

## Similitudes and singularities of higher education systems in the Mediterranean countries: Historical construction, policy and evolution of key indicators

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**Abstract.** Higher education is one of the most important areas for societies moving towards development and modernity. Analysing higher education systems in Europe, it is clear that Southern Europe has many differences from the rest of the continent, despite the strategies to achieve a European higher education culture by implementing reforms on all European countries' higher education systems on the basis of common key values. Taking into account four Southern Europe countries – Portugal, Spain, Italy and Greece – and regarding their link to a certain Mediterranean culture, the proposal is to analyse these four countries' higher education systems and their growth, using indicators for educational and economic development. This paper provides a reflection on a hypothetically similar evolutionary pattern according to a hypothetically similar historical cultural background, as well as on a set of external stimuli provided by modernization and Europeanization processes. The relation between higher education and the labour market will be analysed, understanding it as a relevant 'third mission' policy for higher education systems. By identifying these countries' educational, cultural and socioeconomic similitudes and singularities, the reflection aims to reinforce and enrich a sociological analysis of the existence of a Southern European approach to higher education as a specific value in Mediterranean culture. To better understand large transformation processes, a comparative analysis on the institutional and policy making levels will be used. At the same time, suggesting how modernization theory informed the evolution of higher education systems in the four countries through higher education policy and contributing to regional strategies for development.

### 1 Introduction

From a sociological point of view, there are three possible ways to approach the theme of higher education: 1) based on sociology of education, the focus could be on the actions of higher education students and its relation to social reproduction; 2) based on pedagogy, the focus could be higher education learning processes and pedagogical models; or 3) based on public policy, the focus could be the definition of a higher education public policy and how it is perceived by social actors and how it is transposed to results. Despite considering the importance of all of the three perspectives, the exercise proposed is to provide a reflection about the third way, focusing on higher education and its relation to society and economy.

Higher education is one of the most important key values in modern societies. It generates broader economic growth as well as individual success. In 1998, The World Declaration on Higher Education (UNESCO 1998) underlined the preservation, reinforcement and further expansion of education, training, and research as core missions of higher education systems. Additional foci included contributing to the sustainable development and improvement of society as a whole. Further, “higher education has acquired an unprecedented role in present-day society, as a vital component of cultural, social, economic and political development” (UNESCO 1998, p. 1).

Higher education systems first mission is nation- and state building and of supplying educated manpower, “designed to shape the national elite, the senior officials and graduates in the public sector services” (Stamelos, Paivandi 2015, p. 2). Its second mission is academic training and scientific knowledge. A third mission was added to higher education systems: regional development and community engagement, supplying knowledge-intense outputs, and a fundamental contribution to economic growth and regional development (Paleari et al. 2014). As these authors state, in the transition from pre-modern to modern societies in Europe, changes in higher education emerged to respond to the changing demands and needs of the society and stakeholders.

Higher education systems’ social function is to qualify people to work as specialists, professionals and highly qualified human resource to meet the needs of governments, industry, business and all branches of society. Besides training, higher education systems also provide a range of services and research outputs to the community and it has a role in the national and institutional policy-making and economic, technological, social and cultural reforms. Pure knowledge is no longer and not only what society expects from a higher education system. It is also supposed to fulfil social, scientific, economic and technological needs as well as respond to demands from society. Public policies towards higher education are directly and indirectly defined to achieve goals other than just purely knowledge.

There is a growing recognition of the potential role of higher education institutions as a driver of national and regional economic development (Newlands 2003). As stated by the renewed EU Agenda for Higher Education adopted by the European Commission in 2017 (European Commission 2017, 247 final), higher education is an important asset for regional development and competitiveness. It can boost innovation and upgrade the skills of the workforce through education and lifelong learning. First at a regional level, then at a national and finally at the European level. Linking higher education to the labour market is thinking of development in a broader perspective than just economic prosperity (Angelis et al. 2016). It is the incorporation of a social dimension, carried out in every country and specifically in every region. As Newlands states, “universities add to the human capital of the region and assist the innovative processes of firms but in turn their teaching and research activities are informed by businesses in the region” (Newlands 2003, p. 1).

A practical, useful, applied but at the same time highly qualified knowledge is an indispensable engine of the society. As Paleari et al write, “historically the development of higher education is closely related to the growth of economy and society and university’s mission evolved during the centuries to respond to the changing societal needs” (Paleari et al. 2014, p. 369). Social and economic evidence of the outcomes of higher education is measured in terms of the growth of the economy and society. Higher education is a ‘cultural reference point’ for each society, besides having an essential role as a social institution and a provider and supporter of the society’s innovation system (Paleari et al. 2014).

In a globalised world, countries share guidelines on higher education and import from each other’s best practices (Kivinen, Nurmi 2003). Besides, some countries’ education systems are already quite similar based on historical, geographical or cultural aspects.

The focus of this paper on higher education systems in some European Mediterranean countries is justified by the fact that Southern Europe has been determining many differences from the rest of the continent, despite the effort of the Bologna Process to ensure comparability in the standards and quality of higher education qualifications. Taking four Southern Europe and Mediterranean countries sharing a historical political

cultural and social identity (Sprague 2016) – Portugal, Spain, Italy and Greece – as the object of analysis, the proposal of this paper is to discuss in which way there is a shared experience of higher education in order to sustain the concept of a Mediterranean culture toward higher education. This will be based on some similitude in cultural historical social political economic and educational characteristics. The relation between higher education and the labour market are the dimensions of the analysis.

First, similitudes and singularities of the four countries regarding higher education will be discussed. Its characterization, the important social and political changes in the last decades in each of these Mediterranean countries and the countries' public policies on higher education as a consequence, will sustain this first structural comparison.

Considering the social function of a higher education system as responding to the needs of society and stakeholders, the second stage of the reflection is to evaluate the relation between higher education and the qualification of the labour market in the four countries. Using international data sources, such as OECD and Eurostats, based on reliable, official and governmental data to explore statistical trends, this empirical reflection will help to compare the four countries' higher education culture(s) between them and the European Union average. This will allow for understanding how far the social construction of the concept of a Mediterranean higher education culture is sustainable.

Finally, after the analysis of the data, some emergent questions will be pointed out in order to enrich the debate surrounding a Mediterranean higher education culture.

This analysis can provide important clues not only to the definition of national strategies and policy on higher education and a high-skill labour market, but also for regional developments, investments in higher education and local industries.

## 2 Background

### 2.1 *The missions of a higher education System*

Similar to other dimensions of society, education in general and higher education in particular have certain roles and missions in societies. Considering higher education, instead of being replaced by another, different missions and goals have been added to the initial one. The first mission – education – was mainly focused on nation- and state building as well as increasing society's educated manpower. 'Scientification' was a second mission of higher education systems, through defining academic training and scientific knowledge. In both missions, pure knowledge was the common ground. A third mission was added to higher education when knowledge needed to be operationalized as a fundamental role for economic growth and regional development (Paleari et al. 2014). As Antonowicz (2012), the human capital theory, as the theoretical framework most responsible for the adoption of education and development policies, rests on the assumption that formal education is highly instrumental and even necessary to improve the population's production capacity.

Since their beginning, universities are par excellence the institutions of production of knowledge. But knowledge is not locked inside the institutions and has been transferred and used in societies towards development and modernization. In present day knowledge economies and societies, higher education institutions have become politically and economically more important as institutions that produce and transfer knowledge. As Krings states, "we are living in knowledge-based societies; we are knowledge-based workers; we are working in knowledge-intensive sectors and we are producing knowledge-intensive services" (Krings 2006, p. 9). Or, as in Drucker's model (Drucker 1969, cited by Antonowicz (2012)), the production of goods is being gradually replaced by the provision of services, and knowledge and skills are playing an increasing role in the national economy.

That is why it is no longer possible to think of higher education without considering its relation to the labour market as a specific dimension of modern societies and economies. But firstly, a reflection on the historical, social, cultural and political context surrounding the development of higher education systems must be provided.

## 2.2 *Conceptualizing a Mediterranean higher education culture*

Clustering countries according to specific parameters besides geographic ones is a way to structure an analysis striking a balance between generalization and specificity. The clustering process might take into account, separately or not, different dimensions: geographical, economic, political, social, demographical, to mention few. Criteria of comparison must be defined, and by doing so, some countries might not be included, in an objective but selective way, as encapsulating an entire region is not the researcher's aim.

Southern Europe can be regarded as a distinct regional entity, by its common climatic system and a geographical expression of strategic importance different from Northern Europe. Inside the European Mediterranean zone, different societies and economies have been developed. Similarities and shared experiences allow the grouping of Greece, Italy, Portugal and Spain together (Lazaridis 1996). Through sharing a certain common identity (Williams 1984), they can be grouped as a 'family of nations' with similar pattern of public policies.

The relevant literature on higher education systems leads to a first and considerable obstacle for the comparison: higher education in Europe, as well as globally, is very diverse. And labelling a country's higher education system as if it is homogeneous is to suggest a singular model of higher education discharging any possibility of inner diversity and, therefore, the model having a strong bias towards reality.

One of the first key studies of diversity in higher education systems is done by Birnbaum (1983), identifying seven categories of diversity: a) a systemic diversity, referring to differences in institutional type, size and control found; b) a structural diversity, resulting from historical and legal foundations; c) a programmatic diversity, according to the degree level or degree area, mission and main programmes and services provided by institutions; d) a procedural diversity, differing ways of teaching, researching and/or providing services of the institutions; e) a reputational diversity, as long as there might be differences in institutions by their status and prestige; f) a constituential diversity, by including a variety of institutional constituents such as faculty, staff, trustees, and political and religious interest groups; and g) a value and climate diversity, regarding the social environment and culture.

In a more recent perspective, also Teichler (2007) highlighted higher education diversity, adding a horizontal and a vertical approach, and focusing the importance of institutional missions and profiles as a criterion for a distinction. van Vught et al. (2010) suggested that a greater variety in the environmental conditions (particularly governmental policy contexts), and a variety of norms and values in which a higher education system operates is reflected in an institutional diversity of higher education institutions. Besides, "diversity would also increase if Europe's higher education institutions were operating within diverse policy contexts that were supportive of a variety of missions and profiles" (van Vught et al. 2010, p. 12).

Every higher education system is generally associated to a certain social, economic and educational profile despite having internal differences. Considering each profile's specificity, how is the comparison made between countries? By controlling exactly in which terms it may or may not be compared in different systems, certain trends can be drawn and specific similitudes and singularities can be identified. Doing so, an objective parameter of comparison is defined specifying similitudes (Foucault 1983, Hook 2007) and singularities (Deleuze 1990) of each research object.

Taking each higher education system as unique, and considering social, political, economic, geographical and educational characteristics of Portugal, Spain, Greece and Italy, their similitude is sustained in a sociological perspective searching for shared experiences and strategies towards higher education. In this line of thought, the concept of Mediterranean higher education culture must be considered. Despite each country's singularity, culture – from a sociological perspective – is the ensemble of symbolic codes, shared experiences, attitudes, beliefs, norms, practices, symbols and values.

The thought of a 'higher education culture' took its first steps in the early work of Clark (1973) by providing an important, original well-spring for work on culture in higher education (Maassen 1996). The concept of a culture in higher education included very different topics: culture regarding students' social backgrounds and multiculturalism

inside the institutions; culture as a sense of organization inside the institutions; culture as an institutional environment and its influence on students. But a higher education culture is also seen in a macro perspective as a support for public policies and the definition of strategies towards the development of the society and the economy.

As [Lazaridis \(1996, p. 6\)](#) stated, between these countries there is an “element of common identity in relation to key socio-economic, politic-economic and cultural aspects and changes which have transformed the whole region in the last decades”. Among several characteristics, such as economic styles, political cultures and institutions, family structures, industrial organizations, welfare state, migration trends, religion, etc., it is clear that the educational and specifically the higher education system can also be an element of a shared Mediterranean culture.

Several dimensions and indicators reflect a country’s or institution’s higher education culture, but not all of them are taken into account in this study. This study will exclude dimensions related to quality or governance, internationalisation or research. Instead, this study will focus more on those linked to the missions of a higher education public policy and its relation to economy and labour market as a higher education output to society and economy.

Indicators such as global trends, system’s expansion, and population with tertiary education, graduates employment and unemployment are some of those considered in this analysis as comparable and characteriser of a higher education culture. Also public policies and socio-economic and political context must be included in this approach. The next chapter provides a brief context to the development of each country’s higher education system. Afterwards, some statistical indicators regarding higher education and the labour market will be analysed.

### *2.3 Higher education and the social and political context in four Mediterranean countries*

Even considering possible differences between the countries, researchers are best suited to understand the development of each higher education systems in the last decades through knowing their social, political and economic situation. The modernization strategies countries have outlined to reposition themselves within the modern world system have been shaping their higher education systems under the framework of increasingly competitive knowledge societies.

For this analysis, four Southern Europe countries were selected: Portugal, Spain, Italy and Greece. Besides being geographically located in the southern part of Europe and sharing Mediterranean waters and a certain Mediterranean culture, recently these countries have undergone a similar process of becoming part of European Union and adjusted to European rules.

This group of Mediterranean countries share a historical, political, cultural, and social identity. The historical and political realities of these distinct countries necessarily influence their education systems – from their system development to reforms over time and their current priorities ([Sprague 2016](#)). Specifically considering higher education, the Bologna Declaration (a joint statement of thirty-one European Ministers of Education signed on 19th June 1999), regarding education, is an example of how these societies’ policies were defined in order to respond to Europe’s call to harmonise European higher education systems. The Bologna process was a voluntary, intergovernmental process based on the open method of coordination, which aims at the align of national policies in order to achieve specific goals ([Asderaki 2009](#)). [Mitchell, Nielsen \(2012\)](#) argue the policy ideas circulating globally are also linked to international political organizations (the EU, World Bank, IMF, UN, UNESCO and OECD), representing “a complex and ungovernable web of relationships that extends beyond the nation state” ([Waters 1995](#), cited by [Mitchell, Nielsen \(2012\)](#)).

Another common aspect between the four countries refers to its position in a globalized world. Despite the scientific controversy of classification nowadays, these four countries as peripheral (e.g. [Gambiarotto, Solari 2014](#)) or semi-peripheral (e.g. [Roncovic 2001](#)) according to Wallerstein’s World-Systems Theory ([Wallerstein 1979](#)). In both perspectives, their non-centrality is never open to question. And this is obvious considering their recent

economic history, their struggle against economic and social crisis and the two-speed Europe (Vanhercke et al. 2016, Piris 2012).

Katrougalos, Lazaridis (2003) showed how difficult it is to characterize these four countries as completely similar, regarding their social policy developments and a broader political economic and social environment. In some indicators, there may be some divergence between the four countries, but in general their trends and characteristics are very different from other European countries. Their similarities and some singularities in their historical, socio-economic and socio-political context, with regards to higher educations over the last decades, will be summarized next. Before that, a description of each country's process of building a higher education system will be given, in an arbitrary order.

There were two major changes in the twentieth century that helped Portugal catch up with the rest of Europe considering the socio-political and socioeconomic context and the changes in several dimensions including higher education. Firstly, the Revolution of 1975, which led to significant democratic reforms. Secondly, Portugal's admission to the European Common Market, which provided substantial financial aid and technological cooperation. Concerning education, one of the major public policies on education was the Education System Basic Law (LBSE 46/1986) and its changes and adaptations to Bologna's educational culture in 2005 (Law 49/2005). Consequently, a renewed educational system helped reduce the educational gap, lowered the socioeconomic gap of the population, and increased the economic and technological development of the country. Since then, education in Portugal is developing at an accelerated rate: illiteracy rates have fallen consistently in the last years from around twenty per cent in 1998 to seven per cent in 2017, of the general population. The enrolment has increased dramatically from six per cent in 1998 up to eighteen per cent in 2017. The country has been developing rapidly and education is accompanying this strong evolution. The higher education system in Portugal is organized in two subsystems: university education and non-university higher education (polytechnic education). Higher education is provided through public and private universities and non-university higher education institutions (both public and private).

In Spain too, there were also important political changes, resulting in a reform on education. Within a short period, only a year and a half, Spain and Portugal both ended a long dictatorial period and began a process of political transformation leading to democratic regimes. Both countries were incorporated into the European Economic Community in 1986. Additionally, in both countries, the political, social and economic changes had consequences for the status of higher education. Notwithstanding the differences in each process of higher education reform, both countries started from the same strategic premise – the premise of modernization – with profound implications for public education policies. Considering the legal framework, the most important reform regarding higher education came with the adoption of the University Reform Act of 1983, where universities became a public service, and private universities were validated as higher education providers. The Spanish higher education system consists of both university and non-university institutions, although it operates more as a unitary system made up of only university institutions (Santiago et al. 2009). The principal law for tertiary education, the Organic Law on Universities (LOU, Ley Orgánica de Universidades, Law 6/2001 on Universities, 21 December 2001, amended by the Organic Law 4/2007, 12 April 2007) concerns universities only. Non-university tertiary education, consisting of post-secondary higher vocational education and specialised tertiary education, is regulated by the Organic Law on Education (LOE, Ley Orgánica de Educación of 2006). In 2009 the Spanish government launched a policy initiative, Estrategia Universidad 2015, aiming to boost the competitiveness of Spanish universities. As in other countries, internationalization was one of the main goals of the strategy. But the focus of this paper will be on other goals than strategy.

On the growth within the educational system in Spain, literature refers to a dramatic increase since the 1960s and continued during the 1970s and the 1980s: from around 100.000 students in 1950 up to more than 1.5 million by the end of the 1980s (Villarroya et al. 2008). During the general restructuring of the education system in 1990, the

enrolment of students in the universities has almost doubled in ten years, between 1983 and 1993 (Díaz 2010). Subirats (2001) stated that the changes in Spanish university in the last three decades are incomparable with any other historical moment: an increase in the infrastructures and enrolments, but also inside the organizations and in the nature of the university's mission.

Historically, during the second half of the 20th century, the Italian Republic was founded in 1946 and the Italian Constitution came into effect in 1948. Also, Italy was a founding member of the Inner Six (the six founding member states of the European Communities) in 1951. These were significant events, which marked a turning page in Italy's post-Fascist history as well as the civil, social and economic consequences of World War II. In such a turbulent and intense socioeconomic and socio-political context, there were multiple reforms in education in general and specifically higher education. Particularly during the past 30 years. Important educational reforms took place unifying Italian mid-school (1962) and liberalizing higher education attendance (1969). The Italian education reform process in 1989 was the first step towards the decentralisation of the university sector and the introduction of a general framework of didactic, organizational and scientific autonomy for all universities. This new reform took into account the principles of the Sorbonne Declaration (signed on 25th May 1998 by the Ministers of Education of 4 EU countries, namely France, Italy, Germany and the United Kingdom) and the Bologna Declaration. This declaration promoted the creation of a European Higher Education Area through the harmonisation of the different European educational systems. In 1999 almost all Italian universities were adapted to the Bologna process. Other milestones in education policy were the legislative decree 509/99,4, redefining the structure of the university system, and the 'Gelmini Reform' (Law 240/2010), changing the institutional governance and internal organization of Italian state universities. But Italy's higher education faced tumultuous time: as Monti (2008) stated in his investigation of the decline of the Italian university, more than 1,000 laws and rules were introduced from 1990 to 2006. Public policies regarding higher education allows to change (or rather permits changes) the system. Similar to Portugal and Spain, but in a slightly different timing, in Italy the growth of the university system which began after World War II reached a peak between 1980 and 2010, when the system virtually doubled in size. Italy experienced a remarkable increase in the numbers of students enrolled at university, percentages of 19-year-old students enrolled and number of graduations in the past 30 years (Turri 2014).

With a binary system, Italian higher education is organized in university (state and private universities, polytechnics, universities for foreigners, schools of advanced studies and on-line/distance learning universities) and non-university sector (among others, national academies in the Fine Arts, Cinema, Dance and Drama, Music Conservatories, schools and institutes for the education and training of professionals in various fields, such as language mediation, design, etc.).

Similar in timing and importance as in Portugal, Spain, and Italy, political and social changes took place in Greece in 1974. There also the country experienced a return to a democratic government and the admission to European Common Market in 1981. These were followed by changes in public policies on education, namely the Framework Law of 1982 (1268/82). In 1999, Greece accessed the Bologna Process. But comparing with other countries' progress, indicators on education showed Greece has undertaken almost all the commitments undertaken within the Bologna Process (Asderaki 2009).

The Greek higher education system grew. Themelis (2013) summarised the spectacular increase of Greek higher education: "Globally, between 1950 and 1970, tertiary-education enlargement was much higher than primary and secondary, with a net increase of approximately 300 percent. This trend continued unabated in the next 30 years. (...) This relevant statistics for Greece are even more startling. Between 1956 and 2001, the number of tertiary-education students grew nearly 16 times, while only between 1976 and 2001, the respective increase was fourfold. This rise, the second biggest among 31 European countries, makes Greece a remarkable case in Europe as far as educational expansion is concerned though not necessarily an exceptional one (HE participation between 1950 and 1965 more than doubles in almost every European country, with the exception of Spain

and Portugal)” (Themelis 2013, p. 81–82).

As for Greece, the organization of higher education is a bit different as there are only public higher education institutions and private higher education is strictly forbidden. It comprises two parallel sectors: the university (Universities, Technical Universities, and the School of Fine Arts) and technological (Technological Education Institutions (TEIs) and the School of Pedagogical and Technological Education (ASPETE)) sectors. Greek higher education was developed according to a regional approach.

The structural and institutional transformations of these four countries along the last five to six decades results in profound reforms concerning education, where milestone public policies were implemented. There has been a gradual merging of higher education standards since the 1970s. Public policy reforms took place, including education broadly and higher education specifically. In summary, there is a consensus on identifying a significant growth of high literacy levels, a wider access to higher education in contrast to the previous elite university system, and education developing at an accelerate rate.

Despite singular differences in time and small details in structure, the four Mediterranean countries that have endured dictatorships were behind on the modernization process of higher education and society, compared to the Northern and Central Europe countries. These were countries with dictatorship regimes in the 1970s (and before) and with a transition to a democratic regime, influencing the way higher education reassumed a priority position. Before democratic times, higher education was in crisis, due to two reasons: a reduction in the university’s autonomy to eliminate the production and free dissemination of critical thinking and authoritarian private projects competing with the university under unfair competition processes (Santos 2008). After that, the four countries’ higher education systems moved on towards a stage of consolidation of mass higher education, following specific higher education policies towards a modern society and economy. In 1999 the Education Ministers of the four countries signed the Bologna Declaration and they began a general reform of higher education to move it towards the common European Higher Education Area (EHEA). The Bologna Process gave new impetus to the development of their national higher education systems (for a brief description of social changes and education, see Table 1).

Regarding political and social, and more specifically – what higher education is concerned with – processual similitude and coincidence in consequences, occurred in the four countries. However, this does not mean inner or even external homogeneity. The European Commission’s guidelines and Europe 2020 goals tend to level EU members in education key indicators and benchmarks. So far it should be kept in mind each country’s specificities, leading to a diversity of situations and higher education institutions. As van Vught et al. (2010) stated, diversity is “one of the major factors associated with the positive performance of higher education systems” (van Vught et al. 2010, p. 11), as diversity meets the needs of the labour market and reinforces the link and the role of higher education, economy and society, in another words, a market of university services (Santos 2008).

### 3 Data, methodologies and results

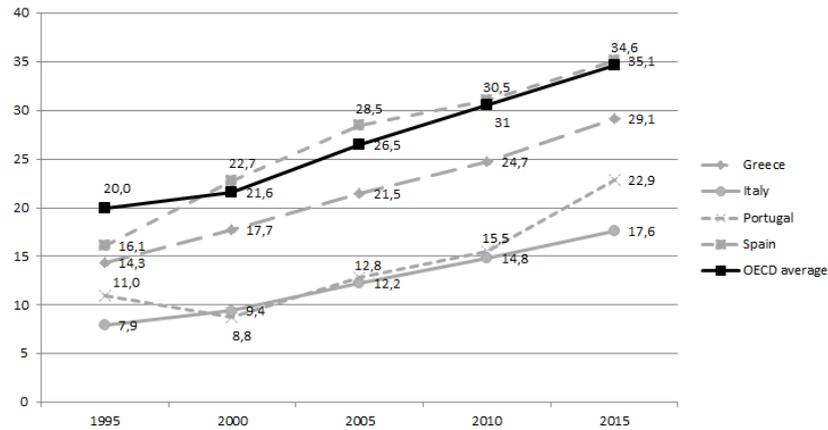
#### 3.1 Data and Indicators about a Mediterranean higher education culture

Empirical data can help evaluate and measure the intensity of similitude and singularity between the four countries’ experiences on higher education. Data was collected through reliable secondary sources with parameterized data: OECD, Eurostats, UNESCO-UIS.

In order to sustain and develop the previous reflection about the similitude of the four countries’ higher education systems, some indicators were collected and analysed in a comparative way taking a longitudinal perspective. Some of those indicators are measuring the level of higher qualifications of the population in general and their level of employability, and others are referring to higher qualifications in specific sectors of the countries’ economic activities. These indicators objectively measure the weighting higher education and qualified professions have in the construction and development of a modernization process of the society and the economy.

Table 1: Brief description of each country's Higher Education and recent socio-historical changes

|                                  | Greece   | Italy  | Portugal   | Spain   | Summary  |
|----------------------------------|--|--|--|---|--|
| Organization of HE               | <ul style="list-style-type: none"> <li>- University and technological</li> <li>- No private universities</li> <li>- 1974: return to democratic government</li> <li>- EU in 1981</li> </ul> | <ul style="list-style-type: none"> <li>- Binary system: university and non-university sector</li> <li>- Public and private</li> <li>- After Fascist regime and WWII, 1946: Italian Republic</li> <li>- EU founding member</li> <li>- 1980 reform</li> <li>- Legislative decree no. 509/99,4</li> <li>- 2015 La buona scuola</li> </ul> | <ul style="list-style-type: none"> <li>- 2 subsystems: university and polytechnic</li> <li>- Public and private</li> <li>- After dictatorship, Revolution of 1974: democratic reform</li> <li>- EU in 1986</li> <li>- LBSE 46/86 and 49/2005</li> <li>- 1999: the Bologna Process</li> </ul> | <ul style="list-style-type: none"> <li>- University and non-university institutions</li> <li>- Public and private</li> <li>- after dictatorship, 1978 Spanish Constitution</li> <li>- EU in 1986</li> <li>- University Reform Act of 1983</li> <li>- Organic Law of Universities 2001</li> <li>- 1999: the Bologna Process</li> <li>- Growth of tertiary education</li> </ul> | <ul style="list-style-type: none"> <li>→ Binary HE systems</li> <li>→ Structural and institutional transformations</li> <li>→ Profound reforms in education</li> <li>→ Education and social changes</li> </ul> |
| Important changes in the country |  |  |  |   |  |
| Public policies on Education     | <ul style="list-style-type: none"> <li>- Framework Law of 1982 (1268/82) and reform of higher education</li> <li>- 1999: the Bologna Process</li> </ul>                                    |  |  |   |  |
| Consequences                     | <ul style="list-style-type: none"> <li>- Five decades of reforms established high literacy levels</li> </ul>   | <ul style="list-style-type: none"> <li>- From old elite university system to wider access</li> </ul>   | <ul style="list-style-type: none"> <li>- Education developing at an accelerated rate</li> </ul>  |   |  |



Source: Education at a glance: Educational attainment and labour-force status. OECD (2018), Adult education level (indicator). doi: <https://doi.org/10.1787/36bce3fe-en> (Accessed on 23 July 2018), International Standard Classification of Education (ISCED 2011 levels 5-8) <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>

Figure 1: Percentage of the 25-64-year-old population with tertiary education, 1995-2015

### 3.2 Results on a Mediterranean higher education culture

The indicator based on the share of population with tertiary education will be analysed in a longitudinal and comparative way. Since 1995, with intervals every five years until 2015, this information allows to see how much the importance of higher qualifications grew in the last two decades in each country.

As Figure 1 shows very clearly, in all four countries there is a considerable growth trend. Despite the growth in all of them, the comparison between the four countries shows different rhythms of growth: despite doubling or more in all of the four countries, it is lower in Italy and Portugal, while in Spain figures are quite impressive and quite similar to OECD average.

The importance of and investment in higher education clearly increased along generations: between middle 1990s and the most recent years, the percentage of young adults aged 25-34 with completed high qualifications almost doubled (Figure 2).

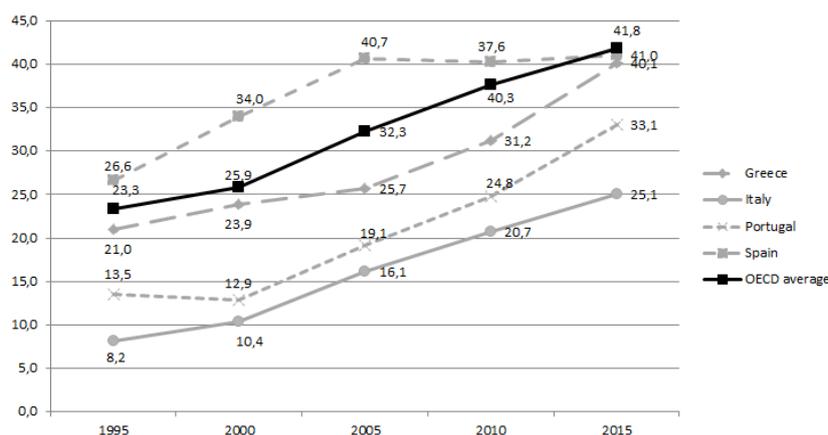
This growth is transversal to all four countries, but with some differences to highlight. Firstly, the percentage of young population with tertiary education in Spain has always been above the OECD average and the other three countries. This indicates a different investment levels, family culture, and the governments' policies towards higher education. Secondly, contradicting the general trend of continuous growth, in Spain there is a stabilization, if not a slight decrease, in the percentage of young people with higher education. Thirdly, the growth in the share of young people with higher education in Italy and in Portugal is even bigger if considering their low starting point in the middle 1990s, reflecting a tripling in two decades.

The growth of the percentage of highly qualified people is an effect of economic, social, political and cultural changes towards modernization, as education drives the modernization process. Holding a higher education degree should provide advantages in the labour market and in technology, industry and economy.

Finding employment after graduation is not the only indicator in the "higher education-labour market" relation: the adjustment between skills and competences provided by higher education and labour market needs, and adjustments to individual career changes are other pieces of the same puzzle that could be considered. However, by now the focus will be only on employment and unemployment rates by level of education.

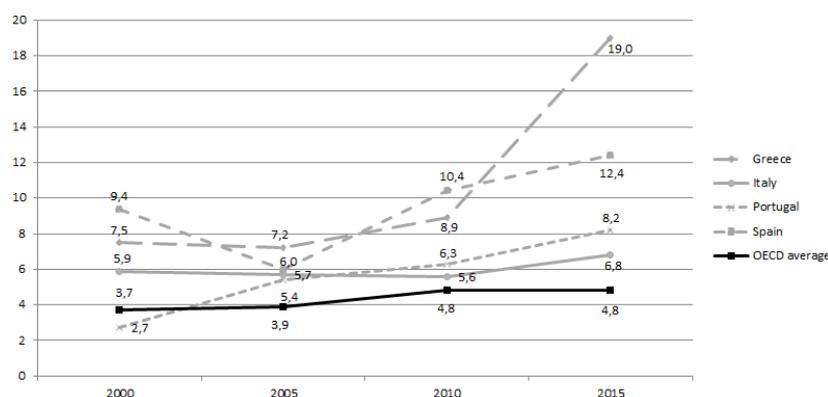
According to recent OECD data, population's unemployment rates of people with higher qualifications vary from 19% in Greece, 6,8% in Italy, 8,2% in Portugal, and 12,4% Spain. All four countries are above the OECD average (4,8%).

Knowing that these percentages are in general lower for the graduated population than among less qualified people, the unemployment data must be read with caution as



Source: Education at a glance: Educational attainment and labour-force status. OECD (2018), Population with tertiary education (indicator). doi: <https://doi.org/10.1787/0b8f90e9-en> (Accessed on 23 July 2018), International Standard Classification of Education (ISCED 2011 levels 5-8) <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>

Figure 2: Percentage of the 25-34-year-old population (% in the same age group) with tertiary education 1995-2015



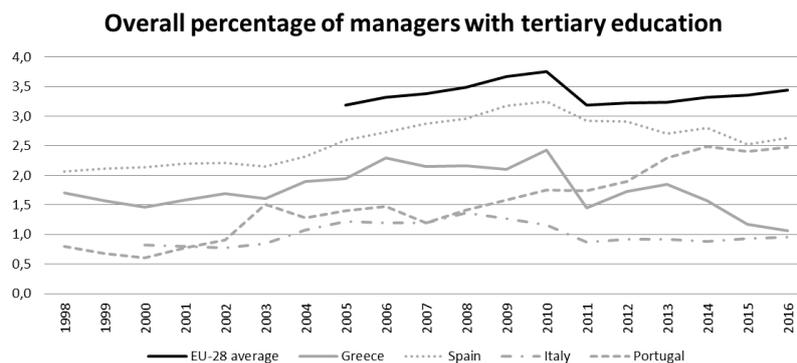
Source: OECD, International Standard Classification of Education (ISCED 2011 levels 5-8) <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>

Figure 3: Unemployment rates among population 25-64-years-old population with tertiary education 1995-2015

in these four Mediterranean countries external factors – and in particular the economic crisis – interfered in higher education attainment and in the capacity of the labour market recruiting high qualifications workforce, especially in the last decade (Figure 3).

The economic conjuncture affects the investment in education and training: for instance, in Italy, between 2009 and 2013, overall public funding for higher education was cut by approximately 20% in real terms (European Commission 2015). Governments' investment in higher education and in research and development are different in time, place and amount, which is an additional challenge in the comparison.

As Paleari et al. (2014) stated, because of the economic crisis, a withdrawal of the state as a financier happened in many countries, mainly in Southern Europe. New structures were built in order to respond to those changes. As Meek et al. (1991) stated, financial pressures appear to be driving higher education systems to change. But also the wish for higher education to be more closely tied to national economies (Meek et al. 1991), both in terms of meeting national labour market needs and through research discovering new products or resources, can produce changes in the higher education structure. That is why the percentage of highly qualified workforce in specific economic sectors is an interesting indicator to add to this analysis of a higher education culture.



Source: Own calculations based on data from Eurostat on Employment by occupation and educational attainment level, International Standard Classification of Education (ISCED 2011 levels 5-8) <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>.

Figure 4: Overall percentage of managers with tertiary education among employed population 1998-2016

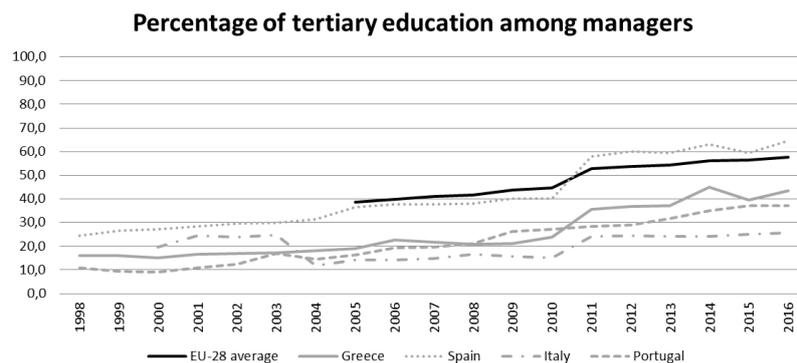
When specific occupations are considered in the analysis, the impact of the higher education growth is transferred to a change in the structure of qualified and unqualified employment. This change of the structure is understandable within a sociological perspective of a knowledge-based society (Krings 2006). Comparing the Southern European countries' higher education systems beyond the traditional figures on students and human resources involving higher education to describe its growth, the analysis aims to understand whether there is a shared common "higher education" culture in the Mediterranean countries.

The analysis combining economic indicators and higher education indicators will be essential to validate this interesting perspective. Data on employment and on levels of education (according to ISCED 2011 classification) will now be considered: in particular, data on the percentage of higher education qualifications in specific occupations, such as managers, professionals, and technicians and associate professionals, according to the ISCO 2008 classification (ILO 2012).

The analysis is supported using Eurostat data between 1995 and 2016 (the most recent data) and comparing the four Southern Europe Mediterranean countries with the EU-28 average. Despite the relation between these four countries and the EU being historically and culturally different, the option of using EU-28 average allows an ongoing comparison including all EU members instead of focusing only on the "classic" EU-15. Besides, differences between EU-28 and EU-15 trends are small.

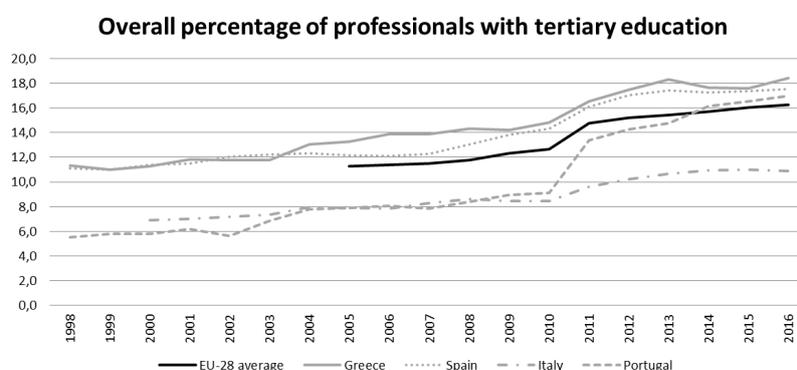
Overall, the percentage of managers with tertiary education is around 3,5% in EU-28 countries. In the four Mediterranean countries, this score is lower; between 1,0% in Italy and Greece and around 2,5% in Spain and Portugal in the most recent year (Figure 4). Despite this difference, in all of them there is a growing trend in having more managers with higher qualifications managers: since the beginning of the last decade, in Spain it surpasses 50% of managers with higher education (Figure 5). However, the lack of higher qualifications of the executives and managers still remains a thorn in the structure of the labour market.

It is among professionals (according to the ISCO 2008 classification) that the presence of higher qualifications is unquestionable and has been increasing each decade: in 2005 qualified professionals were around 11% in a EU-28 average, above that in Greece and Spain, and around 8% in Italy and Portugal (Figure 6). In ten years this figure grew around 50% on average in Europe and in all of the Mediterranean countries except in Portugal, where it more than doubled. changing the structure of the labour market and its qualifications. Furthermore, in Spain, Greece and Portugal, more than 90% of the professionals have a higher education diploma, while the EU-28 average is some percentage points lower (Figure 7).



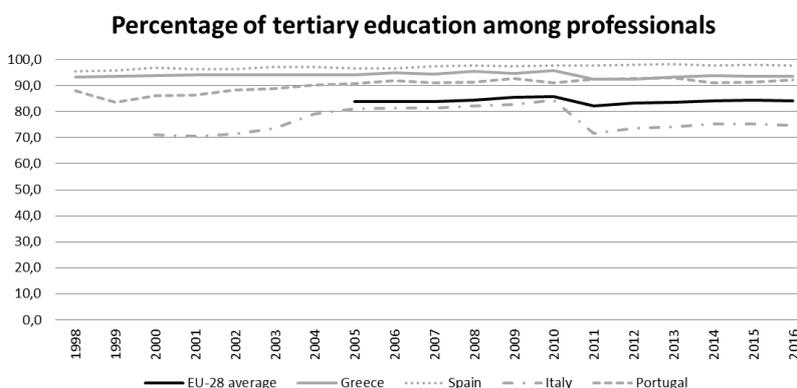
Source: Own calculations based on data from Eurostat on Employment by occupation and educational attainment level, International Standard Classification of Education (ISCED 2011 levels 5-8) <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>.

Figure 5: Percentage of managers with tertiary education among managers 1998-2016



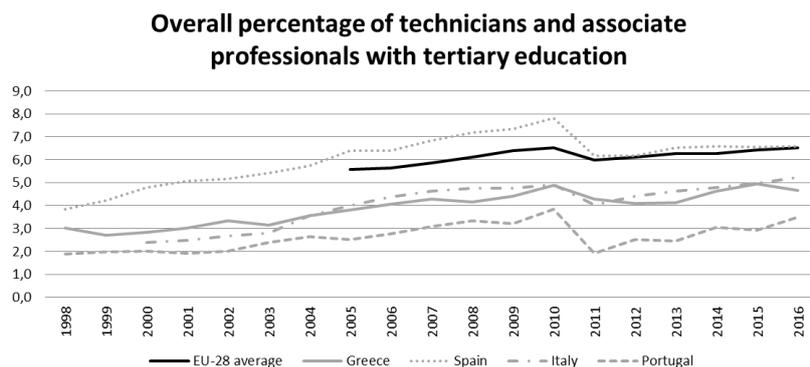
Source: Own calculations based on data from Eurostat on Employment by occupation and educational attainment level, International Standard Classification of Education (ISCED 2011 levels 5-8) <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>.

Figure 6: Overall percentage of professionals with tertiary education among employed population 1998-2016



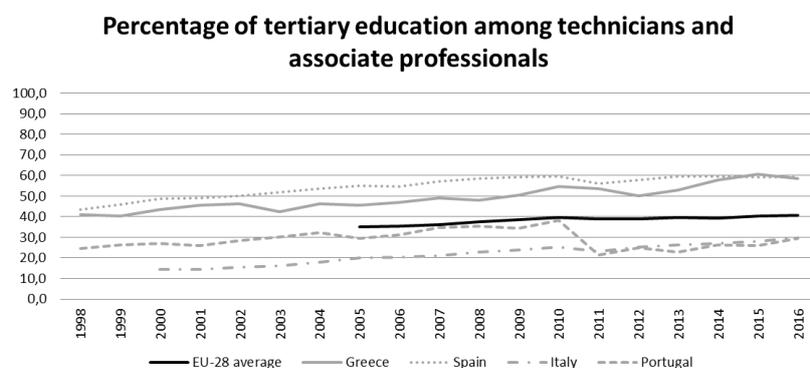
Source: Own calculations based on data from Eurostat on Employment by occupation and educational attainment level, International Standard Classification of Education (ISCED 2011 levels 5-8) <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>.

Figure 7: Percentage of professionals with tertiary education among professionals 1998-2016



*Source:* Own calculations based on data from Eurostat on Employment by occupation and educational attainment level, International Standard Classification of Education (ISCED 2011 levels 5-8) <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>.

Figure 8: Overall percentage of technicians and associate professionals with tertiary education among employed population 1998-2016



*Source:* Own calculations based on data from Eurostat on Employment by occupation and educational attainment level, International Standard Classification of Education (ISCED 2011 levels 5-8) <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>.

Figure 9: Percentage of technicians and associate professionals with tertiary education among technicians and associate professionals 1998-2016

The increase of technicians and associate professionals in the labour market is also a reality, although at a slower pace and in a different proportion when comparing to managers and professionals.

Again, Spain is particularly paradigmatic of these growing trends, reinforcing the relation between: higher education and the economy, the labour market and modernity, as well as technology and innovation (Figure 8). In Spain and Greece, technicians with high qualifications are actually greater than 50% of the workforce, while the average in EU-28 is around 40%. In Portugal and Italy the share is about 10% less than the EU-28 average (Figure 9).

Deepening the analysis on the relation between higher qualifications and the economy using Eurostat data from 2008 onwards on technology and knowledge-intensive sectors' employment, NACE classification (European Commission 2008) at the national level will be used. This will be used to consider the percentage of workers with tertiary education. It is also a way to evaluate how far higher education is part of the engine of modernizing the economy and the society.

Krings (2006), based on Reich (1991, cited by Krings (2006)), mentions the importance of "symbolic" work, by creating a visible spectrum of knowledge-based activities: production knowledge (research and development, innovation and market oriented products);

targeting knowledge (administration, management, organisation); and orientation knowledge (consulting, controlling, co-ordination), as well as the importance of knowledge-based technology for the political decision making process and public service sector, and the importance of a new professional class with a specific professional profile (technology and knowledge based).

Comparing the percentage of highly qualified workers in different sectors in the four countries and taking the EU-28 average as a reference, it is by far the Services sector that absorbs the majority of the graduated workforce: more than 80% of the workers in that sector hold a higher education diploma. This is particularly evident in Greece, Portugal and Italy, rather than in Spain. The second and third most important sectors in recruiting highly qualified workforce are Education (especially in Greece and Portugal) and Human health and social work activities (especially in Italy and Portugal). Among all the other sectors, three sectors can be highlighted by having around 10% of graduated workforce: Manufacturing (but with lower percentages in Greece and Portugal), Wholesale and retail trade (but with higher values in Greece and in Spain) and Professional, scientific and technical activities (and with 6% more in Italy).

Technological advances and the requirement of more sophisticated skills, have both contributed to changes in the work structure across the world and increased the demand for higher-education graduates (Antonowicz 2012). Limiting the analysis to high-technology sectors, the average in EU-28 is around 7%. In Greece and Portugal it is slightly lower.

The knowledge economy and knowledge-based industries development is marked by the growing demand for higher-education graduates to drive this dynamic sector of the European economy (Antonowicz 2012). Selecting some of the sectors involving high-technology, it is quite remarkable the concentration of qualified workers in knowledge-intensive high technology services when comparing, for instance, with high and medium high-technology manufacturing. And it is particularly evident in other knowledge-intensive market services except financial intermediation and high-technology services. It occurs less in Spain, when comparing with the other countries and with EU-28 average (Table 2).

#### 4 Discussion and Concluding Remarks

The main concern of this article is reflecting and analysing the similarities or differences between Mediterranean countries' higher education and its relation to the labour market. Related, how linked they are to a possible Mediterranean way of thinking and substantiate a common higher education culture. Based on similar historical, social, political, and economic background – and often their developments aligning temporally – the changes in the four countries' higher education followed the same trend.

Higher education in Portugal, Greece, Spain and Italy can be characterised by a similitude of growing importance as a core value in the society, in a time coincidence of changing in political, economic and social dimensions in the last four decades. Significant structural changes have been made in the educational systems, with is clearly reflected in tertiary education. In these countries' second moment, the admission to the European Union and the adaptation of the higher education system to Bologna's guidelines also contributed to a fast, wider and remarkable consolidation of higher education in each society and each economy.

The implementation of the Bologna Process makes it difficult to identify the similitude behind the structure European higher education systems should follow. As Gilder, Wells (2009) suggested, little consideration has been given to the content of each level's qualification and their fitness for purpose (e.g. areas relevant to the labour market). Even before the EU and the Bologna process, the four countries' higher education trajectory is quite similar. However, the lack of adjustment highlighted in some Southern European countries, despite of their improved convergence toward the EU-15 average, can be explained by the deficit of modernization theory (and relevant policy) to address structural problems of countries and regions. For example, lack of quality governance, path dependency, and cultural diversity. In a certain way, a first important conclusion of this study is the confirmation of a Mediterranean higher education culture, which is reflected in their changes. Most of these trends are linked to an effort of modernization of

Table 2: Percentage of workers with tertiary education in NACE (Rev.2) sectors and in NACE high-technology sectors, 2008 and 2016

|   | EU-28 |      | GR   |      | SP   |      | IT   |      | PT   |      |
|---|-------|------|------|------|------|------|------|------|------|------|
|   | 2008  | 2016 | 2008 | 2016 | 2008 | 2016 | 2008 | 2016 | 2008 | 2016 |
| in all activities   | 26.8  | 33.9 | 26.3 | 35.1 | 33.9 | 42.1 | 17.0 | 21.3 | 15.1 | 26.3 |
| in Agriculture, forestry and fishing; mining and quarrying  | 1.5   | 1.5  | 1.1  | 1.8  | 1.3  | 1.3  | 0.8  | 0.9  | 1.2  | 1.1  |
| in Manufacturing  | 11.5  | 10.6 | 6.4  | 6.1  | 12.3 | 10.5 | 8.3  | 9.2  | 6.3  | 7.8  |
| in Electricity, gas, steam and air conditioning supply; water supply and construction   | 5.2   | 4.7  | 2.9  | 2.5  | 7.1  | 4.6  | 2.4  | 2.2  | 4.0  | 3.2  |
| in Wholesale and retail trade; accommodation and food service activities; activities of households as employers   | 10.5  | 11.6 | 13.8 | 16.0 | 15.1 | 16.8 | 9.0  | 10.1 | 10.1 | 12.2 |
| in Land transport, transport via pipelines, water transport, air transport, warehousing and support activities for transportation; travel agency, tour operator reservation services and related activities | 2.6   | 2.7  | 2.3  | 3.9  | 3.2  | 3.5  | 1.7  | 1.7  | 1.6  | 2.4  |
| in Services   | 81.5  | 82.6 | 89.6 | 89.6 | 79.3 | 83.6 | 88.5 | 87.6 | 88.5 | 88.0 |
| in Information and communication  | 5.3   | 5.6  | 2.7  | 4.0  | 5.8  | 5.5  | 4.6  | 4.5  | 4.6  | 5.2  |
| in Financial and insurance activities; real estate activities   | 5.6   | 5.7  | 5.4  | 4.4  | 5.6  | 5.3  | 5.2  | 5.5  | 6.4  | 6.3  |
| in Professional, scientific and technical activities  | 10.1  | 11.0 | 14.2 | 12.5 | 9.9  | 10.1 | 17.0 | 17.1 | 12.1 | 11.1 |
| in Administrative and support service activities  | 2.5   | 2.8  | 1.2  | 1.5  | 2.7  | 3.0  | 2.4  | 2.3  | 1.7  | 2.2  |
| in Public administration; activities of extraterritorial organisations and bodies   | 9.8   | 9.2  | 14.6 | 13.6 | 9.0  | 8.7  | 8.1  | 7.1  | 8.7  | 7.6  |
| in Education  | 16.9  | 15.8 | 22.7 | 20.4 | 14.2 | 14.2 | 20.2 | 17.4 | 27.5 | 21.5 |
| in Human health and social work activities  | 14.0  | 13.9 | 10.6 | 10.8 | 10.9 | 12.6 | 16.9 | 17.9 | 13.2 | 15.6 |
| in Arts, entertainment and recreation   | 2.1   | 2.2  | 1.4  | 1.5  | 1.8  | 2.2  | 1.7  | 2.2  | 1.3  | 2.3  |
| in Other activities services  | 2.1   | 2.1  | 1.1  | 1.2  | 1.8  | 1.9  | 1.8  | 1.8  | 1.3  | 1.6  |
| in NACE high-technology and or knowledge-intensive sectors  | 7.0   | 7.1  | 3.9  | 4.6  | 6.6  | 6.8  | 6.3  | 6.5  | 5.9  | 5.5  |
| in High and medium high-technology manufacturing  | 5.8   | 5.5  | 1.7  | 1.8  | 4.9  | 4.7  | 4.1  | 4.8  | 2.7  | 2.7  |
| in Knowledge-intensive services   | 64.0  | 63.5 | 72.2 | 69.3 | 57.1 | 58.8 | 73.9 | 71.7 | 73.7 | 69.6 |
| in Knowledge-intensive high-technology services   | 5.4   | 5.7  | 3.0  | 3.6  | 5.8  | 5.7  | 4.9  | 4.8  | 4.3  | 5.3  |
| in Knowledge-intensive market services (except financial intermediation and high-technology services)   | 10.1  | 11.0 | 14.2 | 14.1 | 10.2 | 10.2 | 16.2 | 16.4 | 12.1 | 10.9 |
| in Financial and insurance activities   | 4.8   | 4.8  | 5.3  | 4.3  | 4.8  | 4.5  | 4.9  | 4.9  | 5.6  | 5.4  |
| in Other knowledge-intensive market services (except financial intermediation and high-technology services)   | 43.8  | 42.1 | 49.7 | 47.4 | 36.3 | 38.4 | 48.0 | 45.6 | 51.7 | 48.0 |

Source: Own calculations based on data from Eurostat on Employment in technology and knowledge-intensive NACE Rev. 2 sectors at the national level, by level of education, International Standard Classification of Education (ISCED 2011 levels 5-8) <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>.

the societies and national economies, in a strong relation to the structure of the labour market at a national and transnational level.

As Meek et al. (1991) stated (and is still valid), many national systems of higher education have been experiencing profound changes by being asked to participate more effectively and efficiently in producing a better educated, culturally enriched, and more economically secure society. Therefore, reinforcing the relation between higher education and the labour market.

Reforms frequently express a path-dependent nature, and every higher education system reflects country-specific regulatory and coordination regimes. This also largely reflect national historical and institutional developments, as each national system is embedded into its own regulations and bears nuances and peculiarities (Donina et al. 2015). And that is why along with some similitude, diversity and singularities can be found, due to different policies, political and economic strategies, as well as different relations between higher education and sectors of the economy.

By analysing data, it seems clear the existence of similitudes between the national systems despite the different shades which are observed from country to country. It was possible to conclude from this exploratory analysis that all four countries have been trying to catch up to the EU average in terms of population's qualification. This was less evident in Spain, where the percentage is even above the EU-28 average. Additionally, this catch up can be observed in the employment of graduates despite still having lower percentages comparing to EU.

Comparing to the EU-28, the current position of each country in educational indicators and their link to labour market indicators is quite similar, in spite of some nuances. Among the four, Spain is the most divergent.

When specific occupations or activity sectors are taken into account, singularities between the four countries emerge, while other similitude persist. In all four, the qualifications of managers and executives are below the EU average; also, Services is where most qualified workforce are. Some singularities, such as less qualified professionals in Italy or less qualified technicians in Italy and Portugal, might be a consequence (or a cause) of a different structure of the economy and industry. Furthermore, differences in some activity sectors and in particular those related to high-technology knowledge intense services might occur either by the structure of the demand of study programmes in each country or by the structure of the needs of the labour market. Much of the singularities depend on other factors affecting the relation between higher education and the labour market on a regional and local level. These conclusions can guide future analysis deepening the focus on a regional level, taking into account different weights of high qualified workforce and different technologic sectors. At the same time, the conclusions also reinforce the strength of regional developments in the economic and social sustainability of societies. Newland writes, "universities have the potential to make an enormous contribution to regional development" (Newlands 2003, p. 15). However, as "regional economic development policy and practice are multi-layered with universities involved at different levels and in different roles" (Newlands 2003, p. 15), further analysis should be focused on a regional dimension of the relation between higher education and labour market, differentiating dominant regions from others (Angelis et al. 2016), in each of the four countries.

Other factors – internal and/or external – that weren't controlled in this study might be interfering. One of those might be the population's demographic structure: as Sprague (2016) suggested, reform of higher education should take into account the trend of ageing and depopulation, given their significant implications for higher education policy. Such reforms include increasing adaptability and employability of the labour force, and participation of the population in the labour market. Also migration is an important and not considered factor. Specifically the phenomenon of brain-drain, where people leave their 'home' country for another country in pursuit of tertiary education. In our globalized labour market, this might be a hypothesis for some maladjustment between higher education and employment in some countries.

Another important question is, in which way education and higher education is defined as part and parcel of each country's strategy for economic development. And this depends

quite often on political programmes, political-party's leanings, and the back and forth of the political pendulum.

Comparing and confronting other groups of European countries, the conclusions on similitude are reinforced. Thus, it is unanimous that higher education has been and still is a core value in all of the four countries as universities will be the cultural reference points for their communities, will have an essential role as a social institution, and will contribute to establishing local social dynamics (Paleari et al. 2014). As Zuti and Lukovics argue, "universities are able to positively contribute to the competitiveness of their regions by considering strategic thinking and third mission activities with the help of tools of economic development" (Zuti, Lukovics 2015, p. 29). This is particularly important for a micro- and meso-perspective, and considering regional contexts. This research has furthered an understanding of strategic considerations for regional development with regards to the inter-relation between economic sectors, the labour market and higher education.

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