always allow assessing the true importance of soft skills for employability of young graduates from universities. There is, however, an innovative work (Humburg, Velden & Verhagen 2013) that is intended to be replicated in the larger project from which this article is the first task – by focusing on the perspective of employers in the employability of young graduates. It seeks to know what is required by employers and how they hire the new graduates from universities. Its methodology, also innovative, consists of formulating questions to interviewees that are as close as possible to the actual conditions of the selection of new employees. Therefore, a selection process initially based on the features available in the *Curriculum Vitae* of the candidates is simulated, and, in a second step, in what would be the assessment based on an interview with the candidates selected in the previous step, from which the only individual selected to the function would be chosen. The options presented to the selectors are formulated according to the procedures of conjoint analysis (Green & Srinivasan 1978). In this particular case, the choice is made from

the options presented among real candidates, with a given set of attributes, and not from the ideal and hypothetical formulation of the selector.

The research was carried out with more than 900 recruiters of companies in nine European countries. The study was complemented with in-depth interviews and focused discussions with relevant groups of employers in more than twelve European countries. On the other hand, the choice of occupational areas was also focused on only six, covering both the public and private sectors: finance, engineering, information and communication technology, communication and media, legal, political and organisational.

The starting point of the study are the changes under way in the labour market arising from the following trends: knowledge society, increasing uncertainty, the ICT revolution, highly technologically complex environments, globalisation and the transformation of the structure. These trends, in turn, also affect the tasks that students must accomplish in this new world. Such tasks are summarised in the following areas: *professional expertise, flexibility, innovation and knowledge management, mobilisation of human resources, international orientation* and *entrepreneurship*.

The main conclusions of the study call into question many of the “established truths” about the topic and point to important aspects to be considered by HEIs and by policy makers.

The first barrier to the employment of a newly graduate is the selection, through his/her resume for an interview. Once the fit between the educational background and the job requirements is verified, the likelihood that the candidate is called for an interview is higher the higher his/her work experience (internships in the area, etc.).

After the first barrier is overcome, the selection for the job opening will depend fundamentally on his/her professional expertise and interpersonal skills. This professional training is not just about academic depth, but also the incorporation of professional practices in the curricula that broaden the empirical training. Furthermore, interpersonal skills are increasingly important because the insufficiency in that aspect may have negative consequences in the group which the new contracted will be part of. In short, a good academic background in the profession is still a great asset to a graduate’s employability, but it will have little value if he/she cannot communicate and integrate in the company’s work teams (Humburg, van der Velden & Verhagen 2013, pp. 98-104).

Figure 1 depicts an overview of the competences expected of higher education graduates, cited in the studies considered herein. To note that they are not always explicitly

referred to as soft skills and that competences end up being the dominant and broader term. On the other hand, it should be mentioned that they are very similar to each other and most of them derive from the DeSeCo and Reflex projects. It is also noted that the competences attained by individuals that better qualify them for life, as advocated by the PIACC project, have a close proximity to the discussion of basic capabilities necessary for a healthy and productive life, in the perspective of human development proposed by Amartya Sen (Sen 1985; Sen 1992).

<p><b>DeSeCo<sup>1</sup></b>  <b>Interactive use of the instruments available:</b> of language, symbols and texts; of knowledge and information; of technology.  <b>Interaction in heterogeneous groups:</b> good relationship with others; cooperation, teamwork; conflict management and resolution.  <b>Autonomous action:</b> act within the extended social context; create and manage a life plan and projects; defend and ensure rights, interests, limits and needs.</p>
<p><b>PIACC<sup>2</sup></b>  <b>Literacy:</b> reading and writing competences to be used in various activities.  <b>Arithmetical calculations.</b>  <b>Ability to solve problems in contexts of intense technology:</b> basically the use of information technology to seek new information.</p>
<p><b>REFLEX, HEGESCO<sup>3</sup></b>  <b>Professional expertise:</b> mastery of his/her area/discipline of work; analytical thinking; ability to assert his/her competence (authority).  <b>Functional flexibility:</b> knowledge of other areas/disciplines; ability to quickly acquire new knowledge; ability in attaining results in negotiation.  <b>Innovation and knowledge management:</b> ability to use computers and the internet; ability to introduce new ideas and solutions; willingness to question his/her own and others' ideas; be alert to new opportunities.  <b>Mobilisation of human resources:</b> ability to work under pressure; use time efficiently; work productively with others; mobilise others' abilities; express him/herself clearly to others; coordinate activities.  <b>International orientation.</b></p>
<p><b>MCKINSEY<sup>4</sup></b>  Ethics and discipline at work; team spirit; local language; oral communication; practical training in the discipline; problem solving; written communication; creativity; technology mastery; theoretical training in the discipline; basic knowledge of mathematics; leadership; knowledge of English.</p>
<p><b>TRANSFORMA TALENTO PORTUGAL<sup>5</sup></b>  Communication and exchange of ideas; oral expression; teamwork; objective-based work; leadership; organisation of work; team management; problem solving; creativity; etc.</p>
<p><b>MALASIA<sup>6</sup></b>  Communication; critical thinking and problem solving; ability to work in teams; continuous learning and information management; entrepreneurship; moral values and professional ethics; leadership.</p>
<p><b>HUMBURG, v.d. VELDEN &amp; VERHAGEN<sup>7</sup></b>  <b>Professional expertise:</b> knowledge and skills needed to solve specific problems of that activity.  <b>General academic skills:</b> analytical ability, reflection ability, ability to understand the limitations of his/her own field of knowledge.  <b>Innovation and creativity skills:</b> ability to have his/her own ideas and to focus on the problems from different viewpoints.  <b>Organisational and strategic skills:</b> ability to act strategically in the search for the objectives and priorities of the organisation (company).  <b>Interpersonal skills:</b> ability to work in teams and to effectively communicate and cooperate with colleagues and clients.  <b>Commercial and business skills:</b> ability to recognise the commercial value of an idea and to enable opportunities so as to transform them into successful products.  <b>International orientation:</b> proficiency in foreign languages and ease of intercultural conviviality, that is, ease in working with people from different cultural backgrounds and in adapting to new cultural contexts.</p>

Source: 1. OECD (2005); 2. OECD (2013); 3. Allen & v.d. Velden (2011); 4. Mourshed, Farrell & Barton (2013); 5. COTEC - F.C.K. – everis (2014); 6. Shakir (2009); 7. Humburg, v.d.Velden & Verhagen (2013).

**Figure 1. Summary table of competences required in higher education graduates**

#### **4. Final remarks**

As mentioned previously, this article is the first output of a major project that aims to analyse the conditions of employability of graduates from Portuguese HEIs. After an introduction and framing of the general problem, the paper analysed some data on the labour market for Portuguese graduates. Then it carried out a brief review of the literature on the concepts of *competence* and *soft skills*, which are very present in the debate on employability.

The analysis of data on the Portuguese labour market points to a worrying trend of increasing employment difficulties for higher education graduates, above the general trend of the labour market. The crisis of the adjustment of the Portuguese economy after 2011 brought this new trend, despite the increase in the emigration of skilled workforce. There is a consistency between these two phenomena. Given that it becomes increasingly difficult for a higher education graduate to find a job in Portugal, one option is to emigrate.

The literature on the topic is not very clear about the concept of soft skills. In the main studies the term used is competences and they often get confused and/or overlap. To a great extent, the competences required from higher education graduates are listed by the DeSeCo and the Reflex projects. They are closely linked to oral and written communication skills and interpersonal relationship skills. Although, at first glance, this may seem like an innate personal attribute, studies reveal that most of these competences may be acquired throughout the university pathway, provided that the appropriate academic practices are given priority.

#### **Notes**

<sup>1</sup> This total does not include graduates in Technical Education Programs taught in HEIs.

<sup>2</sup> Portugal did not participate.

<sup>3</sup> Austria, Belgium/Flanders, Czech Republic, Estonia, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the UK. Data from Portugal, Sweden and Japan were not considered due to statistical problems.

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