

**JOB QUALITY OF YOUNG GRADUATES IN SOUTHERN  
EUROPEAN COUNTRIES**

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## Abstract

International policies related to employment and the education system have spread concern about job quality. This dissertation uses the European Union Labour Force Survey to explore the job quality of young bachelor and master graduates in Southern European Countries, namely Portugal, Greece and Italy. After analysing the characteristics of job quality, those were matched with the available information in the database. A fuzzy cluster analysis allowed to understand the different typologies prevailing in each country. The results achieved show that the young graduates (20 to 24 years old) prevail in the typology with the lowest income, involuntary contracts with flexible duration, part-time job and some atypical work, entering the labour market through these conditions and they are searching for another job. The young adult graduates (25 to 29 years old) prevail in a typology with moderate income, contract from seven months to unlimited duration, full-time and working regular hours. However, some graduates are assigned to stable jobs with long-term contract, full-time job working long hours, higher income and disturbances in work-life balance. Considering the distribution of the graduates by job quality, around a third of the sample is aligned with a single typology where slightly more than half has a combination of two. This shows that having a higher education is no longer sufficient to guarantee a high-quality job for all graduates. Policy-makers should take initiatives to encourage employers to foster job quality and allow young people to have a better transition to and trajectory in the labour market.

Keywords: Job quality, Young graduates, Southern European countries, Labour market segmentation

JEL Classification System:

I2 Education and Research Institutions

I26 Returns to Education

J4 Particular Labour Markets

J42 Monopsony; Segmented Labour Markets

## Resumo

As políticas internacionais relacionadas com o emprego e sistema educativo espalharam a preocupação com a qualidade do emprego. Esta dissertação utiliza o *European Union Labour Force Survey* para explorar a qualidade do emprego dos jovens licenciados e mestres nos países do Sul da Europa, nomeadamente, Portugal, Grécia e Itália. Após analisar as características da qualidade do emprego, estas foram adaptadas à informação disponível na base de dados. Uma análise de *cluster* permitiu perceber as diferentes tipologias que prevalecem em cada país. Os resultados obtidos mostram que os jovens (20-24 anos) prevalecem na tipologia com o rendimento mais baixo, contrato involuntário de duração flexível, *part-time* e trabalho atípico, entrando no mercado de trabalho através destas condições, estando à procura de outro emprego. Jovens adultos (25-29 anos) graduados prevalecem numa tipologia com rendimento moderado, contrato de sete meses a duração ilimitada, *full-time* e horas de trabalho típicas. Contudo, alguns graduados têm um emprego estável com contrato indeterminado, *full-time* a trabalhar longas horas, rendimento mais alto e perturbações no equilíbrio entre trabalho e vida pessoal. Considerando a distribuição dos graduados por qualidade de emprego, cerca de um terço da amostra identifica-se com uma tipologia enquanto que pouco mais de metade tem uma combinação entre duas. Isto mostra que ter uma educação superior já não é suficiente para garantir um emprego de alta qualidade para todos os graduados. Responsáveis políticos devem ter iniciativas para incentivar os empregadores a promover a qualidade do emprego e permitir que os jovens tenham uma melhor transição e trajeto dentro do mercado de trabalho.

Palavras-chave: Qualidade do emprego, Jovens graduados, Países do Sul da Europa, segmentação do mercado de trabalho

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# Job Quality of Young Graduates in Southern European Countries

## Table of contents:

Abstract.....	i
Resumo .....	ii
Acknowledgements .....	iii
Index of Tables .....	v
List of Abbreviations .....	v
Introduction .....	1
I – Literature Review .....	4
1.1 Definition of Job Quality .....	4
1.2 Measuring Job Quality .....	8
1.3 International Research .....	14
1.4 Job quality in the skilled labour market: the young graduates .....	16
II – Data and Methodology.....	20
2.1 Data.....	20
2.2 Methodology.....	21
2.2.1 Dimensions: variables for the construction of the typologies .....	22
2.2.1.1 Limitations of the European Union Labour Force Survey .....	28
2.2.2 Fuzzy Clustering .....	29
2.2.3 Table of Descriptive .....	30
III – Results .....	38
3.1 Fuzzy cluster analysis .....	38
3.1.1 Typologies with Portuguese data.....	39
3.1.2 Typologies with Italian data .....	41
3.1.3 Typologies with Greek data.....	43
3.1.4 Comparing the typologies of the three countries.....	45
3.2 Distribution of the sample by country typologies .....	48
3.2.1 Distribution of young graduates in Portugal .....	49
3.2.2 Distribution of young graduates in Italy.....	49
3.2.3 Distribution of young graduates in Greece.....	50
3.2.4 Distribution of young graduates in the Southern European countries.....	50
IV – Discussion .....	52
V – Conclusions .....	56
Bibliography .....	58
Appendixes .....	62

## Index of Tables

Table 1 – Number of individuals in the full database of EU-LFS and in the sample for the present study

Table 2 - Descriptive analysis: Job quality variables

Table 3 – Descriptive analysis: Characteristics associated with the job

Table 4 – Fuzzy cluster analysis of the Portuguese sample data (the Table indicates the prevailing characteristics)

Table 5 – Fuzzy cluster analysis of the Italian sample data (the Table indicates the prevailing characteristics)

Table 6 – Fuzzy cluster analysis of the Greek sample data (the Table indicates the prevailing characteristics)

Table 7 – Distribution of the Portuguese sample by typologies (full membership set to 0.85)

Table 8 – Distribution of the Italian sample by typologies (full membership set to 0.85)

Table 9 – Distribution of the Greek sample by typologies (full membership set to 0.85)

## List of Abbreviations

EU European Union

EU-LFS European Union Labour Force Survey

## Introduction

Findlay, Kalleberg and Warhurst (2013:442) consider that the new importance and recurrence of the theme, job quality, between social scientists and policy-makers is due to the possible influence ‘*on the individual, the firm and national well-being*’. The International Labour Organization introduced the Decent Work Agenda, that focused on improving the chances of humans (both men and woman) to have a decent work, characterised by ‘*conditions of freedom, equity, security and human dignity*’ (ILO, 1999:3). This report highlights the need for the creation of jobs with acceptable quality, celebrating the marriage that should exist between the quantity of employment and their quality, and realizing that different societies may have a different notion of what quality is (e.g. forms and conditions of work, feelings of value or satisfaction). The European Council in Lisbon (2000) established a new strategic goal to reinforce the employment, the economic reform, to improve the social welfare and modernise the education system (European Council, 2000). In this meeting, the European Union (EU) set a ‘*new strategic goal for the next decade: to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion.*’. Regarding ‘more and better jobs’, it was given more attention to the growth than the quality of jobs; more jobs are not automatically translated into more quality. In fact, some of the new jobs had a flexible contract, meaning that they were involuntary temporary positions or part-time jobs, agency work and low-wage jobs, being the young individuals one of the vulnerable groups where this was common (European Parliament, 2010). Due to a greater knowledge on the topic, these initiatives are a starting point to demonstrate the importance of job quality, triggering the study of this phenomenon. Our study contributes to this literature through an analysis of the job quality of skilled workers.

Job quality is connected to employment-related conditions that have an impact on the well-being of the employees (Holman, 2013; Okay-Somerville and Scholarios, 2013) affecting the well-being of individuals in their personal life and might be different according to their life stage (Knox, Warhurst, and Pocock, 2011). It can lead to higher productivity and can be useful in predicting turnover (Clark, 2005) since poor job quality can lead to the desire to quit the organisation and change job (Bocuzzo and Gianecchini, 2015). Job quality interferes with individuals, families, communities, and countries and the policy-makers already realized that this topic is important in improving individual



well-being and acquiring a national competitive advantage. Therefore it is essential to have a greater understanding of the concept of job quality and establish more consensus (in three key areas: dimensions of job quality, factors that influence it and its outcomes or impacts) to have international, national and regional policies to foster the quality of jobs, and to have a more accurate cross-disciplinary and cross-national research (Findlay, Kalleberg and Warhurst, 2013).

This dissertation aims to characterise the job quality among young graduates in three Southern European countries. The research questions guiding our study are: Which type of jobs prevails in a skilled labour market? What explains the prevalence of certain categories of graduates in high (low) quality jobs?

It uses the information provided by the European Union Labour Force Survey (EU-LFS) to cluster the chosen job characteristics and the characteristics associated with the job by country. In doing so, it will be possible to see the reality of each country and understand the nuances of the combination of the characteristics that prevail, giving us insights of the type of characteristics that stay together in different typologies. The goals of the study are:

- i) Identify typologies of jobs according to different dimensions of job quality reported in the literature;
- ii) Examine which categories of graduates are assigned to good (bad) jobs;
- iii) Explore differences and similarities across the selected Southern European countries.

This study not only contributes to the literature of the graduates but also for the international study of job quality. It provides an innovative way to show results where one can see the intersection of the job characteristics, giving more insights on the impact of them, as well as the distribution of the population by the existing typologies.

The rest of the report is organised as follows. The first chapter is focused on the literature review of job quality, such as the definition of job quality, the situations that the authors faced while measuring it and what has been done so far, providing information about the context of this topic, internationally and focusing on the young graduates. Chapter two describes the data and methodology of this study, detailing the dimensions used and the limitations of the database. While chapter three presents the empirical

## Job Quality of Young Graduates in Southern European Countries

evidence, the fourth chapter outlines the discussion of the results. Finally, chapter five, draws the limitations, suggestions for future research and conclusions of this study.

## I – Literature Review

### 1.1 Definition of Job Quality

Although there have been recurrent debates about job quality, with social, economic and political views, it is difficult to define and measure it and is far from a consensual subject. Since job quality is studied in different social sciences (Cooke, Donaghey and Zeytinoglu, 2013; Findlay, Kalleberg and Warhurst, 2013), the approach that social scientists have towards this topic is different (Kalleberg and Vaisey, 2005), leading to diverse key objectives, and therefore a variety of measures. Due to the lack of academic agreement regarding the concept of job quality and the way to measure it leads policy-makers to the initiatives presented above to flourish a broader understanding of job quality (Cooke, Donaghey and Zeytinoglu, 2013). All this has implications for the scientific community, but also for the contribution that policy interventions have in the future of job quality (Findlay, Kalleberg and Warhurst, 2013).

Osterman (2013) argues that job quality is the result of employers' decisions regarding employment conditions they provide. To understand the origin of those decisions, the author provides us with food for thought with two different ways of thinking, the theory of compensating differentials and a more institutional perspective. The first theory was originally proposed by Adam Smith in 1937, stating that both advantages and disadvantages of different employments nearby should tend to an equilibrium, suggesting that, with everything constant, some jobs will require higher wages to compensate undesirable characteristics of the job and that employees are willing to accept lower wages for more pleasant job characteristics (Smith, 1978). While some empirical literature supports the theory, there are still studies with inconclusive outcomes. The disagreeable job characteristic that has more research found is the risk of death. If we consider this theory, the employers need to provide a package of conditions that takes into consideration the benefits and disadvantages of the work combining it with wages to attract employees. The attraction of the choices results from the trade-offs of the workforce and, therefore, the change in the job quality over time is a consequence of the workforce equilibrium and it is not related to firms' choices. The institutional perspective not only gives weight to economic pressures but also includes sociological and political considerations. The establishment of Internal Labour Markets provides institutional rules for employment practices (Doeringer and Piore, 1971; Kerr, 1954) such as wages,

promotions, and training. Firms can define their strategy by combining different weights of the economic, political or governmental forces and their institutional factors (e.g. internal firm policy). With this institutional approach, there is a mix of forces (economic, social and political) that influence the job quality over the years.

These institutional economists suggested another relevant theory, the dual labour market theory, that indicates a division in the labour market that tends to cluster: a primary sector with 'good jobs' (employment stability, high wages, career opportunities, high skills – protected employees) and a secondary sector with 'bad jobs' (employees outside the internal labour market, high labour turnover, low wages, few career opportunities, low skills with no training – disadvantages groups like the younger workers) (Doeringer and Piore, 1971). Facing this possibility, the 'bad jobs' will translate into individuals that are not satisfied, will harm their well-being, will induce inequality and for an organisation, it will lead to more costs of recruitment and productivity swings, while the 'good jobs' will enhance the employment participation and consequently lower the unemployment rates (Findlay et al, 2017).

Some argue that labour market regulation creates duality and creates insiders and outsiders (e.g. Boeri, 2010; Centeno and Novo, 2012). This segmentation fosters two-tier systems where some employees are overprotected relative to others. This was a result of a high employment protection for employees with open-ended contracts through rules of initiation and termination of the employment relationship, that led to the use of fixed-term contracts to increase the labour flexibility (Centeno and Novo, 2012). All sorts of temporary work appeared and the regulations of the open-ended contracts did not change creating a bigger gap of protection between the employees and evidencing the segmentation (Boeri, 2010). The employment protection gap that exists in the countries influences the type of contracts that organisations use and the conversion rate of temporary contracts to permanent contracts (Centeno and Novo, 2012). This situation strongly influences young individuals, since it is common to enter the labour market and organisations for the first time through a fixed-term contract to verify the match between the employee and the employer, meaning that at the end of the contract, this may be renewed, transformed into an open-ended contract, or a termination of the relationship (Boeri, 2010; Centeno and Novo, 2012).

Although with changes over time in the employment and welfare regime, Portugal, Italy, Greece and Spain, still have common characteristics of the social model,

especially the '*pronounced labour market segmentation and familialism*' (family is responsible for welfare provision) (Karamessini, 2008:44). These countries have had a strict employment protection legislation that benefits the male breadwinner, neglecting other groups of the labour force, such as the young individuals, females and migrants that face a high rate of unemployment and are more easily involved in irregular or informal labour market. To have greater labour flexibility, it was spread the use of the fixed-term contracts that strengthened the labour market segmentation between older workers that were already protected versus the younger workers. This has led to the need to reduce the protection of employees with a permanent contract, restrict and regulate the temporary employment. Moreover, it was established a system of unemployment compensation. With the increase of women's participation into the labour market, families began to have dual-earner couples changing the perception of female and male career and affecting the care regime of these countries that were based on female family members (mostly mums and grandmothers). However, the family is still the centre of welfare provision: support of education, the transition from study to work, support for youth unemployment and long-term care of the elderly. The percentage of individuals from 20 to 29 years old with tertiary education in Southern European countries have been increasing, 14.7% in Portugal, 12.2% in Italy, 18.3% in Greece and 32.8% in Spain against 21.5% in the EU-25 in 2006 versus 27.6% in Portugal, 18.1% in Italy, 27.2% in Greece and 34.3 in Spain against 28.6% in EU-28 in 2017<sup>1</sup>. The rise of the education level in younger generations causes them to spend more years studying, being more expensive to have children, delaying the departure of young individuals from the parents' house and their independence and leaving the family formation for later, jeopardizing the role of the family in this social model.

There are multiple perspectives and approaches to the same subject, and job quality is no exception: the psychologists focus on the intrinsic job characteristics (Okay-Somerville and Scholarios, 2013) emphasising those are the source of job satisfaction instead of the extrinsic job characteristics (Cooke, Donaghey and Zeytinoglu, 2013), analysing psychological origins of job satisfaction (Kalleberg and Vaisey, 2005) and promoting knowledge related to the choices and attitudes of individuals that impact their satisfaction with the job (Findlay, Kalleberg and Warhurst, 2013); sociologists notice the organisational systems of governance and the control and autonomy of workers activities

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<sup>1</sup> Eurostat online database: Young people by educational attainment level, sex and age (yth\_demo\_040).

(Findlay, Kalleberg and Warhurst, 2013; Kalleberg and Vaisey, 2005) having more concern with status, skills, and discretion at work (Okay-Somerville and Scholarios, 2013), job autonomy, effort and skill levels (Cooke, Donaghey and Zeytinoglu, 2013); economists focus on labour market theories to explain differences in the economic aspects of jobs (e.g. earnings and fringe benefits); and political scientists grant information on differences between countries, exploring institutional regimes (Findlay, Kalleberg and Warhurst, 2013). These contributions of social sciences only give a partial understanding of the topic, therefore, to fully comprehend it, one should use a multi-dimensional approach and take into consideration the economic and non-economic sources of differences in job quality (Kalleberg and Vaisey, 2005).

For Cooke, Donaghey and Zeytinoglu (2013) the job quality does not go beyond the job experience of an individual in an organisation. Okay-Somerville and Scholarios (2013) while studying the job quality in emerging graduate occupations, considered job quality as the trigger of employment-related attitudes and well-being. Holman (2013) defined job quality as the positive outcomes that job and employment characteristics have on employees' well-being, such as psychological and physical well-being and job satisfaction. There are several authors who associate job quality with well-being, because as Kalleberg and Vaisey (2005:431) emphasise, there is literature in different social sciences (sociology, psychology, and economics) showing that the quality of work of an individual has an impact on their '*social, psychological and economic well-being*'. This impact goes further of the individual sphere, affecting the well-being of individuals in their personal life (e.g. children or relationships) or situations and activities outside the workplace (Knox, Warhurst, and Pocock, 2011). Looking at the organisational perspective, job satisfaction can help predict turnover, can lead to higher productivity at work and may reduce the absenteeism in organisations (Clark, 2005). Boccuzzo and Gianecchini (2015) argue that a job quality composite indicator can predict organisational behaviours of the employees. This perspective opens the eyes to the importance of job quality for the organisations and what they can do to improve it. Understanding what constitutes a 'good job' that creates a positive impact on the individuals, is a step towards being able to boost that kind of jobs, having a broader impact (Knox, Warhurst, and Pocock, 2011). These authors also call attention for what constitutes a 'good' job for a teenager might be very different from a stage in life where the same individual has

children to take care of, meaning that if there are several jobs with ‘good characteristics’ adapted to the life cycle of the individuals, those will have a life cycle of good jobs.

As one can note, the study of job quality is complex because it is a multidisciplinary phenomenon. This is not the only struggle in defining job quality, as the changes in the society over the years have brought more concerns and situations to analyse, developing the notion of what is a ‘good job’, creating different opinions and bringing more complexity to the topic.

### 1.2 Measuring Job Quality

Although there are numerous jobs and ways to characterise them, leading to struggles when generalizing job quality, even to potential incoherence, with all the changes through this era, there is a need to understand and describe what is happening (Osterman, 2013). More attention from the political and social perspective in the last years, triggered some studies of job quality at the macro level, measuring it as a development indicator of a country or to compare countries (Bocuzzo and Gianecchini, 2015). In fact, considering a more economic literature, there are two approaches for measuring job quality: a macro-level approach where the indicators are based on the relevant macroeconomic measures that characterise the job quality, creating the possibility to compare countries; and a micro-level approach, that focus more on the characteristics of the job itself and the satisfaction with the job (Simões, Crespo and Pinto, 2015). Focusing on the last, there are two main strategies to conceptualise and measure job quality: one can combine several dimensions of work and have an overall measure, or one can measure it based on the general assessment workers have of their job - the most used is the degree of job satisfaction (Kalleberg and Vaisey, 2005). To be able to measure job quality, it is necessary to contemplate the characteristics that should be used to measure it and how to evaluate it, considering several options, like the use of only one or several variables and that the measures used may be subjective, objective or a mix of both (Bocuzzo and Gianecchini, 2015). Objective and subjective factors have different impacts, for example, objective factors such as wages can help fight inequality being subject to existing politics on the topic, and subjective factors like job security have a greater impact on the employees’ attitudes and well-being (Okay-Somerville and Scholarios, 2013). Throughout the years, there were authors that used a single indicator

as measure or multiple indicators (where there are still some disagreement regarding their weights), focusing on different main points, for example, '*economists typically focus on pay, sociologists focus on skill and autonomy and psychologists focus on job satisfaction*' which may have slight differences within disciplines (Findlay, Kalleberg and Warhurst, 2013:443). Okay-Somerville and Scholarios (2013) support the path of studying job quality with an interdisciplinary approach, with objective and subjective factors that describe job quality, contemplating employees' well-being and the influence that policy-makers can have. Díaz-Chao, Ficapal-Cusí and Torrent-Sellens (2016) also conclude the demand for using a multidimensional approach to job quality, since this analysis should not be limited to the workplace of individuals. As this study approaches job quality as a multidimensional phenomenon, it is necessary to define the relevant characteristics of job quality into one or a system of indicators considering the overall job quality as a combination of those aspects (Muñoz de Bustillo et al, 2009).

Regardless of the method chosen to select the most important dimensions to define job quality, those decisions are based on previous research on the subject, which should contemplate different perspectives to fully englobe the multidisciplinary nature of job quality (Muñoz de Bustillo et al, 2009), therefore, this dissertation will evidence some papers that were relevant to the choice of the variables.

After the Lisbon and Nice European Councils, there was a commitment to establishing indicators to monitor poverty and social exclusion and indicators to measure the progress of job quality (Muñoz de Bustillo et al, 2009; Simões, Crespo and Pinto, 2015). One important step towards this was the decision from the Members States, to entrust the Commission and Council to create a set of indicators and show them in the next European Council, which was in Laeken, Belgium, in December 2001 (Muñoz de Bustillo et al, 2009). The Commission proposed a set of indicators of job quality focus on a) the characteristics of the job itself and b) work and wider labour market context; using the main European data sources (like the EU-LFS) to measure the indicators (European Commission, 2001). The Laeken indicators cover a broad spectrum of topics that have been criticized: some variables do not have a direct link with job quality and are associated with other topics, there is redundant information, it is used specific subgroups in the overall results instead of measuring the results of each subgroup of population and then compare it, it was neglected some details like not considering if the part-time is voluntary or not, and it was omitted the wages that is one of the most important measures



considered by other authors (Muñoz de Bustillo et al, 2009; Simões, Crespo and Pinto, 2015). Due to the need to improve the indicators and for all the European institutions to use the same measures, more work needed to be done.

As a response to the insufficient indicators on job quality at the European level and aiming to achieve ‘more and better jobs’, the European Trade Union Institute developed the European Job Quality Index in 2008. Muñoz de Bustillo et al. (2009) highlights that this index is conducted from a workers’ perspective, therefore the variables are measured at an individual level with some exceptions. This index intends to make comparisons across European countries over time, being calculated every year for each member of the EU, by men, women, total of the country and an average for all countries together, allowing a comparison between gender and manifesting the importance of gender in job quality; although the comparison over time is more difficult because some variables cannot be updated yearly due to the information being drawn from five different data sources with different periodicities (Leschke, Watt and Finn, 2008). Further in the same document, one realizes that multiple data sources increase the complexity of having the same relevant information over the years since surveys are always evolving, having or not the same variables in the study. Due to the multifaceted phenomenon, the index englobes six sub-indices composed with objective and subjective measures: wages, non-standard forms of employment, work-life balance and working time, working conditions and job security, access to training and career advancement, and collective interest representation and participation (Leschke and Watt, 2008). The authors also mentioned that one weakness of the analysis was the lack of relevant comparative data in some fields, alerting for the fact, that sometimes measures and assessments are limited to the lack of data to include or develop a better understanding of the topic.

The European Working Conditions Survey, a five-yearly report, provides relevant information about the conditions of work in Europe. It is frequently used by authors to analyse the evolution and differences of job quality in the European countries because it englobes variables related to work and employment that are connected to job quality, although the survey does not allow an analysis within countries by gender, sectors, occupations or other variables because of the small sample (Muñoz de Bustillo et al, 2009). For example, Simões, Crespo and Pinto (2015) used this survey to analyse the determinants of job quality in Europe. The authors applied cluster analysis into the eleven dimensions chosen to characterise job quality and formed three homogeneous country

groups based on similarities. In this study, the Southern European countries were divided, with Portugal and Greece joining the Central and Eastern Europe in the first group and Italy and Spain in the second group with most of the continental European countries, Ireland and the United Kingdom. The second group presents an intermediate level of job quality, while the first group has the lowest level, which is also the most heterogeneous group. Regarding the potential determinants of job quality, there is a gap between the male and female job quality level; job quality increases with age (the effect is more prevalent in the group 2 than in group 1); jobs in the service sector have on average better levels than other sectors; and in the groups where the Southern European countries are, the influence of the education is higher indicating that more years of education can lead to higher quality jobs.

Clark (2005) analysed the changes in job quality in some countries over the 1990s, with the perspective that the overall job satisfaction is the sum of job outcomes and the weights of those are the job values (a value that workers give to different job outcomes). The author identified six outcomes that should be measured: pay; hours of work; future prospects – promotion and job security; how hard or difficult the job is; job content – interest, prestige and independence; and interpersonal relationships. Among the top workers' preferences are job security and some job characteristics like having an interesting job, the work itself or being able to work independently. During this period, the craving to reduce the hours worked has raised in all countries in study.

Kalleberg and Vaisey (2005) while studying the impact of specific aspects that lead workers of the International Association of Machinists in North America to evaluate a job as a 'good' one, used as components some aspects they considered of central discussion among job quality research such as: pay satisfaction, fringe benefits satisfaction (both economic benefits), degree of autonomy, intrinsic rewards from the job (both non-economic benefits), perceived security and promotion satisfaction (opportunities for advancement).

Gallie (2007:6) analysed the core dimensions of job quality to compare the job quality among European countries and assess patterns over time, and suggests: '*skill level, the degree of task discretion or autonomy, the opportunities for skill development, job security and the extent to which jobs are compatible with work-life balance*'. To note that this author also suggests that pay should be englobed in the context of changing skill profiles and work pressure in work-family balance. The author compares countries with

different institutional systems, exploring some diverse theoretical perspectives and argues that the employment regime theory is the most relevant to explain the influences of cross-national variation in job quality.

Findlay, Kalleberg and Warhurst (2013) highlight that, despite the articles they reviewed did not share a single definition of job quality, there was a significant consensus on the core dimensions of job quality, such as: pay and benefits, degree of job security, challenging demands aligned with workers' capabilities, development of new skills, flexibility in working hours and schedules, degree to which workers engaged in decision-making and if it is allowed task discretion and control.

Okay-Somerville and Scholarios (2013) while studying the job quality in emerging graduate occupations, used a multidimensional conceptualisation of job quality that englobed pay, job security, skills underutilization and job content. The authors pinpoint five areas that they assume might be different between emerging graduate occupations and traditional graduate occupations: if skills connected with graduate jobs (different from non-graduates) are used in emerging occupations, perceived match between graduates' skills and the skills required to perform the job, the job content (e.g. the control and opportunity for skill development), the job security and pay.

Holman (2013) selected measures that met his definition of job quality and that cover the five main work and employment-related factors (dimensions) of a job, more specifically, work organisation, wages and payment system, security and flexibility, skills and development and engagement and representation. Holman had an objective approach to job quality, assuming that these features of the job are the main origin of employee experiences like employee well-being.

Boccuzzo and Gianecchini (2015) split the characteristics that are representative of the job quality into three dimensions. The economic dimension englobes the flow of economic exchange of the job like wages, benefits and the contractual arrangement, more precisely the contractual stability. The professional dimension is related to the human resources management practices of the company that have an impact on the professional development and future of employees' career, considering career advancement opportunities, training and development - focusing on the mismatch between what graduates learn and what is required to do in the job, that could be translated into educational and skills mismatching - the level of responsibility and teamwork. The work-

life balance dimension is concerned with the balance between the working life and personal life, paying attention to the commuting time and working hours.

Using a multidimensional approach to job quality and disaggregated microdata to analyse their determinants and capture the effects of the economic crisis in Spain, Díaz-Chao, Ficapal-Cusí and Torrent-Sellens (2016) constructed a composite index with five dimensions: 1 - intrinsic job quality (satisfaction with the job, with motivation, with personal development, and if the education of the work empowers him/her to do their job), 2 - work organisation and workplace relationships (satisfaction with autonomy, superior's assessment, participation in decision-making, teamwork, degree of stress, monotony or routine in tasks, with perceived opportunities for promotion, perception of relationships among workers and between workers and directors), 3 - working conditions, work intensity, and health and safety at work (workspace, lighting conditions, commuting time, weekly working hours, satisfaction with leave entitlements, working day, health and safety at work and perception of risks in the workplace), 4 - extrinsic rewards (satisfaction with wage, social benefits, flexible working hours and job stability, experience in the firm and firm training), finally, 5 - work-life balance (satisfaction with personal life, time devoted to children, partner's involvement in household chores and time available for personal life outside work). The authors mention that it is also normal to see studies including the extrinsic rewards into the overall satisfaction dimension.

Since it is difficult to list all important characteristics of a job and give them weights, or even understand if a set of characteristics is positive to some individuals, there are authors that rely on a single summary measure like job satisfaction because it is the perception of how individuals feel about their job considering all the variables and circumstances that they feel it is important (Osterman, 2013). The individuals when considering the overall job satisfaction might only think on the short-time goals and benefits and not the long-term interests, may be pressured by the type of society or individuals may conform to what they feel they can achieve (Gallie, 2007). While it might be useful to study the job satisfaction to predict behaviours such as quits, when it comes to comparing trends in job satisfaction (between individuals or countries) one does not know if the changes are due to the objective job quality, importance of characteristics or their weight (Osterman, 2013). Muñoz de Bustillo et al. (2009) highlight the inconsistency of using this indicator from an international perspective, comparative research and indicate that are other variables that influence the job satisfaction. There are

authors, some listed above, used the global job satisfaction as a measure and others used the satisfaction as a measure of a specific characteristic of the overall job quality, using a subjective view.

Considering all dimensions of the jobs, by having some that are 'good' does not necessarily mean that all dimensions are of high quality (Osterman, 2013). Kalleberg and Vaisey (2005) indicate that when analysing the relationship between specific and overall job quality, the job characteristics should be seen as one package containing rewards and costs. The goal with this information is not to create a composite index or a system of indicators like the authors mentioned above did, rather, it is the beginning of a research that will help choose the relevant characteristics of job quality based on the available data. This dissertation will select those variables, creating typologies with prevailing characteristics within the young graduates' segment for each Southern European country.

### 1.3 International Research

The list of job characteristics and their importance in describing job quality has changed over the years as a result of the changes in the economic history and cultural values (Gallie, 2007). When researchers want to investigate job quality across more than one country, they need to take into consideration additional issues that may influence the results such as cultural, structural and economic differences (Muñoz de Bustillo et al, 2009). For instance, Cooke, Donaghey and Zeytinoglu (2013) compared rural workers from two islands that have faced similar circumstances, culturally and economically. The cultural differences reflect the individuals' perceptions of well-being and aspirations in job quality (Muñoz de Bustillo et al, 2009) as well as country-based values that influence individual opinion and determine some socially acceptable behaviours (Gallie, 2007). The main concern facing structural differences is the multiple social systems that exist among countries; the institutional and economic context influence the employment of the country, which in turn is connected with the social systems characteristics and that relationship may produce different outcomes depending on the country (Muñoz de Bustillo et al, 2009). For example, Lloyd and Payne (2011) while exploring the differences between vocational teachers in England, Wales and Norway, indicated that partially those differences came from the different institutional and political contexts such as different national-based systems of employment and policy-making regimes.

## Job Quality of Young Graduates in Southern European Countries

It is important that researchers understand the global context of the countries under study, to be able to analyse the results more accurately taking into consideration major differences between countries in the interpretation of results (Muñoz de Bustillo et al, 2009). Based on the institutional theory, the institutional regime associated with a country will influence job quality, in the sense that the national differences in institutional regimes are one of the reasons for the observed variation of job quality between countries (Holman, 2013). There are diverse paths to determine institutional regimes and some topics to have in mind that may influence job quality are industrial relations, financial systems, wage bargaining system, education and training system, welfare system, work organisation practices and labour market policies (European Commission, 2008; Holman, 2013). When analysing information coming from countries that belong to the same institutional regime, these topics are expected to be similar. However, does it mean they influence the job quality in the same way? By restricting the study to countries that faced the same economic difficulties, will the results be more similar?

National institutional characteristics have a strong impact on national and firm policy, which in turn influences the configuration of the quantity and quality of jobs (Findlay et al. 2017). The country not only influences the culture of the organisation and employees' behaviours but might also restrict by law some practices that influence the human resources management, such as the type of contracts, employment protection, the existence of the minimum wage, power and rights of the collective bargaining. The human resources management strategy needs to consider the best options regarding, for example, employment contract, working time, economic benefits, job design, training and development, advancement opportunities, policies for work-life balance; that must be aligned with the culture of the organisation. These decisions can have an impact on job quality, as Boccuzzo and Gianecchini (2015) points out with the creation of a dimension of job quality that translates the decisions of the human resources management practices related to the accumulation of human capital and employees' working conditions. This is a step to acknowledge the importance of the relation between human resources and job quality. Connell, Burgess, and Hannif (2008) state that due to the large study of job quality at the aggregate level there are not many studies linking the human resources practices and their impact on the job quality, however, there is a rising concern to the achievement of organisational goals while caring for employees' well-being, alerting for the importance of evaluating and monitoring the relationship between human resources

practices and job quality not only for the organisation but also for the economy. The authors also mention the organisations can bet on programs to foster quality and become a top choice to work for.

### 1.4 Job quality in the skilled labour market: the young graduates

Wanting to know if the perceived job quality would be different between younger and older workers, Kalleberg and Vaisey (2005) calculated and presented the results for the younger workers, comprising the age between 18 and 30 years, and the older workers, with 31 or more years. Cooke, Donaghey and Zeytinoglu (2013) also specified the target age of their research because the authors assumed the attitudes towards the job, the notion of work and the socio-economical context would be different between younger and older rural workers. In a knowledge-based economy it would be expected that individuals with higher education would have more benefits or at least more opportunities to be successful in life, what may lead to the deduction that young graduates fit in a segment of 'good' jobs, not being common the individual study of this segment (Bocuzzo and Gianecchini, 2015), however, more opportunities do not automatically translate into higher job quality (Lombardo and Passarelli, 2011). The latest global economic recession has changed young graduates' expectations of the activities and benefits of their first job (Deal, Altman, and Rogelberg, 2010), in fact, it is not only the expectations that are changing but also the type of offer graduates had a few years ago and nowadays (Okay-Somerville and Scholarios, 2013).

Based on the study by Kalleberg and Vaisey (2005) there are differences between what younger and older workers consider to be fundamental for a job to be 'good'. Regarding younger workers it appears the combination of the following job characteristics is enough to produce 'good' jobs: autonomy (autonomy over work tasks), benefits (e.g. health insurance or pension benefits) and intrinsic rewards (job interesting, challenging, use of skills and abilities, different activities and learn new things); and, younger workers are also satisfied with the combination of autonomy, benefits, and satisfaction with payment. Older workers have more pathways to consider a job 'good', although, three of the four, has the combination of autonomy and benefits. This may suggest that over time, workers found different ways to feel professionally fulfilled, being more flexible with what makes a 'good' job. From all different combinations by younger

and older workers, there are components that appear more times, suggesting some are more important than others, specifically, the autonomy, benefits and intrinsic rewards. As shown, a job to be considered 'good' or at least above the average, needs to combine satisfaction from economic and non-economic benefits.

Lombardo and Passarelli (2011) noted the disciplinary field is a key aspect of graduates' job quality. This study in southern Italy explores the job quality of graduates in the labour market three years after completing the masters' university degree. Their study points out that some areas like Engineering have more stable jobs than Humanities, which is also explained by the set of characteristics of the disciplinary field and the country, where, self-employed engineers are considered to have a stable job and at the beginning of a career in humanities it is normal to have temporary jobs. Also based on the disciplinary field there are relevant differences regarding the match between the education graduates have and feel it is necessary to perform the job and their wage level. Similarly, Boccuzzo and Gianecchini (2015) also recognized the benefits of some fields in distinct areas of job quality. These authors developed a composite indicator specifically to measure the young graduates' job quality. All decisions were made considering the particular characteristics of this segment. After three years of graduation, the difference in the job quality by gender is quite visible, being the men that presented better overall results (higher results in the professional and economic dimension, while females having higher results on work-life balance). Another difference can be seen in the job quality of the bachelor versus master students, where the last ones have higher results. It is also shown that although bigger companies provide higher job quality results regarding wages, training, and promotion, smaller companies have better results on the work-life balance dimension. Differences can also be found in the sector of activity, wherein manufacturing industry presents better quality jobs than in the agriculture or services industries, which is problematic since most of the sample is working on the service sector. Based on their results, Boccuzzo and Gianecchini (2015) suggest that young graduates are captivated by jobs where they can apply what they have learned in university as well as expand their knowledge and skills, progress in the career ladder and have good economic conditions. In fact, the professional development and economic conditions are more important in defining young graduates' job quality than the work-life balance, probably because the sample had not many individuals with children, and maybe the graduates are willing to neglect this dimension at the beginning of their career to reach other goals.



## Job Quality of Young Graduates in Southern European Countries

As mentioned before, there have been some changes in what was a 'typical' graduate job. Based on Okay-Somerville and Scholarios' (2013) research, graduates in emerging occupations report relying less on graduate skills like numeracy, influence, planning and client communication than traditional occupations, also, they report less use of skills acquired in the education, less opportunity to use skills, job control and pay, having a lower global level of job quality that influences negatively the job satisfaction and the organisational commitment. The authors also showed the most determinant characteristics of job quality for graduates are job control and opportunity for skill use, suggesting that these individuals give more importance to intrinsic job features than economic rewards. One cannot also forget, that graduates may expect higher economic rewards due to their education and therefore, they might give more importance to other features because rewards are something that should be more stable and recurrent in all their current and future jobs.

This was not the only thing that changed. Díaz-Chao, Ficapal-Cusí, and Torrent-Sellens (2017) while analysing the job quality before and after the crisis in Spain, noticed the rise in the average age of the workers in all enterprise-sizes, suggesting a behaviour of exclusion of younger workers in times like this. Further, the results indicated that the crisis had more impact on employees with lower education. There was a decrease in the jobs that only required primary education, oscillations in vocational and secondary education in small and medium enterprises and a rise in the employment that requires an education degree, especially in larger enterprises.

Given this scenario, it is interesting to think about the preparation graduates should have to enter the labour market and whether this affects their job quality. González-Romá, Gamboa, and Peiró (2018) examined if some indicators of employability were related to university graduates' job quality. The authors included 5 indicators into job quality: pay, hierarchical level of current job, vertical match (education required for the job and education the graduate has), horizontal match (relation between degree subject of the education and their job) and job satisfaction. The results achieved in their investigation indicate that some employability indicators are positively related to indicators of job quality: career identity (graduates knowing what they want to be and striving to achieve it) was positively related to all indicators previously mentioned, social capital was related to four indicators (except pay) and human capital - that was divided in the specific degree of the graduate, formal postgraduate course and working experience

## Job Quality of Young Graduates in Southern European Countries

– showed different results, with degree subject and work experience being positively related to all job quality indicators and postgraduate formal education with only two, hierarchical level and horizontal match. This research reveals some areas that should receive more attention to the inclusion of graduates in the labour market as well as an improvement in their job quality. Programs to help individuals discover their subject degree and the employment opportunities in each area, universities providing alumni meetings with current graduates or other professional activities, mandatory internships during the university, are some ideas that can lead to the improvement of job quality by graduates. Another thing that pops up in these results is the impact of having a postgraduate course (e.g. master) only on two of the five job quality indicators, in this case, it influences the hierarchical level one individual may reach and the chance to find a job fitting their educational degree.

Based on the examined literature, this study tests empirically the labour market segmentation hypothesis in that *good (bad) employment conditions cluster together* (Hypothesis 1). Furthermore, in the line of the same theoretical framework, we consider that *some categories of graduates prevail in a certain type of jobs* (Hypothesis 2).

## II – Data and Methodology

### 2.1 Data

The empirical analysis will use secondary-data provided by the European Union Labour Force Survey (EU-LFS) referring to the year of 2015. This survey is conducted on the household sample of all the Member States in the study providing information on labour participation and on related persons outside the labour force. In fact, each countries' national statistical institute is responsible for all procedures of the survey, taking into consideration the requirements of regulation and specific guidelines to produce comparable and harmonized data (use of the same concepts and definitions, common classifications, registers the same set of characteristics and follows the International Labour Organization guidelines) that is processed by Eurostat (for more details see, for example, Eurostat (2003) and Eurostat (2016a)). The EU-LFS has a considerable sample size allowing for extensive analysis by secondary variables within each country (Muñoz de Bustillo et al, 2009).

Other authors already used this database to analyse and describe a specific labour market: with a psychological perspective using vocational interests to classify occupations of workers (Ghetta et al, 2018), to describe the employment profiles in the cultural and creative industries (O'Brien et al, 2016) or to explore the involuntary part-time workers (Cam, 2012). It has also been used to analyse information from more than one labour market, for example, to see the migration flow from Poland to the United Kingdom and to estimate migration flows (Wiśniowski, 2017). When studying the role of job quality, authors can design their own model and gather the information themselves or use a microdata from general surveys, Leschke and Watt (2008) used the EU-LFS to extract information regarding some indicators for their analysis. The choice of using EU-LFS data was mainly for three reasons: covers all the EU countries, provides yearly based information and is comparable within the countries due to harmonised results over time (Leschke, Watt and Finn, 2008).

This study will focus on the Southern European countries. Holman (2013) called for the attention of how jobs are expressed within an institutional regime. In his paper, the Southern European regime englobed the following countries: Cyprus, Spain, Greece, Italy, Malta and Portugal. Leschke and Watt (2008) when proceeding with country clustering, were having doubts regarding the classification of Italy (either Southern or

Continental), Malta and Cyprus (either New Member States from 2004 or Southern), thus, they assumed those two categorizations to compare averages and standard deviations. The typology where Italy was in the Southern European countries and Malta and Cyprus were in the New Members States had more coherence. This analysis will restrict the attention to countries that are members of the EU for several years and the ones that suffer the most with the last economic crisis: Portugal, Spain, Italy and Greece (Zamora-Kapoor and Coller, 2014). Since each country provides the information for the Labour Force Survey database, it is necessary to analyse four databases. There is a need for codification to have comparable data for further analysis, consequently, this study proceeded with the codification of the variables in the Portuguese Labour Force Survey understanding how they behaved, and only then, the same codification was done for the other databases. Since job quality is a multidisciplinary phenomenon, this study will analyse several variables that characterise it. The Spanish Labour Force Survey did not contain enough data on the income, which is considered crucial for this analysis, therefore, Spain was excluded from this analysis and will continue with three countries: Portugal, Italy and Greece.

### 2.2 Methodology

As mentioned before, this study focuses on a younger segment of the labour force. To gather the sample it was selected the participants that in the database were: (a) women and men with the professional status employed, (b) that mention the highest level of education successfully completed was bachelor or master or equivalent level (measured in the ISCED 2011 classification equals ISCED 6 and ISCED 7) and (c) age between 20 and 29 to englobe the maximum individuals in the youngest age group (since we have an anonymised database, the variable age is delivered in a 5 year age band, and although it is expected to only finish their bachelor at age 21, the data cannot be cut within an age range). Some data has been omitted (for example the ISCO1D which is the Armed Forces). The following table shows the number of individuals present in the analysis in each country:

## Job Quality of Young Graduates in Southern European Countries

Table 1 – Number of individuals in the full database of EU-LFS and in the sample for the present study

	Portugal	Italy	Greece
Full database	166 495	650 569	271 770
Sample Young Graduates (N)	1925	2488	2168

### 2.2.1 Dimensions: variables for the construction of the typologies

As mentioned above, the job quality topic has different perspectives and approaches, leading to a multidimensional concept and phenomenon. Ghai (2003) highlights that it is very rare for one single indicator to measure the full objective and that various indicators might produce a more precise measure of the specific goal. This analysis will follow the authors that used several dimensions of work to characterise job quality. Based on a theory-driven strategy (Bocuzzo and Gianecchini, 2015) the variables chosen were drawn from the literature. All the variables in this study came from the EU-LFS, which provides data about demographic background, labour status, employment characteristics, atypical work, hours worked, second job, education and training, the situation one year before the survey and the deciles of the monthly income (Eurostat, 2013 and 2016, b)). Since this survey has objective questions, the variables will also be objective. The database does not allow the perception of more subjective topics; however, some variables may allow us to understand more subjective notes, therefore, this study will use some variables to understand and to extract subjective information of why an individual gives a certain answer and assumes an individual perception. This study will resort to proxies in the cases when the database does not have all the necessary variables but by analysing others it is possible to deduct or make some assumptions. It is important to mention that the dimensions can affect each other, especially when there are no direct questions or when the proxies are used. This perspective can be evidenced in the fuzzy clustering, with the conjugation of the characteristics into different typologies. The variables are divided into internal and external, where internal variables contribute to the configuration of the typologies and the external variables help characterise the typologies and are used in the second stage of the data analysis.

### Income

It was pointed out as a limitation of the Laeken indicators the absence of wages in the dimensions of job quality (Muñoz de Bustillo et al, 2009). Leschke, Watt and Finn (2008) argue that the most important field when it comes to job quality is the wage, mostly due to the influence of the current income to buy goods, to be able to actively participate in the society and that social security benefits are connected to former wages. Therefore, from the workers point of view, the important thing for their welfare is the purchasing power that the income allows. Although of great importance, there are limited applications to using only absolute standards (e.g. in pay) in comparative research (Findlay, Kalleberg and Warhurst, 2013). Holman (2013) in the dimension wage and payment system, the wage level was standardized within the country into 10 bands. The EU-LFS presents the monthly take-home pay from the main job through deciles (variable incdecil), where the first decile refers to the individuals with lowest wages and the last decile to the highest wages (Eurostat, 2013). Due to the monthly payment being in deciles, this information should be comparable between countries because we will not compare an actual number influenced by the economy of the country but a relative value between a minimum and a maximum.

### Contract

Some of the authors mentioned in the literature, measured job security by asking something to the workers, for example, to measure perception of job security, Kalleberg and Vaisey (2005) asked whether the individual had job security on a scale from 1 to 4, and Okay-Somerville and Scholarios (2013) asked with a yes or no question if the individual considers it might lose his job in twelve months. Since this study does not have access to this type of information, this analysis will consider the stability of the working arrangement (permanent job) and the duration of the contract. Holman (2013) englobed in the sub-dimension security: permanent contract, fixed length contract, apprenticeship contract and agency contract; which all measures are considered in the contract dimension. Based on Eurostat (2013): one variable will measure the permanency of the job, considering if an individual has a permanent job or a contract of unlimited duration or if the individual has a temporary job or contract of limited duration and the reason to be in this situation (covering period of training, could not find a permanent job, did not

want to find a permanent job and if the contract is for a probationary period); another variable will measure the duration, in months, of the contract of limited duration; and the final variable will measure if individuals have a contract with a temporary employment agency.

### Professional

As mentioned in the literature, Boccuzzo and Gianecchini (2015) grouped the job quality characteristics into three dimensions, being one of them the professional. Focusing on this approach, one of the variables that these authors included was the level of responsibility given to employees. Considering that our data source does not have a direct measure of this variable, this analysis will incorporate a variable from the EU-LFS that describes the occupation of the employees according to the ISCO-08 definitions (Eurostat, 2013). Over the years, some responsibilities and main tasks of certain jobs have changed (Osterman, 2013), either by the advance in the technology, the bigger supply of jobs, or by other factors, and that may imply a change in the perception of the job quality in certain jobs. By comparing only one year of the database, we are assuming that the main tasks and responsibilities of the jobs are equal for the three Southern European countries in the study (e.g. the same characteristics present in a manager job in Portugal are the same of a manager in Greece). Another focus is on the mismatch between acquired education and the education required for the job. Okay-Somerville and Scholarios (2013) also explore the skill utilization and the opportunity for skill use. Assuming the level of education of the individuals as a measure of skill level ignores the distinction between what is the skill capacity of the individual and the skills that are necessary to perform the job itself, which may be different (Gallie, 2007). Another concern expressed in this book is whether the skills are broadly different due to institutional influences or there has been a convergence of the skills across the countries. The development of skills at the workplace depends on the initial education of the individuals given by each country (Leschke, Watt and Finn, 2008). Taking this into consideration, this analysis will use a variable that evaluates if the education received by an individual matches the mode of the profession, meaning if an individual has the most common education required to perform the job. Without any initial filter, it was found the mode of the educational level for every occupation, based on the research of Kiker, Santos, and de Oliveira (1997). It is important to capture the skills over time in assessing differences between countries, therefore, one

should not focus only on the initial pre-entry training system but also, for example, on the post-entry learning that the organisations provide to increase the process of skill formation (Gallie, 2007). This dissertation will also analyse if the individuals have received training (seminars, conferences, courses or private lessons) in the last four weeks prior to the survey (Eurostat, 2013). This information was also used by Leschke, Watt and Finn (2008) who took it from the EU-LFS. It might be a limitation to only consider four weeks prior to the survey, however, in the absence of direct measures, it is fundamental to discover a proxy (Gallie, 2007), using the best data available.

### Working Time

In 2016 individuals in Europe worked on average 37.1 hours per week, however when considering only individuals in full-time employment the average raised to 41.4 hours per week, with men working around 42.3 hours and women 40 hours, while in part-time, the average working hours is higher for women than for men, 20.6 vis-à-vis 19.2 hours (Eurostat, 2017). Further, it was reported that the average working hours was at least 40 hours in half of all regions in Portugal and in all Greece, being this country the one with the highest averages (more than 46 hours). This amount of time is a central piece of individuals' week and lives; therefore, it is plausible to say that what happens during this time is extremely relevant for the well-being of the individuals (Muñoz de Bustillo et al, 2009). As mentioned before, Clark (2005) found that during the decade of the 90's in the countries in his study, it increased the desire to reduce the number of working hours by the employees. As seen earlier, it is expected to see differences in the working hours spent per week due to the working arrangement so there will be a distinction between the full-time and part-time workers. It is also incorporated in this variable the reasons to be in part-time, namely, the individual is undergoing school education or training, a person could not find a full-time job or other reasons (Eurostat, 2013). To note that with this database we cannot assure if the part-time is voluntary, however, we can assume that the individuals that could not find a full-time job, they first tried to find one and since they could not find it they involuntarily accepted a part-time job. Based on the reference hours from above, there will be another variable that registers the number of hours usually worked in the main job per week, which will be divided in working less than 20 hours, between 20 and 40 hours and more than 40 hours. Authors can measure the working time per week (Boccuzzo and Gianecchini, 2015) or focus only on a specific time, for example,



more than 48 hours per week (Leschke, Watt and Finn, 2008); for this analysis, we believe this separation of hours will bring more insights.

### Work-Life Balance

Gallie (2007) suggests that the growth of discussion about the balance between work career and family life was a result of the massive entrance of women into the labour market, bringing out issues like the scheduling of the working hours that may fit atypical periods of time, and if the employees would have the flexibility to engage in family obligations. Muñoz de Bustillo et al (2009) indicates that this concern was incorporated in earlier studies, however, it was when married women joined the labour market that this topic became a more relevant social problem, due to the changes in the traditional gender roles. Díaz-Chao, Ficapal-Cusí and Torrent-Sellens (2016) mention some important indicators of work-life balance such as the perception of personal life, especially outside work, measuring the satisfaction with the time available for a personal life outside work, the time available for children and more specific insides of the household functioning. Leschke, Watt and Finn (2008) combined the working time and work-life balance into one dimension, considering the atypical hours (shift work, Saturday work, Sunday work, night work and evening work) into their analysis with information available from the EU-LFS. The authors considered these variables in this dimension because they have a negative effect on health and work-life balance. Holman (2013) also considered the atypical hours in his analysis, gathering these variables and others such as choosing working arrangements or being able to adapt them in the sub-dimension flexibility. The variables chosen in this dimension consist of the constraints the job imposes on the workers that disrupt the normal working hours and place to work. There are no clear direct questions of working-life balance in the database, therefore, it will be used proxies to study this dimension. With the information from the EU-LFS (Eurostat, 2013) this analysis identifies if an individual does shift work or not (usually working in shifts includes working unsocial hours – early morning or night – working at the weekends and the rest day might not be on the weekends), and the following variables that have three levels (usually, sometimes or never): works in the evening (evening work should be after usual working time but before sleeping hours); works at night (work during the usual sleeping hours, for example between midnight and five in the morning); works on Saturdays; works on Sundays; and works at home (any productive work related to current

job done at home). This analysis does not evaluate whether a shift is assumed as a good or a bad thing because the data do not clarify if the worker chose it and if it is happy with it, but assumes that if every worker has a normal schedule, working in shifts can disturb a workers' life because the time to run errands, or the possible time to devote to friends and family is different than working typical hours. The logical reasoning is the same for the other variables. In the case of working at home, the boundaries between work and personal life may be blurry which can affect the work-life balance. To note that not all variables necessarily have the same negative effect on an individual's life.

### Satisfaction

Sometimes it is very difficult to find a direct indicator of a specific topic or it can be extremely expensive, thus it may be necessary to use an indirect measure (Ghai, 2003). Considering the source of information of this study, and the aggregation of the data into typologies that exist in the countries in study, it was considered interesting and more enriching to consider variables with a more subjective connotation; in the perspective of this analysis, the variables correspond to the dissatisfaction with a characteristic present in the job. The variables in this dimension are proxies because there are no direct measures for this. It is highlighted the dissatisfaction with the number of hours worked, with specific reasons that led an individual to look for another job and if a person has a second job. The goal is to see in which typologies these variables are more relevant. One of the variables identifies whether a person wants to work more hours than the present working hours, taking into consideration that additional hours will increase the salary; and the way that the individual is willing to work more hours, namely, through an additional job, finding a job working more hours than the present one, only if it is in the present job or through a different way (Eurostat, 2013). There are several reasons to look for another job, so this analysis will also present a variable for the attachment of an individuals' job: if a person is looking or not for another job, and if looking, the main reason to do so, for example, due to the risk of losing the current job, the job is transitional, to the intention of having better working conditions or other reasons (Eurostat, 2013). The most direct goal of having more than one job is to have an additional salary, therefore, this will be assumed, and the variable will focus on people with multiple jobs, registering the individuals that have one or more than one job (Eurostat, 2013).

### External Variables

Simões, Crespo and Pinto (2015) studied the impact of some factors in job quality, for example, education, gender, age and employment status as worker characteristics; economic sector and firm size as firm characteristics and the country where the individual works, showing that these variables are relevant in explaining job quality. Considering these determinants of job quality, education, age, economic sector and firm size are the ones that express more heterogeneity within the groups of countries. In the study of Boccuzzo and Gianecchini (2015) there were some variables related to personal characteristics, academic background and company characteristics that helped explain job quality, namely, gender, age, university degree level, disciplinary field and company size. Age, gender, organisational tenure and the subject of the degree are some of the control variables that Okay-Somerville and Scholarios (2013) used in their analysis. Holman (2013) also used control variables such as tenure, firm size and gender. This study will include the following socio-demographic variables: age that as mentioned before is in a five-year range (from 20 to 24 and from 25 to 29); gender; marital status; the situation of the participant one year before the survey, tenure, the highest level of education that is complete, and the respective field. The firm characteristics englobe the economic activity of the place of work and the firm size.

#### 2.2.1.1 Limitations of the European Union Labour Force Survey

The definitions used to collect data may differ among countries, and within a country over time, which makes comparisons over time and between countries vulnerable to measurement errors, being only an approximation of the performance in the study and not the full reality (Ghai, 2003). This database uses the same definitions and concepts; therefore, we believe this database is one step forward to harmonized data, nevertheless, the actual questions or meanings of words may differ giving some flexibility to national specifications, therefore it should be taken into consideration possible errors in the conduction of the questionnaires or the design, being these data only an approximation of the reality of the information provided in that year.

Leschke, Watt and Finn (2008) noted that the information regarding monthly take-home pay in the EU-LFS was missing in some countries, therefore they used another data. In fact, there is no question of the real salary of an individual but the deciles of the income, which are subject to availability due to the possible delay in the landing of the results up to 21 months (Eurostat, 2016b)). This hinders the studies that want to analyse this variable, which also happened in this study with Spain. As mentioned before, by using the anonymised EU-LFS data, age is provided in five-year age bands, not allowing to split the data into specific ranges (Eurostat, 2016b)).

Due to the data in the EU-LFS, there are no variables related with work autonomy, work intensity, physical work factors, participation in decision-making, task discretion, collective interest representation or variables of satisfaction with characteristics of the job, which other authors have used in their analysis. To clarify, it is not correct or wrong to use or not those variables, but this aspect may present a limitation when using this database. Another limitation is the fact that since it is not the researcher who asks the questions, there are specific things that one may not be able to explore, or even be able to resort to a proxy. This database does not ask questions about satisfaction and it was necessary to use proxies to have more information.

### 2.2.2 Fuzzy Clustering

When considering the study of job quality as bundles of characteristics, Kalleberg and Vaisey (2005) used a configurational approach (in this case the fuzzy-set qualitative comparative analysis) that considers all endless possibilities to combine the job quality components, meaning that, the job characteristic will form bundles instead of competing with each other. Not all phenomena fit into crisp sets, and in the fuzzy set, the logically possible combinations do not need to be dichotomies, it could be fuzzy, where the degree of membership in the set scores range from zero to one – non membership to full membership, therefore, one of the impressive features of the fuzzy approach is the opportunity to adjust partial membership in sets (Ragin, 2008).

The present study performed fuzzy clustering using the grade of membership model (GoM) devised by Woodbury and Clive (1974) and the estimation process was carried out by means of DSIGoM software (Decision System Inc, 1999). As the output, this software provides the characteristics of fuzzy clusters in probabilistic terms and also

the membership degrees of every individual in these clusters. The probabilities are compared to the observed relative frequencies and allow profiling of fuzzy clusters in terms of prevailing characteristics. The membership degrees give an account of how individuals are distributed in the structure determined by fuzzy clusters.

All the variables were inserted in the program, that gave us the optimal solution of the number of typologies in each country and also has a limit and a factor that helps us understand the characteristics of each typology that prevail in relation to the general population under study. In this way, one can see the intersection of variables, meaning, the characteristics that affect the same individuals. If we consider two characteristics of job quality that affect the well-being of the individuals in a negative way, it is different to know that both affect different people or that both affect the same individuals, because the job quality will be completely different (Muñoz de Bustillo et al, 2009).

### 2.2.3 Table of Descriptive

In Table 2 one can see the descriptive analysis concerning the job quality variables while in Table 3 one can see the descriptive analysis of the variables used to characterise the job. Each table shows the valid percentage approximate to 100 per cent (missing values excluded) of the information on the database of the three countries in the study.

Focusing on Table 2, one can start by comparing the monthly take-home pay that is divided in deciles. More than 50% of the Portuguese individuals have a monthly take-home pay from the 50 to 80 deciles. The only percentage that has double digits and is not in that range is the 10 deciles, while the highest valid percentage belongs to the 80 deciles. The distribution in Italy is very different, where the percentages with double digits are from 10 to 50 deciles (summing approximately 62%), with the 60 and 80 very close to being double digits and the highest value belongs to the 10 deciles. Greece has percentages above 15% from the 10 to 30 deciles (around 50% of the sample), having double digits in the 50 and 60 deciles and after that the closer values belong to 40 and 80 deciles.

## Job Quality of Young Graduates in Southern European Countries

Table 2 - Descriptive analysis: Job quality variables

Countries	Portugal	Italy	Greece
<b>Internal Variables</b>	%	%	%
Monthly (take-home) pay from main job - in deciles			
10	10.44	14.71	17.04
20	6.38	11.45	17.76
30	5.59	13.95	16.00
40	8.08	10.01	9.91
50	14.27	12.54	13.11
60	14.09	9.45	10.53
70	13.48	7.76	4.44
80	15.97	9.45	6.71
90	7.89	7.76	2.58
100	3.83	2.93	1.91
Permanent job (contract of unlimited duration)	37.30	45.05	77.15
Reasons for contract of limited duration:			
- cover a period of training	16.99	16.03	2.86
- person could not find a permanent job	40.62	31.69	17.37
- person did not want a permanent job	1.97	1.57	0.57
- contract for a probationary period	3.12	5.65	2.05
Duration of the limited contract:			
- less than one month	2.00	0.54	0.60
- 1 to 3 months	3.67	6.60	1.75
- 4 to 6 months	17.08	14.65	8.95
- 7 to 12 months	32.16	16.38	9.41
- 13 to 18 months	0.72	1.36	1.85
- 19 to 24 months	0.95	2.48	0.97
- 25 to 36 months	1.11	9.62	0.32
- more than 3 years	2.34	2.31	1.38
Contract with a temporary employment agency (1=Yes)	3.01	2.34	0.51
Level of responsibility:			
- managers	3.27	0.36	0.37
- professionals	58.49	27.77	34.92
- technicians and associate professionals	13.56	33.92	15.96
- clerical support workers	8.78	19.41	14.76
- service and sales workers	11.90	14.55	29.34
- craft and related trades workers	1.09	1.13	3.18
- plant and machine operators and assemblers	0.83	1.21	0.60
- elementary occupations	2.08	1.65	0.88
Acquired and required education:			
-2	0.00	0.00	0.14
-1	31.48	4.86	0.05
Acquired and required education match	31.01	25.80	46.91
+1	0.00	0.00	3.41
+2	0.00	0.96	1.25
+3	22.44	34.49	47.28
+4	10.49	31.75	0.69
+5	3.53	2.13	0.28
+6	1.04	0.00	0.00
Received training in the last four weeks (1=Yes)	15.79	10.02	4.57

## Job Quality of Young Graduates in Southern European Countries

Table 2 – Descriptive analysis: Job quality variables (cont.)

Full-time job	87.58	76.97	83.23
Reasons for part-time job:			
- person is undergoing school education or training	2.91	2.65	0.60
- person could not find a full-time job	7.06	17.97	14.42
- other personal or family reasons	2.44	2.41	1.76
Nº hours per week:			
- from 1h - 20h	7.51	14.51	12.13
- from 21 - 40h	72.38	78.58	69.05
- more than 40h	20.11	6.91	18.82
Shift work (1=Yes)	21.97	19.25	24.49
Usually works in the evening	7.58	16.60	39.16
Sometimes works in the evening	23.27	5.28	17.07
Person never works in the evening	69.14	78.12	43.77
Usually works at night	1.66	8.62	5.49
Sometimes works at night	10.03	3.82	9.18
Person never works at night	88.31	87.56	85.33
Usually works on Saturday	9.92	28.88	34.82
Sometimes works on Saturday	30.75	7.55	13.79
Person never works on Saturdays	59.32	63.57	51.38
Usually works on Sundays	5.71	17.10	12.32
Sometimes works on Sunday	19.32	6.21	10.70
Person never works on Sundays	74.96	76.69	76.98
Usually works at home	5.40	1.09	1.11
Sometimes works at home	12.62	0.60	3.55
Person never works at home	81.97	98.31	95.34
Do not wish to work more hours than currently	65.51	95.43	78.83
Wish to work more hours:			
- through an additional job	1.77	0.00	1.52
- through a job working more hours than the present job	4.73	0.57	2.35
- only within the present job	18.91	2.71	7.01
- in any of the above ways	9.09	1.29	10.29
Not looking for another job	81.56	92.28	92.89
Reasons for looking for another job:			
- risk or certainty of loss or termination of present job	1.04	2.33	0.83
- actual job is considered as a transitional job	2.70	0.24	0.74
- wish to have better working conditions (e.g. pay, working or travel time, quality of work)	12.73	1.93	0.88
- other reasons	1.97	3.22	4.66
Person has more than one job (1=Yes)	6.96	2.53	0.74
N =	1925	2488	2168
Source: Labour Force Survey 2015   Percentage excluding missing values			

Greece presents the highest number of permanent contracts (77.15%), following Italy (45.05%) and Portugal (37.30%). The major reason for individuals to be on a contract of limited duration is that they could not find a permanent job. In fact, in Portugal, the valid percentage of not finding a permanent job is not only the highest of the three countries but also higher than the individuals with a permanent job, being 40.62%, in Italy

## Job Quality of Young Graduates in Southern European Countries

31.69% and in Greece 17.37%. In Portugal and Italy, there is around a sixth of the answers belonging to another reason, that the contract of limited duration covers a period of training. The reason with the lowest percentages is that the individual did not want to find a permanent job. Regarding the duration of the limited contract, although the highest percentages of the three countries belong to 4 to 6 months and 7 to 12 months, there are different aspects to be considered. In Portugal, the valid percentage of individuals that have a contract of 7 to 12 months (32.16%) is near twice as much of the individuals with contracts of 4 to 6 months (17.08%). In Italy, the distribution between 4 and 6 months and 7 and 12 months is more similar (14.65% and 16.38% respectively), furthermore, there are more durations that catch our attention, as from 25 to 36 months with 9.62% and 1 to 3 months with 6.60%. Greece also has similar values for the durations between 4 to 6 months and 7 to 12 months, 8.95% and 9.41%. It is not common for the sample in the analysis to have a contract with a temporary employment agency, due to the low numbers observed, in Portugal 3.01%, in Italy 2.34% and in Greece 0.51%.

The more usual occupations graduates have in Portugal are professionals (highest value and more than half of the sample), following technicians and associate professionals and then service and sales workers. In Italy, the highest value belongs to technicians and associate professionals, following professionals, clerical support workers and then service and sales workers. In Greece, the most common responsibility is the same as for Portugal, professionals, then service and sales workers, technicians and associate professionals and then clerical support workers. The responsibilities focus on the same occupations but with different distributions. Considering the acquired education and the most common education that is required to do the job, one can also see different distributions. From the three countries, the one that has the most representative expression of falling below the match is Portugal (31.48%) in the minus one degree, meaning these individuals have a bachelor or a master, and usually, it is necessary a master or a doctoral, respectively. Almost the same percentage fit their acquired and required education. In this country, the following higher percentage is in the plus three degrees and then plus four degrees, being the complete opposite of the written above. Slightly more than a quarter of the sample in Italy match their education with the required one, however, more than 66% fall in the plus three and four degrees, meaning there are a lot of individuals taking a degree to work beneath their education. Greece has a different path, with close percentages in the match and plus three degrees categories. The country that said yes more often to the question of



receiving any type of training in the past four weeks was Portugal, followed by Italy and then Greece.

More than three-quarters of the participants in the selected countries have full-time jobs. The main reason for individuals to be in part-time is because they could not find a full-time job. In Portugal, 72.38% of the participants work between 21 to 40 hours and 20.11% work more than 40 hours per week. Similarly, in Greece, 69.05% of the individuals work between 21 to 40 hours a week, and the following percentage is 18.82% of the participants that work more than 40 hours per week. The same does not hold for Italy. This was the country with the lowest percentage of full-time workers, which most of the employees, 78.58% work between 21 and 40 hours, and 14.51% work less than 20 hours per week.

In the countries in study, the work by shift is higher in Greece, following Portugal and then Italy, not reaching a quarter of the answers. The most heterogeneous distribution is visible in the evening work, where in Greece, 43.77% of the individuals never work in the evening, 39.16% usually work in the evening and 17.07% sometimes work in the evening. In Portugal, 69.14% never work in the evening and 23.27% work sometimes in the evening, and in Italy, 78.12% never work in the evening and 16.6% usually work in the evening. The distribution of working on Saturdays or Sundays follows the same categories as mentioned before but with different percentages. Regarding working at night, in all countries, more than 85% never work at night. In Portugal and Greece, nearly 10% sometimes work at night and in Italy, around 8% usually work at night. While working at home, more than 95% of the participants in Italy and Greece never work at home, and in Portugal, that percentage is lower because around 12% sometimes work at home.

Italy has the highest percentage (95.43%) of individuals that do not wish to work more hours than those stipulated in the contract, followed by Greece (78.83%) and Portugal (65.51%). In the last country, 18.91% of the sample wish to work more within the present job. Portugal has the lowest percentage (81.56%) of people that are not looking for another job (against in Italy 92.28% and in Greece 92.89%) and the main reason to look for another job is to have better working conditions. Regarding individuals with multiple jobs, in Portugal, 6.96% of the individuals in the sample have more than one job, whereas in Italy 2.53% and in Greece 0.74%.

## Job Quality of Young Graduates in Southern European Countries

Most of the sample (more than 70%) are individuals with ages between 25 and 29, the majority of the participants are single females (Table 3). More than 60% of the individuals in the sample had a job one year before the survey, and while on Italy and Greece the following percentage is being unemployed and only then being a student, in Portugal it is the contrary. Italy has the most balanced distribution of the highest level of education successfully completed with nearly 50% that finished bachelor and 50% master. Portugal has a similar distribution with around 60% that finished bachelor and around 40% that finished the master. While in Greece, around 96% finished bachelor and 4% finished the master. Regarding the field of the last education completed, the highest value of the three countries is social sciences, business and law with around 30%. In Portugal, there are more fields with double digits such as health and welfare (23.64%) and engineering, manufacturing and construction (14.55%). There are similarities with Italy, which the first is followed also by health and welfare (17.30%), humanities, languages and arts (16.13%), and only then the engineering, manufacturing and construction (15.85%). In Greece, the distribution after the social science is more balanced, with engineering, manufacturing and construction with 14.91%, followed by humanities, languages and arts with 11.21%, services with 10.29% and health and welfare with 10.24%. The distribution of the tenure through the three countries is similar, with over 50% below the two-year mark. The number of individuals in the local unity varies by country, where the highest value is: in Portugal more than 50 individuals (36.73%), in Italy between 11 to 49 individuals (41.12%) and in Greece less than 10 individuals (51.06%). Considering the economic activity of the local unit with double digits, there are some similarities but with different distributions. In Portugal, the economic activity where more participants work is human health and social work activities, followed by wholesale and retail trade; repair of motor vehicles and motorcycles and then professional, scientific and technical activities. In Italy is human health and social work activities, manufacturing, wholesale and retail trade; repair of motor vehicles and motorcycles and education. In Greece, the order is different: wholesale and retail trade; repair of motor vehicles and motorcycle, education and professional, scientific and technical activities.

## Job Quality of Young Graduates in Southern European Countries

Table 3 – Descriptive analysis: Characteristics associated with the job

Countries	Portugal	Italy	Greece
<b>External Variables</b>	%	%	%
Age (range 20 to 24)	28.21	12.78	17.48
Gender (1=Male)	33.25	34.85	41.42
Civil Status (1=Single)	92.68	92.20	88.98
Situation with regard to activity one year before survey:			
- carries out a job or profession, including unpaid work for a family business or holding, including an apprenticeship or paid traineeship, etc,	66.49	63.06	78.97
- unemployed	15.90	20.10	14.62
- pupil, student, further training, unpaid work experience	17.61	16.84	6.41
Highest level of education successfully completed:			
- bachelor's or equivalent level	59.95	49.44	96.08
- master's or equivalent level	40.05	50.56	3.92
Field of the level of education:			
- teacher training and education science	7.17	7.38	9.92
- humanities, languages and arts	7.74	16.13	11.21
- social sciences, business and law	30.03	32.18	30.73
- science, mathematics and computing	6.39	8.39	9.69
- engineering, manufacturing and construction	14.55	15.85	14.91
- agriculture and veterinary	1.61	1.21	3.00
- health and welfare	23.64	17.30	10.24
- services	8.88	1.57	10.29
Tenure:			
- until 1 year in the organisation	30.49	28.74	17.90
- until 2 years in the organisation	27.90	30.55	26.71
- until 3 years in the organisation	13.25	14.43	16.42
- until 4 years in the organisation	10.13	10.29	12.36
- until 5 years in the organisation	6.75	6.75	8.30
- more than 6 years in the organisation	11.48	9.24	18.31
Number of persons working at local unit:			
- < 10	29.04	29.02	51.06
- 11 to 49	34.23	41.12	33.90
- > 50	36.73	29.86	15.04
Economic activity:			
B - Mining and quarrying	0.10	0.04	0.00
C - Manufacturing	9.77	16.92	6.13
D - Electricity, gas, steam and air conditioning supply	0.73	0.76	0.32
E - Water Supply; sewerage, waste management and remediation activities	0.21	0.76	0.09
F - Construction	2.13	1.41	1.20
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	16.73	12.26	20.48
H - Transportation and storage	2.23	2.57	3.97
I - Accommodation and food service activities	3.64	5.87	9.36
J - Information and communication	6.91	4.78	5.07
K - Financial and insurance activities	2.39	5.06	2.77
L - Real estate activities	0.47	0.36	0.28

## Job Quality of Young Graduates in Southern European Countries

Table 3 – Descriptive analysis: Characteristics associated with the job (cont.)

M - Professional, scientific and technical activities	12.36	8.96	13.24
N - Administrative and support service activities	3.58	4.02	2.63
O - Public administration and defence; compulsory social security	4.57	1.45	8.39
P - Education	6.55	10.73	14.99
Q - Human health and social work activities	20.94	19.17	8.03
R - Arts, entertainment and recreation	4.83	2.37	2.08
S - Other service activities	1.77	1.53	0.83
T - Activities of households as employers; undifferentiated goods - and services - producing activities of households for own use	0.05	0.84	0.14
U - Activities of extraterritorial organisations and bodies	0.05	0.12	0.00
N =	1925	2488	2168
Source: Labour Force Survey 2015   Percentage excluding missing values			

### III – Results

This chapter presents the empirical evidence focusing on two analyses: the fuzzy cluster analysis in Southern European countries, with 3 tables showing the prevailing characteristics in Portugal, Italy and Greece, similarities and differences of typologies by country and between countries; and the distribution of the sample by typologies, with 3 tables outlining the distribution by country, providing a summary of the tables and some similarities and notes about the distribution of young graduates.

#### 3.1 Fuzzy cluster analysis

This study used the fuzzy clustering to explore the realities of young graduates in Southern European countries. It was applied the fuzzy cluster analysis by country to the set of internal variables identified in the previous chapter, giving us segments of graduates that stay in the same typology due to similar job quality. The application of this method led to different optimal solutions, being three typologies in Portugal and Greece and four in Italy, each one characterising the underlying fuzzy clusters. Tables 4, 5 and 6, respectively, show the different typologies. This analysis is based on Table A1, A2 and A3 in the appendix. In each country, the typologies have a different combination of the variables concerning job quality and the variables used to characterise the job. To note that the characteristics present in the Tables are the ones that prevail in relation to the general population under study, which means that, for example: in Table 4, typology 1, in the income row, it is written more or equal than 80 deciles - the individuals of this typology may also have an income on the 60 or 70 decile, however, the distribution of those two is lower or very close to the general population of the Portuguese sample, while the deciles equal to or higher than 80 are much higher than the general response, therefore, those deciles are the ones that will appear in the Table. Another thing to take into consideration, is if the answer of a variable is similar to the general sample's response (there is none that stands out) there are no characteristics to write in the Table, therefore, a hyphen will appear, as for example, in Table 4, typology 1, on the socio-demographic dimension, in the variables age and gender.

3.1.1 Typologies with Portuguese data

Table 4 shows the three typologies in Portugal. It seems some characteristics show a gradient in the possible answers along the typologies, as in the case of income, duration of the contract and number of hours worked per week, which are higher in the first typology and lower in the third. The first typology is the only one with a long-term contract, the second and third have a flexible contract due to different reasons: a period of training and an involuntary decision, respectively. The third typology is the only with contracts with a temporary employment agency. Professionally, the occupations are quite different with more types of occupation falling into typology 3. These individuals have a higher acquired education than what is required to perform the job. This situation also happens in typology 1, as well as having a match of education. It is interesting to note that despite this, the first typology is the only one where individuals that received some sort of training (seminars, conferences, courses or private lessons) at least in the last four weeks prior to the survey prevail. The second typology is the only one gathering graduates with less education than the minimum for the job or a match between both. The third typology is the only one that has an involuntary part-time job. The work-life balance is also quite different, wherein for the first typology it is normal to have all sorts of atypical work, in the third some forms of atypical work such as usually working at evening, and the second typology does not show any constraints of the normal working time. The third typology is the least satisfied with working hours (individuals want to work more hours) and with their job itself, looking for another one with better conditions. The concentration of graduates with multiple jobs is higher in the first typology.

Table 4 – Fuzzy cluster analysis of the Portuguese sample data (the Table indicates the prevailing characteristics)

Country	Portugal		
Dimensions	Typology 1	Typology 2	Typology 3
Income - Monthly pay	≥ 80	50 - 70	≤ 40
<b>Contract</b>			
- permanency of the job	Stable	Flexible (period of training)	Flexible (involuntary)
- duration	≥ 25 months	7 - 24 months	≤ 6 months
- temporary employ agency	No	No	Yes
<b>Professional</b>			
- occupation (level of responsibility)	Managers; Professionals	Professionals	Technicians and associate professionals; Service and sales workers; Clerical support workers

## Job Quality of Young Graduates in Southern European Countries

Table 4 – Fuzzy cluster analysis of the Portuguese sample data (the Table indicates the prevailing characteristics) (cont.)

- acquired and required education	Match or higher	Match or lower	Higher
- received training in the last four weeks	Yes	-	-
<b>Working Time</b>			
- full-time or part-time	Full-time	Full-time	Part-time (involuntary)
- number of hours per week	+ 40h	21h - 40h	- 20h
<b>Work-life Balance</b>			
- shift work	Yes	No	Yes
- evening work	Sometimes or Usually	No	Usually
- night work	Sometimes or Usually	No	No
- Saturday work	Sometimes or Usually	No	Sometimes
- Sunday work	Sometimes or Usually	No	Sometimes
- working at home	Sometimes or Usually	-	No
<b>Satisfaction</b>			
- wish to work more	No	-	Yes (more hours than the present job)
- looking for another job	No	No	Yes (better working conditions)
- multiple jobs	Yes	No	-
<b>Socio-Demographic</b>			
- age	-	-	20 - 24
- gender	-	-	-
- civil status	Married	-	Single
- one year before the survey	Had job	-	Unemployed or student
- university degree	Master	-	Bachelor
- disciplinary field	Health and welfare	Engineering, manufacturing and construction; Science, mathematics and computing	Services; Humanities, languages and arts; Teacher training and education science
- tenure	> 3 years	-	< 2 years
<b>Firm Characteristics</b>			
- size firm	> 50	-	< 10
- economic activity	Human health and social work activities	Professional, scientific and technical activities; Manufacturing; Education	Wholesale and retail trade, repair of motor vehicles and motorcycles; Administrative and support service activities; Arts, entertainment and recreation

Regarding socio-demographic characteristics, from the three Portuguese typologies, the second is where the distribution of the characteristics is more similar to the sample of graduates, thus presenting more hyphens in the Table. The characteristics that prevail in typology 1 and 3 are completely different. While there are several

disciplinary fields that can work on various economic activities, it is curious to note that in typology 1 they are the same, suggesting that individuals graduating on health and welfare are able to find a job working at a human health unit.

### 3.1.2 Typologies with Italian data

Table 5 displays the four typologies of Italy. The levels of income are not so well defined by ranges as it was in the Portuguese typologies, suggesting that graduates who have similar job quality considering the other characteristics can have different levels of income. Nevertheless, the first typology still presents the highest income and the fourth the lowest. The second and the third typology are the most similar. One of the major differences is the contract, while the second has a contract of unlimited duration, the third has an involuntary or flexible job due to a period of training with a contract of more than 7 months, as well as a contract with a temporary employment agency. Typology 2 and 4 have graduates with more education than necessary for their responsibilities and the opposite is visible in typology 3 where there is a match in education or graduates have lower education than required. Interestingly, this typology is the only one where it prevails the graduates that received training. The only typology that gathers graduates in involuntary part-time, working less than 20 hours, is typology 4. The first typology is the only where it prevails working by shifts and the concentration of graduates working atypical hours is higher. Graduates in typology four wish to work more hours within the present job, are looking for another job due to uncertainty and they might have multiple jobs, all these situations do not happen in the other typologies.

Table 5 – Fuzzy cluster analysis of the Italian sample data (the Table indicates the prevailing characteristics)

Country	Italy			
Variables	Typology 1	Typology 2	Typology 3	Typology 4
Income - Monthly pay	≥ 60	40 - 80	Mixed (30, 50, 90, 100)	≤ 20
Contract				
- permanency of the job	Stable	Stable	Flexible (involuntary or period of training)	Flexible (involuntary)
- duration	Unlimited	Unlimited	≥ 7 months	≤ 6 months
- temporary employ agency	No	No	Yes	Yes



## Job Quality of Young Graduates in Southern European Countries

Table 5 – Fuzzy cluster analysis of the Italian sample data (the Table indicates the prevailing characteristics) (cont.)

<b>Professional</b>				
- occupation (level of responsibility)	Technicians and associate professionals; Managers;	Technicians and associate professionals;	Professionals; Managers	Service and sales workers; Elementary occupations;
- occupation (level of responsibility)	Plant and machine operators and assemblers	Clerical support workers; Craft and related trades workers		Plant and machine operators and assemblers
- acquired and required education	Match or higher	Higher	Match or lower	Higher
- received training in the last four weeks	-	No	Yes	No
<b>Working Time</b>				
- full-time or part-time	Full-time	Full-time	Full-time	Part-time (involuntary)
- number of hours per week	+ 40h	21h - 40h	21h - 40h	- 20h
<b>Work-life Balance</b>				
- shift work	Yes	No	No	No
- evening work	Usually or Sometimes	No	No	No
- night work	Usually or Sometimes	No	No	No
- Saturday work	Usually or Sometimes	No	No	Usually
- Sunday work	Usually or Sometimes	No	No	Usually
- working at home	Sometimes	No	Usually or Sometimes	No
<b>Satisfaction</b>				
- wish to work more	No	No	No	Yes (within present job)
- looking for another job	No	No	No	Yes (due to uncertainty)
- multiple jobs	No	No	No	Yes
<b>Socio-Demographic</b>				
- age	20 - 24	25 - 29	25 - 29	20 - 24
- gender	-	-	-	Female
- civil status	Single	Married	Single	Divorced
- one year before the survey	-	-	Student	Student or unemployed
- university degree	Bachelor	-	Master	Bachelor
- disciplinary field	Health and welfare; Services	Social sciences, business and law	Engineering, manufacturing and construction; Science, mathematics and computing; Teacher training and education science	Humanities, languages and arts; Teacher training and education science; Services
- tenure	> 3 years	> 4 years	2 years	1 year
<b>Firm Characteristics</b>				
- size firm	> 50	-	> 50	< 10

## Job Quality of Young Graduates in Southern European Countries

Table 5 – Fuzzy cluster analysis of the Italian sample data (the Table indicates the prevailing characteristics) (cont.)

- economic activity	Human health and social work activities; Accommodation and food service activities	Manufacturing; Financial and insurance activities; Information and communication	Education; Professional, scientific and technical activities	Wholesale and retail trade, repair of motor vehicles and motorcycles; Accommodation and food service activities
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The socio-demographic characteristics of the Italian typologies are dispersed, having multiple possible combinations. Nevertheless, it should be noted that the youngest (20 to 24 years old) female graduates prevail in the fourth typology that has involuntary part-time. One year before the survey the graduates on this typology were unemployed or were students.

### 3.1.3 Typologies with Greek data

Table 6 shows the three Greek typologies. Although typology 1 has a mixed-income, it is visible once again, the income decreasing by the typologies starting in the first. As opposite to Portugal, Greece presents two typologies with more secure jobs (long-term contract) and one involuntary flexible job, in which all possible durations of contracts are combined. The second typology is the only one with a contract with a temporary employment agency. Of the three countries, the Greek typologies have the most mixed characteristics in the variable - acquired and required education. All typologies have 'higher' and two also have 'below', suggesting that for the same occupations there is a discrepancy in the education required. Another aspect that may influence this result is how different the levels of education are to the levels of responsibility in this typology. Greece has the only typology where the graduates that received training prevail in the inflexible job. Typologies 1 and 2 present a full-time job, with differences in the working hours (more hours in the first), while typology 3 has a part-time job because graduates cannot find a full-time job. Regarding work-life balance, the atypical work is privileged in typology 1, especially shift work, and in the third there are some sorts of atypical work. Once again, the last typology is the least satisfied with the working hours, graduates are looking for another job to improve working conditions

## Job Quality of Young Graduates in Southern European Countries

or because they feel insecure in their current job, and the concentration of graduates with multiple jobs is higher, which do not happen in the other typologies.

Table 6 – Fuzzy cluster analysis of the Greek sample data (the Table indicates the prevailing characteristics)

Country	Greece		
Variables	Typology 1	Typology 2	Typology 3
<b>Income</b> - Monthly pay	Mixed (30 and $\geq$ 80)	40 - 70	10
<b>Contract</b>			
- permanency of the job	Stable	Stable	Flexible (involuntary)
- duration	Unlimited	Unlimited	Mixed
- temporary employ agency	No	Yes	No
<b>Professional</b>			
- occupation (level of responsibility)	Service and sales workers; Craft and related trades workers; Elementary occupations	Professionals; Technicians and associate professionals; Managers	Professionals; Clerical support workers; Elementary occupations
- acquired and required education	Higher	Mixed: Below, Match or Higher	Mixed: Below and Higher
- received training in the last four weeks	No	-	Yes
<b>Working Time</b>			
- full-time or part-time	Full-time	Full-time	Part-time (involuntary)
- number of hours per week	+ 40h	21h - 40h	- 20h
<b>Work-life Balance</b>			
- shift work	Yes	No	No
- evening work	Usually or sometimes	No	Usually
- night work	Usually or sometimes	No	No
- Saturday work	Usually or sometimes	No	Sometimes or No
- Sunday work	Usually or sometimes	No	No
- working at home	No	Sometimes or usually	No
<b>Satisfaction</b>			
- wish to work more	No	No	Yes (within present job)
- looking for another job	No	No	Yes (better working conditions or due to uncertainty)
- multiple jobs	No	-	Yes
<b>Socio-Demographic</b>			
- age	20 - 24	25 - 29	20 - 24
- gender	Male	-	Female
- civil status	Single	Married	Single
- one year before the survey	-	-	Unemployed or Student
- university degree	Bachelor	Master	Bachelor
- disciplinary field	Services; Engineering, manufacturing and construction; Health and welfare	Social sciences, business and law; Teacher training and education science	Humanities, languages and arts
- tenure	> 6 years	4 or 5 years	< 3 years

## Job Quality of Young Graduates in Southern European Countries

Table 6 – Fuzzy cluster analysis of the Greek sample data (the Table indicates the prevailing characteristics) (cont.)

<b>Firm Characteristics</b>			
- size firm	> 50	-	< 10
- economic activity	Wholesale and retail trade, repair of motor vehicles and motorcycles; Accommodation and food service activities; Public administration and defence	Professional, scientific and technical activities; Education; Manufacturing	Education; Human health and social work and activities; Information and communication

About the socio-demographic characteristics, young adult graduates (25 to 29 years old) prevail in the second typology, as well as having a master's degree and graduates who are married. Single graduates that have a bachelor and are in the 20 to 24 age range prevail in the other typologies, however, there is a major difference, the gender. Comparative to males and females, while in the first typology (higher income, secure job, full-time working more than forty hours) the concentration of males is higher, in the third (lowest income, flexible job, part-time working less than 20 hours) it is the females, showing differences in job quality based on the gender. The last typology gathers the graduates that one year before the survey were unemployed or student and prevails the bachelor in humanities, languages and arts.

### 3.1.4 Comparing the typologies of the three countries

Looking at the typologies of the three countries, Portugal, Italy and Greece, there are similarities and differences that are worth mentioning. This method allows us to hierarchize the type of jobs that exist in each country, and while analysing the typologies, there is a common pattern resulting in three major groups of characteristics that prevail: typologies that are more secure, with higher income, full-time job, more working hours, disturbances in work-life balance and higher satisfaction with the characteristics in study (do not wish to work more and are not looking for another job); typologies with more intermediate characteristics, such as moderate income, full-time job, moderate working-time, and working non-atypical hours; and finally, typologies that have lower monthly pay, more instability, involuntary contracts of limited duration and part-time job, working less hours, some disturbances in the work-life balance and the desire to work more hours or to find a more suitable job.

## Job Quality of Young Graduates in Southern European Countries

The first typology of each country has some similar characteristics that should be mentioned, as well as the type of graduates that prevail in this group. Although the Greek typology has one of the lowest deciles it also gathers the highest, and even with different numbers, this group presents the highest deciles in each country. All typologies have a long-term contract providing more stability to graduates and none of them have a contract with a temporary employment agency. One of the major differences in this group is the main occupations of the typologies, where in Portugal are managers and professionals, in Italy there are also plant and machine operators and assemblers, and Greece has completely different levels of responsibility: services and sales workers, craft and related trades workers, and elementary positions. This might be the biggest reason for the differences in socio-demographic and firm characteristics. Despite that, graduates in this group have the required education for the job (Portugal and Italy) or higher than required (all countries). The only country where graduates received training in the last four weeks before the survey was Portugal. All typologies provide a full-time job with the highest working hours per week (more than 40 hours). These graduates do not wish to work more hours and they are not looking for another job. The Portuguese typology is the only one gathering the graduates with more than one job. This group is the most affected by atypical work - especially work by shifts - where there is a slight difference, in Portugal the percentage of graduates that sometimes work atypical hours is higher than the ones that usually do, which is the opposite of Italy and Greece, and the major difference in this dimension is the possibility to work at home. The socio-demographic characteristics depend on the country, while in Portugal it prevails the graduates that one year before the survey were employed, married and have a master, in Italy and Greece it is the young graduates (20 to 24 years old), single and with a bachelor, and only in Greece prevails a gender, in this case, males. Graduates remain in the same company for several years, more specifically, in companies with over 50 employees. Although 'health and welfare' is in all disciplinary fields in this group, only in Portugal and Italy, the 'human health and social work activities' is mentioned in the economic activity (in Greece it is in the third typology).

Italy is the only country with four typologies, and although there are similarities and differences between them, from all, the second and the third are more similar to the second Portuguese typology (more flexible job) and the second Greek typology (more secure job). This group has a similar monthly pay in deciles, however, the Italian range

is higher since it comprises two typologies. The second Portuguese typology has a flexible contract due to a period of training with a duration of at least 7 months, which is a close situation to the third Italian typology. The second Greek and Italian typology have a more stable job with a contract of unlimited duration. Of the four, the typologies that have a contract with a temporary employment agency are the Greek that is more stable and the Italian that is more flexible. The only level of responsibility that prevails in Portugal is professionals, which also happens in the other countries, however, in Italy and Greece, there are other occupations, such as managers and technicians and associate professionals. These typologies present a full-time job where graduates work between 21 to 40 hours, in the work-life balance there are no constraints to the normal working hours where the only variable that shows different answers is the 'working at home' and the graduates are not looking for another job. This group has two Italian typologies with socio-demographic characteristics that are different and a Portuguese typology in which only one characteristic prevails, which hinders and limits the comparison of this dimension. In both Italian and Greek typologies, it prevails the young adult graduates (25 to 29 years old). Portugal and Greece have different disciplinary fields; however, these typologies share the same economic activities. Italy only has the same disciplinary fields and economic activity of the other countries if it combines both typologies.

The third group is constituted by the last typology of each country (third in Portugal and Greece and fourth in Italy). The graduates in this group receive the lower deciles of monthly income, being the highest decile in Portugal and the lowest in Greece. The job is flexible because graduates cannot find a permanent job, and while in Portugal and Italy the contract has a maximum of 6 months, the duration in Greece is more flexible, englobing more months, probably because it is the only flexible typology in Greece and the other countries have two. In Portugal and Italy, the concentration of contracts with a temporary employment agency is higher, and the same is not true for Greece. There is not the same level of responsibility in all countries, however, there are different combinations: service and sales workers in Portugal and Italy (where in Greece this level of responsibility prevails in the first typology), clerical support workers in Portugal and Greece and elementary occupation in Italy and Greece. Despite that, graduates have higher education than required, except in Greece, where graduates may have an education below the required. The Greek typology is the only one where it prevails the graduates that received training. This group presents an involuntary part-time job where graduates

work less than 20 hours per week. Regarding work-life balance, the Portuguese typology is the only where it prevails working by shifts, however, in all, there is atypical work. Graduates want to work longer hours and are looking for another job due to better working conditions or because they are insecure in their current position. In the Italian and Greek typology, the concentration of graduates with multiple jobs is higher, which do not happen in the Portuguese one. Focusing on the socio-demographic and firm characteristics, this group is the one that presents more similarities because in the typologies prevails: young graduates (20 to 24 years old - the only Portuguese typology where this happens), single, have a bachelor's degree, one year before the survey they were unemployed or were student, low tenure and working in a small company. In Italy and Greece also females prevail in this group. Although there is a common disciplinary field, humanities, languages and arts, and in Italy and Portugal also teacher training and education science and services, the economic activities are different.

The fuzzy clustering gathers the same pattern of characteristics showing the existence of nuances in typologies. The three groups gathered above include different levels of responsibility depending on the country and affect different graduates (e.g. age, gender) and economic activities. In a general mode, the results support the idea of seeing a job as a combination of characteristics that should be analysed as a whole and supports the cluster of certain characteristics into profiles, in which some are considered better than others.

### 3.2 Distribution of the sample by country typologies

The second part of this chapter focuses on the distribution of the sample by the typologies of each country. Now that it is known the different typologies of the Southern European countries, it will be interesting to understand how each one is present in the segment of young graduates. Every graduate on the sample has a specific combination of the variables concerning job quality and the variables used to characterise the job, that might be equal to one of the typologies present in the tables above, a combination of two or a mixture of three. As a more graphic interpretation, if one considers an equilateral triangle, the vertices will be the three optimal solutions (three typologies in the case of Portugal and Greece), the edges will be the combination of two typologies and the interior

a combination of all typologies. In the case of Italy, since it has four optimal solutions, the graphic interpretation is a tetrahedron, however, the logic behind is the same.

### 3.2.1 Distribution of young graduates in Portugal

Table 7 shows the distribution of the young graduates by the Portuguese typologies. In the vertex there are 35% of the individuals of the Portuguese sample, which means that these have the (almost) exact same characteristics present in Table 4, where the majority belongs to typology 2 (25.7%) with a flexible contract due to a period of training, moderate income, working full-time and regular hours. Slightly more than 50% of the sample are individuals with a combination of typologies, where the highest percentages intersect with typology 2, suggesting the greater influence of this typology in this country.

Table 7 – Distribution of the Portuguese sample by typologies (full membership set to 0.85)

Distribution of the Portuguese sample			Total (N = 1925)
Vertices			673 (35%)
Typology 1	Typology 2	Typology 3	
91 (4.7%)	494 (25.7%)	88 (4.6%)	
Edges			1088 (56.5%)
Typology 1 - Typology 2	Typology 1 - Typology 3	Typology 2 - Typology 3	
421 (21.9%)	213 (11.1%)	454 (23.6%)	
Interior			164 (8.5%)

### 3.2.2 Distribution of young graduates in Italy

Table 8 displays the distribution of young Italian graduates by typology. The percentage of individuals in the sample that fits with a single typology is 35.4%. The highest percentage (21.2%) is typology 2 with characteristics such as a long-term contract, income of 40 to 80 deciles, full-time work and non-working at atypical hours. The lowest percentage is typology 4, which only counts with 0.6% of the sample, that is translated into an involuntary flexible job, the lowest income and an involuntary part-time. The mixture of two typologies represents half of the sample, where once again, the highest percentages belong to the combinations with the typology 2. In this case, the highest is a combination with typology 3 that presents a flexible job covering a training period or an involuntary flexible job.



## Job Quality of Young Graduates in Southern European Countries

Table 8 – Distribution of the Italian sample by typologies (full membership set to 0.85)

Distribution of the Italian sample						Total (N = 2488)
Vertices						881 (35.4%)
Typology 1	Typology 2	Typology 3	Typology 4			
109 (4.4%)	528 (21.2%)	228 (9.2%)	16 (0.6%)			
Edges						1259 (50.6%)
Typology 1 - Typology 2	Typology 1 - Typology 3	Typology 1 - Typology 4	Typology 2 - Typology 3	Typology 2 - Typology 4	Typology 3 - Typology 4	
145 (5.8%)	130 (5.2%)	160 (6.4%)	404 (16.2%)	288 (11.6%)	132 (5.3%)	
Facets and Interior						348 (14%)

### 3.2.3 Distribution of young graduates in Greece

The distribution of the Greek young graduates' is presented in Table 9. There are 36.5% of the sample in the vertex, with 25.2% in the typology 2. This means that most individuals fall in this typology: long-term contract, full-time job, moderate income and do not work atypical hours. A little more than half of the population has a mixed of typologies, where the intersection with typology 2 is more expressive. The higher combination is between typology 2 and 1, where the last represents a long-term contract with high income, full-time work and working atypical hours.

Table 9 – Distribution of the Greek sample by typologies (full membership set to 0.85)

Distribution of the Greek sample			Total (N = 2168)
Vertices			791 (36.5%)
Typology 1	Typology 2	Typology 3	
182 (8.4%)	546 (25.2%)	63 (2.9%)	
Edges			1214 (56%)
Typology 1 - Typology 2	Typology 1 - Typology 3	Typology 2 - Typology 3	
609 (28.1%)	250 (11.5%)	355 (16.4%)	
Interior			163 (7.5%)

### 3.2.4 Distribution of young graduates in the Southern European countries

With a different number of typologies per country the comparative analysis between them is more complicated, however, there are some similarities that should be mentioned.

## Job Quality of Young Graduates in Southern European Countries

The total percentage of individuals in each sample that is aligned with a single typology is close, ranging from 35% to 36.5%, suggesting that in this case, having one more typology do not have a great influence in the percentage of individuals in this situation. The highest percentage in the three countries is typology 2 which as similarities among them. The involuntary flexible job is the typology less present in these countries.

The distribution of young graduates that have a combination of two typologies is at least half of the sample in every country. Italy has the lowest percentage (50.6%) which may be related to the existence of more possible combinations (three of the four typologies and all typologies) that are also in the facets and interior (14%). In the first part of the analysis, it was suggested the aggregation of the second and third Italian typology to compare with the second Portuguese and Greek typology due to the similarity. It is interesting to note that 16.2% of the Italian sample falls into this combination, and this percentage is not only the highest of the possible combinations but higher than the percentage of typology 1, 3 and 4 alone. The more relevant combinations include the typology 2, expressing their importance in the distribution of typologies (although with slight differences in each country) among the young graduates in Southern European countries.

### IV – Discussion

The results presented in the previous chapter support Kalleberg and Vaisey's (2005) theory that when analysing specific and overall job quality, the jobs should be seen as bundles with less and more attractive job characteristics, because as Osterman (2013) points out, having a 'good' dimension in a job is not a synonym of having only 'good' dimensions. The results also address one of the concerns formulated by Muñoz de Bustillo et al. (2009) as it reveals dimensions that intersect, giving us typologies of characteristics that stand out in relation to the general sample, providing us with a more realistic view of the young graduates' situation. This study emphasizes once again that these results show the reality of the countries in Southern Europe – which have suffered from the crisis, resulting in changes and constraints – therefore, the picture of the results may not be the same as 20 years ago or the same in other countries.

Considering the type of graduates in typologies, the young graduates (20 to 24 years old) are entering into the market (previous year were unemployed or student) through a flexible contract because they cannot find a permanent job and in a part-time because they also cannot find a full-time job (Hypothesis 1). There are several possible ways for this to be true: due to the economic goals companies might be using more these types of contracts; graduates who have studied during the crisis may have developed the mindset that having a job is better than chasing a 'good' one (Findlay et al, 2017), transferring that thought to the first job; or just because they were unemployed and considered that this type of job could lead to better opportunities. Graduates earn a low income, have disturbances in work-life balance and are overeducated. They also work for small organisations, which is in line with Boccuzzo and Gianecchini's (2015) findings, in which their job quality index increases with the size of the organisation. This typology affects more the female (findings in Italy and Greece), who have a bachelor's degree, and in all countries, there is a common disciplinary field: humanities, languages and arts. Lombardo and Passarelli (2011) also suggested that the disciplinary field is related to the job quality, as well as it is normal for some fields, such as humanities, to have temporary jobs at the beginning of a career (Hypothesis 2). These graduates are not satisfied with this situation and they are looking for another job due to uncertainty in the current position or to have better working conditions. The study of Leschke and Watt (2008) also found that women are more predominant in non-standard forms of employment and this type of employment is related to less job security and benefits. This typology has a low job

quality and although in terms of distribution it presents the lowest values for graduates in that exact situation (4.6% in Portugal, 0.6% in Italy and 2.9% in Greece), it still affects other graduates that share some of these characteristics (11.1% and 23.6% in Portugal; 6.4%, 11.6% and 5.3% in Italy; and 11.5% and 16.4% in Greece). The aged englobed in this typology has fewer individuals in the sample than the other age range which can influence the results, nevertheless, it should be taken time to analyse these conditions and understand how they can be improved.

In Italy and Greece, the concentration of young graduates (20 to 24 years old) in relation to the general population under study, is also higher in typology 1. These graduates also have a bachelor; however, they have a stable job of unlimited duration, higher income, a full-time job working long hours in bigger companies, disturbances in the work-life balance and they are not looking for another job. In the Greek typology, it also prevails the male graduates, supporting the literature that indicates differences in job quality based on gender (Boccuzzo and Gianecchini, 2015, Simões, Crespo and Pinto 2015). As shown, there is great inequality in paths that the youngest graduates can follow. One of the reasons may be due to the disciplinary field since one appears in all countries: health and welfare. It is interesting to note that in Portugal, it prevails graduates that instead of a bachelor have a master and that were employed in the previous year. Portugal is also the only country that has multiple jobs in this typology, exposing a different reality in this area, economic activity or level of occupation. The specifications of the countries may lead to small differences between them. There are more individuals distributed in these characteristics than in the typology above, 4.7% in Portugal, 4.4% in Italy and 8.4% in Greece, as well as a combination of these characteristics with other typologies. It cannot be said often enough that this does not mean all young graduates (20 to 24 years old) are in these two situations. They are distributed all over the typologies, however, they prevail in these two.

In Italy and Greece, adult young graduates from 25 to 29 years old prevail in a typology more stable or flexible with a large contractual period, a full-time job with regular working hours, non-working atypical hours and the graduates are not looking for another job, so it is assumed that they are satisfied with the current one. Boccuzzo and Gianecchini (2015) suggest that young graduates while thinking on their job quality, are more concern with professional development and economic conditions than work-life balance. This may happen, for example focusing on Italy, there are equal occupations in

typologies that prevail distinct ages, suggesting that individuals are in different stages of life, and for the older graduates is no longer suitable to have work at atypical hours; or for another reason such as the influence of the economic activity in which the occupation of the graduates is carried out. In Portugal the age range 25 to 29 does not prevail in any typology, however, the distribution of the sample is greater in the second typology as well as the combinations with it. In Portugal is more visible the use of a flexible contract since it has two typologies with flexible contract, in Greece is the opposite with two stable contract dimensions in two typologies, and Italy has half each.

In the Tables of the fuzzy cluster analysis, there are some dimensions that stand out due to smaller differences between countries or bigger ones being harder to find a pattern.

There is some controversy regarding the use of wages for job quality, some authors consider one of the most important characteristics (e.g. Leschke, Watt and Finn, 2008), others measure the satisfaction of the individuals with pay but not the actual value of payment (e.g. Díaz-Chao, Ficapal-Cusí and Torrent-Sellens (2016) or Kalleberg and Vaisey (2005)) while others believe that it is also important to focus only on the non-monetary aspects of the job (Green et al, 2013). Our findings support the link between higher wages and better job quality – stable contract, full-time job and graduates that are not looking for another job. The higher income in the first typology gives more meaning to the idea that there is a compensation of characteristics because the work-life balance is not so great as pictured in the second typology (also third in Italy) which has lower income although still higher than the last typology as it would be expected since this has a part-time job; however, it could also be a difference based on occupation, because the second typology also englobes some deciles of income that are at the top of the range. The mixed values of income in a Greek and Italian typology alerts for the possibility that some occupations or economic activities aggregate individuals with similar job characteristics but different income. It would be interesting to study the impact of income in more detail.

Simões, Crespo and Pinto's (2015) findings indicate that more years of education can lead to a higher job quality in the countries under study. The acquired and required education is more similar between Portugal and Italy, while Greece has a slightly different mix of characteristics, with two typologies with graduates below the required education for the job. Okay-Somerville and Scholarios (2013) expose some changes in the traditional job of graduates versus what is happening now, and graduates are using fewer

skills acquired in the education. This can also be related to the greater supply of graduates in the labour market, which may lead companies to think: ‘If I can have an employee with a master’s degree, even if it is not essential to the job, why should I settle for someone who only has a bachelor’s degree?’ and consequently hire employees with higher education (Lombardo and Passarelli, 2011; Okay-Somerville and Scholarios, 2013). Graduates that have an education below the required, can actually have a bachelor for positions that required a master (or a master for positions that required a doctoral); enter a position with a bachelor like in the situation stated above while finishing the master and promise to present the certificate in a certain period of time; can be caught in a transition of the required education; or it results from the distribution of the graduates that prevail in typologies with occupations so different that required distinct educations. Graduates with a match can fall into the trap of a job with daily activities that do not match the education, not using their full potential. Graduates with higher education can accept a job with lower required education because they have not found anything else, it may be a temporary job, there is not enough supply of jobs in a specific area or the area may not require a master for example, but graduates may think that in the long term they will have more benefits with that educational level. To find out more about this topic it was necessary to ask more detailed questions which was not possible with the data of this study.

The findings raise questions on the type of job by the level of responsibility since it is visible some variations in this characteristic between the countries. Although Holman (2013) presented the types of jobs with different job quality across occupations, where managers, professionals and technicians and associate professionals are incorporated in higher job quality types than service workers, machinery operators and elementary occupations, this author also stresses that all types of job exist in all occupations, just with a different distribution.

### V – Conclusions

The knowledge and awareness of this topic have been growing in recent times. The concern about life in general among other things led to better working conditions, the increase in the average life expectancy as well and the number of years an individual is expected to work. This has aroused greater interest in the health and well-being of the individual in the job, which is normal since most of an individual's week is spent at work. To improve a situation, it is necessary to understand the current one and the ideal one. Only then it will be possible to instigate international, national and regional policies to improve job quality that together with national traits will affect the national and firm policy and consequently the human resources management strategy.

As mentioned earlier in this dissertation, the EU has set some strategic goals, implemented European employment strategies and national targets to achieve. It was taken into consideration the last crisis and long-term challenges to develop the strategy for this decade, the Europe 2020 (European Commission, 2010 a)). The EU has been encouraging youth employment through initiatives to ensure lifelong learning, continued education, learning mobility and improve the transition to work reducing the labour market segmentation (European Commission, 2010 b)). This study reflects the growing concern with this segment of the labour market, giving more attention to what is really happening.

In the infinite ways to discover more about job quality, this study approached this topic with a fuzzy cluster analysis. It analysed what other authors considered important to describe and characterise job quality and matched that information with the available data from the EU-LFS. This research provides information from three Southern European countries: Portugal, Italy and Greece. The analysis of the results confirms the variation of the job quality among young graduates, wherein in each country, there are graduates with better job characteristics than others. There are graduates with higher income, stable job with a long-term contract, full-time job working long hours, disturbances in the work-life balance and they are not looking for another job; graduates with slightly lower income, contract from seven months to unlimited duration, full-time job and non-working atypical hours; and finally, graduates with the lowest income, involuntary contracts with flexible duration, part-time job working less than 20 hours, some disturbances in the work-life balance and the desire to find a better job. It is important to mention that around a third

of the sample is aligned with those characteristics, and slightly more than half has a combination of characteristics between two of the three descriptions above. The alignment and combinations of characteristics between the graduates are predominate within the moderate description.

Despite this, the dissertation faced limitations that should be addressed. Limitations regarding the EU-LFS, such as possible errors in the conduction of the questionnaire by country, the constraints to the income variable which made it impossible to analyse Spanish data, the obligation to analyse data in age-ranges, the restriction to the information available in the database and use of proxies, were already discussed in a previous chapter. The use of fuzzy cluster analysis allowed a cluster of characteristics to prevail and led to different optimal solutions in the countries under study making a direct comparison of the analysis more difficult.

By observing the typologies of the three countries, it would be interesting to deepen our knowledge on the influence of some characteristics in the graduates' job quality. Future research would benefit from studying the paths graduates find along the career, considering the type of transition between group ages, for example, if the same database is used, the sample could be divided between the age range 20 to 24 and 25 to 29, and only then conduct the analysis to understand if the characteristics are the same or not. Although the number of individuals with a bachelor and a master has been increasing, there are still graduates with some doubts about whether it is worthwhile to continue their education, and a future study may analyse the job quality by level of education (eg. bachelor versus master) to further understand if there are differences and if they are visible in the early career stage or only in the long-term. Since females and humanities prevailed in the last typology, more attention should be given to an analysis by gender or by field of education to explore if there is a relationship between both and realize their possible influence. To access future patterns of behaviours, it is necessary to analyse the evolution of jobs, meaning if the types of jobs found with 2015 data are the same with most recent data or with data prior to the crisis. It would be interesting to examine whether some categories of graduates are trapped in bad jobs.



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## Job Quality of Young Graduates in Southern European Countries

### Appendixes

Table A1 – Fuzzy cluster analysis of the Portuguese sample data

Country		Portugal			
Dimensions		Frequency	Typology 1	Typology 2	Typology 3
<b>Income</b>					
Monthly pay	Missing	14.44	7.07	14.40	<b>21.06</b>
	10	10.44	0.00	0.00	<b>35.63</b>
	20	6.38	0.00	7.22	<b>10.11</b>
	30	5.59	0.00	0.00	<b>19.06</b>
	40	8.08	0.00	8.09	<b>14.52</b>
	50	14.27	0.00	<b>21.97</b>	13.29
	60	14.09	3.74	<b>23.38</b>	7.40
	70	13.48	14.81	<b>21.18</b>	0.00
	80	15.97	<b>31.50</b>	18.16	0.00
	90	7.89	<b>33.65</b>	0.00	0.00
	100	3.83	<b>16.31</b>	0.00	0.00
<b>Contract</b>					
Permanency of the job	Contract of unlimited duration	37.30	<b>78.59</b>	34.62	0.00
	Reasons for contract of limited duration:				
	- cover a period of training	16.99	2.84	<b>29.35</b>	0.00
	- person could not find a permanent job	40.62	18.57	32.63	<b>85.05</b>
	- person did not want a permanent job	1.97	0.00	0.00	<b>9.22</b>
- contract for a probationary period	3.12	0.00	3.40	<b>5.73</b>	
Duration	Missing	6.65	<b>9.81</b>	3.66	<b>10.67</b>
	Unlimited	39.96	<b>84.97</b>	35.78	0.00
	Less than one month	2.00	0.00	0.00	<b>10.08</b>
	1 to 3 months	3.67	0.00	0.00	<b>18.47</b>
	4 to 6 months	17.08	0.00	11.26	<b>53.56</b>
	7 to 12 months	32.16	0.00	<b>50.04</b>	17.89
	13 to 18 months	0.72	0.00	<b>1.27</b>	0.00
	19 to 24 months	0.95	0.00	<b>1.65</b>	0.00
	25 to 36 months	1.11	<b>4.85</b>	0.00	0.00
More than 3 years	2.34	<b>10.18</b>	0.00	0.00	
Contract with a temporary employment agency	No	96.99	<b>100.00</b>	<b>100.00</b>	87.44
	Yes	3.01	0.00	0.00	<b>12.56</b>
<b>Professional</b>					
Occupation - level of responsibility	Managers	3.27	<b>18.74</b>	0.00	0.00
	Professionals	58.49	<b>81.26</b>	<b>100.00</b>	0.00
	Technicians and associate professionals	13.56	0.00	0.00	<b>35.46</b>
	Clerical support workers	8.78	0.00	0.00	<b>22.96</b>
	Service and sales workers	11.90	0.00	0.00	<b>31.11</b>
	Craft and related trades workers	1.09	0.00	0.00	<b>2.85</b>
	Plant and machine operators and assemblers	0.83	0.00	0.00	<b>2.17</b>
	Elementary occupations	2.08	0.00	0.00	<b>5.43</b>

## Job Quality of Young Graduates in Southern European Countries

Table A1 – Fuzzy cluster analysis of the Portuguese sample data (cont.)

Acquired and required education	-1	31.48	34.39	<b>54.66</b>	0.00
	Acquired and required education match	31.01	<b>57.13</b>	<b>45.34</b>	0.00
	+3	22.44	0.00	0.00	<b>62.25</b>
	+4	10.49	0.00	0.00	<b>29.11</b>
	+5	3.53	<b>6.30</b>	0.00	<b>6.80</b>
	+6	1.04	<b>2.19</b>	0.00	<b>1.84</b>
Received training in the last four weeks	Yes	15.79	<b>32.11</b>	11.96	10.05
	No	84.21	67.89	88.04	89.95
<b>Working Time</b>					
Full-time or part-time	Full-time job	87.58	<b>100.00</b>	<b>100.00</b>	41.84
	Reasons for part-time job:				
	- person is undergoing school education or training	2.91	0.00	0.00	<b>13.63</b>
	- person could not find a full-time job	7.06	0.00	0.00	<b>33.10</b>
	- other personal or family reasons	2.44	0.00	0.00	<b>11.44</b>
Number of hours per week	Missing	5.19	<b>10.49</b>	1.50	<b>8.91</b>
	From 1h - 20h	7.51	0.00	0.00	<b>36.34</b>
	From 21 - 40h	72.38	31.35	<b>100.00</b>	63.66
	More than 40h	20.11	<b>68.65</b>	0.00	0.00
<b>Work-life Balance</b>					
Shift work	Does shift work	21.97	<b>79.86</b>	0.00	<b>39.24</b>
	Never does shift work	78.03	20.14	<b>100.00</b>	60.76
Evening work	Usually works in the evening	7.58	<b>13.64</b>	0.00	<b>26.23</b>
	Sometimes works in the evening	23.27	<b>86.36</b>	0.00	0.00
	Person never works in the evening	69.14	0.00	<b>100.00</b>	73.77
Night work	Usually works at night	1.66	<b>6.49</b>	0.00	<b>2.79</b>
	Sometimes works at night	10.03	<b>66.41</b>	0.00	0.00
	Person never works at night	88.31	27.10	<b>100.00</b>	<b>97.21</b>
Saturday work	Usually works on Saturday	9.92	<b>38.54</b>	0.00	0.00
	Sometimes works on Saturday	30.75	<b>61.46</b>	0.00	<b>100.00</b>
	Person never works on Saturdays	59.32	0.00	<b>100.00</b>	0.00
Sunday work	Usually works on Sundays	5.71	<b>37.95</b>	0.00	0.00
	Sometimes works on Sunday	19.32	<b>62.05</b>	0.00	<b>65.66</b>
	Person never works on Sundays	74.96	0.00	<b>100.00</b>	34.34
Working at home	Usually works at home	5.40	<b>22.88</b>	0.00	0.00
	Sometimes works at home	12.62	<b>24.11</b>	13.14	0.00
	Person never works at home	81.97	53.01	86.86	<b>100.00</b>
<b>Satisfaction</b>					
Wish to work more	Do not wish to work more hours than currently	65.51	<b>90.31</b>	67.63	36.84
	Wish to work more hours:				
	- through an additional job	1.77	0.00	1.88	<b>3.17</b>
	- through a job working more hours than the present job	4.73	0.00	0.00	<b>20.53</b>
	- only within the present job	18.91	9.69	22.23	19.75
	- in any of the above ways	9.09	0.00	8.26	<b>19.72</b>

## Job Quality of Young Graduates in Southern European Countries

Table A1 – Fuzzy cluster analysis of the Portuguese sample data (cont.)

Looking for another job	Not looking for another job	81.56	<b>100.00</b>	<b>94.85</b>	39.08
	Reasons for looking for another job:				
	- risk or certainty of loss or termination of present job	1.04	0.00	<b>1.40</b>	1.13
	- actual job is considered as a transitional job	2.70	0.00	2.92	<b>4.43</b>
	- wish to have better working conditions (e.g. pay, working or travel time, quality of work)	12.73	0.00	0.00	<b>49.43</b>
	- other reasons	1.97	0.00	0.84	<b>5.93</b>
Person has more than one job	No	93.04	88.11	<b>95.44</b>	91.92
	Yes	6.96	<b>11.89</b>	4.56	8.08
<b>Socio-Demographic</b>					
Age	Range 20 to 24 years old	28.21	10.97	28.30	<b>43.44</b>
	Range 25 to 29 years old	71.79	89.03	71.70	56.56
Gender	Male	33.25	38.48	36.48	20.85
	Female	66.75	61.52	63.52	79.15
Civil status	Widowed, divorced	0.16	<b>0.74</b>	0.00	0.00
	Single	92.68	88.76	92.66	<b>96.21</b>
	Married	7.17	<b>10.51</b>	7.34	3.79
Situation with regard to activity one year before survey	Carries out a job or profession, including unpaid work for a family business or holding, including an apprenticeship or paid traineeship, etc,	66.49	<b>96.72</b>	62.01	47.37
	Unemployed	15.90	1.12	16.40	<b>29.22</b>
	Pupil, student, further training, unpaid work experience	17.61	2.16	21.59	<b>23.41</b>
University degree	Bachelor's or equivalent level	59.95	38.67	54.94	<b>88.37</b>
	Master's or equivalent level	40.05	<b>61.33</b>	45.06	11.63
Disciplinary field	Teacher training and education science	7.17	0.00	7.01	<b>12.84</b>
	Humanities, languages and arts	7.74	0.00	6.74	<b>15.65</b>
	Social sciences, business and law	30.03	21.96	36.17	22.76
	Science, mathematics and computing	6.39	0.35	<b>9.79</b>	3.54
	Engineering, manufacturing and construction	14.55	7.97	<b>20.73</b>	6.07
	Agriculture and veterinary	1.61	0.00	1.12	<b>3.87</b>
	Health and welfare	23.64	<b>64.38</b>	16.71	8.31
	Services	8.88	5.33	1.73	<b>26.96</b>
Tenure	Until 1 year in the organisation	30.49	8.90	32.81	<b>45.54</b>
	Until 2 years in the organisation	27.90	17.65	28.10	<b>37.17</b>
	Until 3 years in the organisation	13.25	<b>17.40</b>	12.92	10.06
	Until 4 years in the organisation	10.13	<b>20.76</b>	8.41	4.11
	Until 5 years in the organisation	6.75	<b>11.53</b>	7.33	0.81
	More than 6 years in the organisation	11.48	<b>23.75</b>	10.42	2.31
<b>Firm Characteristics</b>					
Size firm	< 10	29.04	11.58	26.20	<b>49.67</b>
	11 to 49	34.23	27.02	36.58	34.92
	> 50	36.73	<b>61.40</b>	37.22	15.41

## Job Quality of Young Graduates in Southern European Countries

Table A1 – Fuzzy cluster analysis of the Portuguese sample data (cont.)

Economic activity	B - Mining and quarrying	0.10	<b>0.56</b>	0.00	0.00
	C - Manufacturing	9.77	2.02	<b>14.80</b>	3.65
	D - Electricity, gas, steam and air conditioning supply	0.73	0.66	<b>1.05</b>	0.00
	E - Water Supply; sewerage, waste management and remediation activities	0.21	0.00	<b>0.36</b>	0.00
	F – Construction	2.13	1.16	<b>3.32</b>	0.00
	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	16.73	18.84	4.59	<b>44.50</b>
	H - Transportation and storage	2.23	0.31	1.17	<b>6.33</b>
	I - Accommodation and food service activities	3.64	2.70	0.64	<b>11.63</b>
	J - Information and communication	6.91	7.18	<b>9.67</b>	0.00
	K - Financial and insurance activities	2.39	0.00	<b>4.15</b>	0.00
	L - Real estate activities	0.47	0.00	0.14	<b>1.63</b>
	M - Professional, scientific and technical activities	12.36	4.68	<b>19.71</b>	0.59
	N - Administrative and support service activities	3.58	0.00	0.49	<b>13.91</b>
	O - Public administration and defence; compulsory social security	4.57	2.77	<b>7.04</b>	0.00
	P – Education	6.55	0.00	<b>11.37</b>	0.00
	Q - Human health and social work activities	20.94	<b>54.83</b>	17.49	2.58
	R - Arts, entertainment and recreation	4.83	4.18	2.12	<b>11.93</b>
	S - Other service activities	1.77	0.00	1.87	<b>2.90</b>
	T - Activities of households as employers; undifferentiated goods - and services - producing activities of households for own use	0.05	0.00	0.00	<b>0.22</b>
	U - Activities of extraterritorial organisations and bodies	0.05	<b>0.11</b>	0.00	<b>0.14</b>
Source: Labour Force Survey 2015					

Table A2 – Fuzzy cluster analysis of the Italian sample data

Country		Italy				
Dimensions		Frequen- cy	Typology 1	Typology 2	Typology 3	Typology 4
<b>Income</b>						
Monthly pay	10	14.71	0.00	0.00	0.00	<b>52.53</b>
	20	11.45	0.00	0.00	0.00	<b>40.91</b>
	30	13.95	12.48	14.56	<b>23.50</b>	6.56
	40	10.01	11.33	<b>18.12</b>	8.42	0.00
	50	12.54	11.46	<b>20.11</b>	<b>16.74</b>	0.00
	60	9.45	<b>11.94</b>	<b>14.79</b>	11.05	0.00
	70	7.76	<b>14.38</b>	<b>10.39</b>	9.07	0.00
	80	9.45	<b>18.93</b>	<b>12.82</b>	9.83	0.00
	90	7.76	<b>15.12</b>	9.21	<b>10.58</b>	0.00
	100	2.93	<b>4.37</b>	0.00	<b>10.81</b>	0.00



## Job Quality of Young Graduates in Southern European Countries

Table A2 – Fuzzy cluster analysis of the Italian sample data (cont.)

<b>Contract</b>						
Permanency of the job	Missing	0.44	0.00	0.23	<b>0.69</b>	<b>1.15</b>
	Contract of unlimited duration	45.05	<b>70.84</b>	<b>76.59</b>	0.00	0.00
	Reasons for contract of limited duration:					
	- cover a period of training	16.03	0.00	18.69	<b>25.38</b>	3.92
	- person could not find a permanent job	31.69	25.08	0.00	<b>64.90</b>	<b>81.55</b>
	- person did not want a permanent job	1.57	0.00	0.00	<b>2.42</b>	<b>7.29</b>
- contract for a probationary period	5.65	4.08	4.72	<b>7.29</b>	<b>7.24</b>	
Duration	Missing	2.61	0.00	0.61	<b>4.50</b>	<b>8.24</b>
	Unlimited	46.06	<b>81.08</b>	<b>80.44</b>	0.00	0.00
	Less than one month	0.54	0.00	0.00	0.00	<b>4.15</b>
	1 to 3 months	6.60	0.00	0.00	0.00	<b>51.09</b>
	4 to 6 months	14.65	17.26	8.21	10.07	<b>44.76</b>
	7 to 12 months	16.38	0.00	0.00	<b>54.77</b>	0.00
	13 to 18 months	1.36	1.67	0.00	<b>3.83</b>	0.00
	19 to 24 months	2.48	0.00	0.00	<b>8.28</b>	0.00
	25 to 36 months	9.62	0.00	11.36	<b>15.33</b>	0.00
	More than 3 years	2.31	0.00	0.00	<b>7.73</b>	0.00
Contract with a temporary employment agency	Missing	0.44	<b>1.74</b>	0.52	<b>0.85</b>	0.00
	No	97.66	<b>100.00</b>	<b>100.00</b>	92.67	96.63
	Yes	2.34	0.00	0.00	<b>7.33</b>	<b>3.37</b>
<b>Professional</b>						
Occupation level of responsibility	Managers	0.36	<b>2.26</b>	0.00	<b>0.48</b>	0.00
	Professionals	27.77	0.00	0.00	<b>99.52</b>	0.00
	Technicians and associate professionals	33.92	<b>94.63</b>	<b>53.62</b>	0.00	0.00
	Clerical support workers	19.41	0.00	<b>42.58</b>	0.00	0.00
	Service and sales workers	14.55	0.00	0.00	0.00	<b>88.25</b>
	Craft and related trades workers	1.13	0.00	<b>2.47</b>	0.00	0.00
	Plant and machine operators and assemblers	1.21	<b>3.11</b>	1.33	0.00	<b>1.75</b>
	Elementary occupations	1.65	0.00	0.00	0.00	<b>10.00</b>
Acquired and required education	-1	4.86	0.00	0.00	<b>20.52</b>	0.00
	Acquired and required education match	25.80	<b>68.99</b>	0.00	<b>79.48</b>	0.00
	+2	0.96	<b>9.55</b>	0.00	0.00	0.00
	+3	34.49	21.46	<b>45.02</b>	0.00	<b>58.00</b>
	+4	31.75	0.00	<b>54.98</b>	0.00	31.01
	+5	2.13	0.00	0.00	0.00	<b>10.99</b>
Received training in the last four weeks	Missing	2.17	1.40	<b>2.87</b>	<b>2.72</b>	0.00
	Yes	10.02	10.35	9.34	<b>16.14</b>	1.61
	No	89.98	89.65	<b>90.66</b>	83.86	<b>98.39</b>

## Job Quality of Young Graduates in Southern European Countries

Table A2 – Fuzzy cluster analysis of the Italian sample data (cont.)

<b>Working Time</b>						
Full-time or part-time	Full-time job	76.97	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	0.00
	Reasons for part-time job:					
	- person is undergoing school education or training	2.65	0.00	0.00	0.00	<b>11.52</b>
	- person could not find a full-time job	17.97	0.00	0.00	0.00	<b>78.01</b>
Number of hours per week	- other personal or family reasons	2.41	0.00	0.00	0.00	<b>10.47</b>
	From 1h - 20h	14.51	0.00	0.00	0.00	<b>100.00</b>
	From 21 - 40h	78.58	67.13	<b>100.00</b>	<b>100.00</b>	0.00
	More than 40h	6.91	<b>32.87</b>	0.00	0.00	0.00
<b>Work-life Balance</b>						
Shift work	Does shift work	19.25	<b>100.00</b>	0.00	0.00	0.00
	Never does shift work	80.75	0.00	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
Evening work	Missing	0.24	0.00	0.06	<b>0.60</b>	<b>0.46</b>
	Usually works in the evening	16.60	<b>75.87</b>	0.00	0.00	0.00
	Sometimes works in the evening	5.28	<b>24.13</b>	0.00	0.00	0.00
	Person never works in the evening	78.12	0.00	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
Night work	Missing	0.16	0.00	0.17	<b>0.34</b>	0.00
	Usually works at night	8.62	<b>69.26</b>	0.00	0.00	0.00
	Sometimes works at night	3.82	<b>30.74</b>	0.00	0.00	0.00
	Person never works at night	87.56	0.00	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
Saturday work	Missing	0.48	0.52	0.54	<b>0.64</b>	0.00
	Usually works on Saturday	28.88	<b>72.85</b>	0.00	0.00	<b>100.00</b>
	Sometimes works on Saturday	7.55	<b>27.15</b>	0.00	0.00	0.00
	Person never works on Saturdays	63.57	0.00	<b>100.00</b>	<b>100.00</b>	0.00
Sunday work	Missing	0.32	0.21	0.21	0.38	<b>0.67</b>
	Usually works on Sundays	17.10	<b>70.71</b>	0.00	0.00	<b>35.09</b>
	Sometimes works on Sunday	6.21	<b>29.29</b>	0.00	0.00	0.00
	Person never works on Sundays	76.69	0.00	<b>100.00</b>	<b>100.00</b>	64.91
Working at home	Missing	0.24	0.00	<b>0.39</b>	0.28	0.00
	Usually works at home	1.09	0.72	0.00	<b>3.90</b>	0.00
	Sometimes works at home	0.60	<b>1.19</b>	0.34	<b>0.80</b>	0.41
	Person never works at home	98.31	98.08	<b>99.66</b>	95.30	<b>99.59</b>
<b>Satisfaction</b>						
Wish to work more	Missing	0.60	<b>1.36</b>	0.28	0.25	<b>1.33</b>
	Do not wish to work more hours than currently	95.43	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	67.23
	Wish to work more hours:					
	- through a job working more hours than the present job	0.57	0.00	0.00	0.00	<b>4.06</b>
	- only within the present job	2.71	0.00	0.00	0.00	<b>19.43</b>
	- in any of the above ways	1.29	0.00	0.00	0.00	<b>9.28</b>

## Job Quality of Young Graduates in Southern European Countries

Table A2 – Fuzzy cluster analysis of the Italian sample data (cont.)

Looking for another job	Not looking for another job	92.28	<b>95.78</b>	<b>98.89</b>	<b>95.40</b>	63.49
	Reasons for looking for another job:					
	- risk or certainty of loss or termination of present job	2.33	2.06	0.00	0.00	<b>13.51</b>
	- actual job is considered as a transitional job	0.24	0.00	0.00	0.24	<b>1.23</b>
	- wish to have better working conditions (e.g. pay, working or travel time, quality of work)	1.93	2.16	1.11	<b>4.36</b>	0.00
	- other reasons	3.22	0.00	0.00	0.00	<b>21.77</b>
Person has more than one job	No	97.47	<b>100.00</b>	<b>100.00</b>	<b>97.91</b>	86.22
	Yes	2.53	0.00	0.00	2.09	<b>13.78</b>
<b>Socio-Demographic</b>						
Age	Range 20 to 24 years old	12.78	<b>17.53</b>	7.50	7.86	<b>31.41</b>
	Range 25 to 29 years old	87.22	82.47	<b>92.50</b>	<b>92.14</b>	68.59
Gender	Male	34.85	27.34	41.92	42.44	11.42
	Female	65.15	72.66	58.08	57.56	<b>88.58</b>
Civil status	Widowed, divorced	0.04	0.00	0.00	0.00	<b>0.27</b>
	Single	92.20	<b>92.86</b>	89.02	<b>97.97</b>	91.41
	Married	7.76	7.14	<b>10.98</b>	2.03	8.32
Situation with regard to activity one year before survey	Carries out a job or profession, including unpaid work for a family business or holding, including an apprenticeship or paid traineeship, etc.	63.06	78.27	78.17	52.61	20.95
	Unemployed	20.10	15.41	13.68	24.10	<b>36.77</b>
	Pupil, student, further training, unpaid work experience	16.84	6.31	8.15	<b>23.29</b>	<b>42.28</b>
University degree	Bachelor's or equivalent level	49.44	<b>78.85</b>	50.66	14.05	<b>73.91</b>
	Master's or equivalent level	50.56	21.15	49.34	<b>85.95</b>	26.09
Disciplinary field	Missing	0.32	0.00	0.30	<b>0.57</b>	0.32
	Teacher training and education science	7.38	3.26	3.61	<b>13.95</b>	<b>11.05</b>
	Humanities, languages and arts	16.13	4.88	14.99	10.46	<b>33.52</b>
	Social sciences, business and law	32.18	3.76	<b>47.53</b>	18.58	33.44
	Science, mathematics and computing	8.39	0.00	8.70	<b>14.47</b>	6.31
	Engineering, manufacturing and construction	15.85	4.32	14.78	<b>33.72</b>	4.99
	Agriculture and veterinary	1.21	0.92	<b>1.89</b>	0.41	0.82
	Health and welfare	17.30	<b>80.58</b>	7.52	8.41	5.57
	Services	1.57	<b>2.28</b>	0.99	0.00	<b>4.29</b>
	Tenure	Until 1 year in the organisation	28.74	21.89	19.53	32.10
Until 2 years in the organisation		30.55	22.71	25.82	<b>42.25</b>	33.20
Until 3 years in the organisation		14.43	<b>19.10</b>	15.55	16.94	2.56
Until 4 years in the organisation		10.29	10.55	<b>16.05</b>	5.40	1.86

## Job Quality of Young Graduates in Southern European Countries

Table A2 – Fuzzy cluster analysis of the Italian sample data (cont.)

Tenure	Until 5 years in the organisation	6.75	<b>10.71</b>	<b>9.72</b>	2.62	1.02
	More than 6 years in the organisation	9.24	<b>15.03</b>	<b>13.33</b>	0.69	5.50
<b>Firm Characteristics</b>						
Size firm	< 10	29.02	6.27	24.95	15.81	<b>72.12</b>
	11 to 49	41.12	32.40	48.46	44.17	27.10
	> 50	29.86	<b>61.34</b>	26.59	<b>40.02</b>	0.78
Economic activity	B - Mining and quarrying	0.04	<b>0.19</b>	0.03	0.00	<b>0.15</b>
	C - Manufacturing	16.92	1.30	<b>28.57</b>	18.93	0.32
	D - Electricity, gas, steam and air conditioning supply	0.76	0.29	<b>1.70</b>	0.00	0.00
	E - Water Supply; sewerage, waste management and remediation activities	0.76	0.28	0.90	<b>1.39</b>	0.00
	F - Construction	1.41	0.00	<b>2.90</b>	0.76	0.00
	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	12.26	9.79	10.18	2.39	<b>33.50</b>
	H - Transportation and storage	2.57	2.63	<b>4.08</b>	0.26	2.12
	I - Accommodation and food service activities	5.87	<b>15.71</b>	0.18	0.55	<b>18.02</b>
	J - Information and communication	4.78	4.32	<b>6.27</b>	5.86	0.08
	K - Financial and insurance activities	5.06	0.00	<b>11.39</b>	1.11	0.00
	L - Real estate activities	0.36	0.00	<b>0.71</b>	0.00	0.36
	M - Professional, scientific and technical activities	8.96	0.00	11.17	<b>17.41</b>	0.00
	N - Administrative and support service activities	4.02	0.00	3.72	1.90	<b>11.45</b>
	O - Public administration and defence; compulsory social security	1.45	1.12	1.59	0.96	<b>2.10</b>
	P - Education	10.73	0.00	1.10	<b>40.17</b>	2.48
	Q - Human health and social work activities	19.17	<b>63.53</b>	13.06	6.26	11.04
	R - Arts, entertainment and recreation	2.37	0.52	0.60	0.02	<b>11.68</b>
	S - Other service activities	1.53	0.00	1.48	1.77	<b>2.73</b>
	T - Activities of households as employers; undifferentiated goods - and services - producing activities of households for own use	0.84	0.00	0.36	0.00	<b>3.99</b>
	U - Activities of extraterritorial organisations and bodies	0.12	<b>0.32</b>	0.00	0.29	0.00
Source: Labour Force Survey 2015						

## Job Quality of Young Graduates in Southern European Countries

Table A3 – Fuzzy cluster analysis of the Greek sample data

Country		Greece			
Dimensions		Frequency	Typology 1	Typology 2	Typology 3
<b>Income</b>					
Monthly pay	Missing	10.65	7.49	<b>13.50</b>	8.38
	10	17.04	0.00	0.00	<b>81.30</b>
	20	17.76	17.77	17.35	18.70
	30	16.00	<b>25.83</b>	16.83	0.00
	40	9.91	12.37	<b>12.64</b>	0.00
	50	13.11	12.90	<b>18.85</b>	0.00
	60	10.53	9.03	<b>15.95</b>	0.00
	70	4.44	2.29	<b>7.66</b>	0.00
	80	6.71	<b>12.73</b>	5.89	0.00
	90	2.58	<b>3.80</b>	2.94	0.00
	100	1.91	<b>3.29</b>	1.88	0.00
<b>Contract</b>					
Permanency of the job	Missing	3.09	2.01	0.00	<b>14.06</b>
	Contract of unlimited duration	77.15	<b>100.00</b>	<b>100.00</b>	0.00
	Reasons for contract of limited duration:				
	- cover a period of training	2.86	0.00	0.00	<b>12.50</b>
	- person could not find a permanent job	17.37	0.00	0.00	<b>76.04</b>
	- person did not want a permanent job	0.57	0.00	0.00	<b>2.50</b>
- contract for a probationary period	2.05	0.00	0.00	<b>8.96</b>	
Duration	Unlimited	74.77	<b>97.83</b>	<b>100.00</b>	0.00
	Less than one month	0.60	0.00	0.00	<b>2.44</b>
	1 to 3 months	1.75	1.62	0.00	<b>5.09</b>
	4 to 6 months	8.95	0.00	0.00	<b>36.44</b>
	7 to 12 months	9.41	0.00	0.00	<b>38.32</b>
	13 to 18 months	1.85	0.00	0.00	<b>7.51</b>
	19 to 24 months	0.97	0.00	0.00	<b>3.94</b>
	25 to 36 months	0.32	<b>0.55</b>	0.00	<b>0.62</b>
	More than 3 years	1.38	0.00	0.00	<b>5.63</b>
Contract with a temporary employment agency	Missing	1.11	0.97	1.18	1.16
	No	99.49	<b>99.56</b>	99.26	<b>100.00</b>
	Yes	0.51	0.44	<b>0.74</b>	0.00
<b>Professional</b>					
Occupation - level of responsibility	Managers	0.37	0.00	<b>0.69</b>	0.00
	Professionals	34.92	0.00	<b>51.77</b>	<b>58.96</b>
	Technicians and associate professionals	15.96	0.00	<b>30.04</b>	0.00
	Clerical support workers	14.76	4.18	16.37	<b>36.81</b>
	Service and sales workers	29.34	<b>85.53</b>	0.00	0.00
	Craft and related trades workers	3.18	<b>8.53</b>	0.00	2.05
	Plant and machine operators and assemblers	0.60	0.00	<b>1.13</b>	0.00
	Elementary occupations	0.88	<b>1.76</b>	0.00	<b>2.18</b>

## Job Quality of Young Graduates in Southern European Countries

Table A3 – Fuzzy cluster analysis of the Greek sample data (cont.)

Acquired and required education	-2	0.14	0.00	<b>0.27</b>	0.00
	-1	0.05	0.00	0.00	<b>0.29</b>
	Acquired and required education match	46.91	0.00	<b>75.09</b>	49.98
	+1	3.41	0.00	<b>6.58</b>	0.00
	+2	1.25	<b>3.32</b>	0.00	1.10
	+3	47.28	<b>96.25</b>	16.90	47.20
	+4	0.69	0.00	<b>1.16</b>	0.56
	+5	0.28	<b>0.43</b>	0.00	<b>0.86</b>
Received training in the last four weeks	Yes	4.57	1.92	5.35	<b>7.33</b>
	No	95.43	<b>98.08</b>	94.65	92.67
<b>Working Time</b>					
Full-time or part-time	Missing	0.18	0.00	0.00	<b>1.07</b>
	Full-time job	83.23	<b>100.00</b>	<b>100.00</b>	0.00
	Reasons for part-time job:				
	- person is undergoing school education or training	0.60	0.00	0.00	<b>3.58</b>
	- person could not find a full-time job	14.42	0.00	0.00	<b>85.95</b>
- other personal or family reasons	1.76	0.00	0.00	<b>10.47</b>	
Number of hours per week	From 1h - 20h	12.13	0.00	0.00	<b>72.86</b>
	From 21 - 40h	69.05	48.22	<b>100.00</b>	27.14
	More than 40h	18.82	51.78	0.00	0.00
<b>Work-life Balance</b>					
Shift work	Does shift work	24.49	<b>100.00</b>	0.00	0.00
	Never does shift work	75.51	0.00	<b>100.00</b>	<b>100.00</b>
Evening work	Usually works in the evening	39.16	<b>67.04</b>	0.00	<b>51.16</b>
	Sometimes works in the evening	17.07	<b>32.96</b>	0.00	10.18
	Person never works in the evening	43.77	0.00	<b>100.00</b>	38.65
Night work	Usually works at night	5.49	<b>20.13</b>	0.00	0.00
	Sometimes works at night	9.18	<b>33.66</b>	0.00	0.00
	Person never works at night	85.33	46.21	<b>100.00</b>	<b>100.00</b>
Saturday work	Usually works on Saturday	34.82	<b>76.00</b>	0.00	0.00
	Sometimes works on Saturday	13.79	<b>24.00</b>	0.00	<b>28.51</b>
	Person never works on Saturdays	51.38	0.00	<b>100.00</b>	<b>71.49</b>
Sunday work	Usually works on Sundays	12.32	<b>53.51</b>	0.00	0.00
	Sometimes works on Sunday	10.70	<b>46.49</b>	0.00	0.00
	Person never works on Sundays	76.98	0.00	<b>100.00</b>	<b>100.00</b>
Working at home	Usually works at home	1.11	0.00	<b>1.81</b>	1.20
	Sometimes works at home	3.55	0.90	<b>5.34</b>	3.46
	Person never works at home	95.34	<b>99.10</b>	92.86	<b>95.34</b>
<b>Satisfaction</b>					
Wish to work more	Do not wish to work more hours than currently	78.83	<b>100.00</b>	<b>100.00</b>	0.00
	Wish to work more hours:				
	- through an additional job	1.52	0.00	0.00	<b>7.19</b>
	- through a job working more hours than the present job	2.35	0.00	0.00	<b>11.11</b>
	- only within the present job	7.01	0.00	0.00	<b>33.12</b>
- in any of the above ways	10.29	0.00	0.00	<b>48.58</b>	

## Job Quality of Young Graduates in Southern European Countries

Table A3 – Fuzzy cluster analysis of the Greek sample data (cont.)

Looking for another job	Missing	0.05	<b>0.14</b>	0.00	0.00
	Not looking for another job	92.89	<b>100.00</b>	<b>100.00</b>	56.11
	Reasons for looking for another job:				
	- risk or certainty of loss or termination of present job	0.83	0.00	0.00	<b>5.13</b>
	- actual job is considered as a transitional job	0.74	0.00	0.00	<b>4.56</b>
	- wish to have better working conditions (e.g. pay, working or travel time, quality of work)	0.88	0.00	0.00	<b>5.41</b>
	- other reasons	4.66	0.00	0.00	<b>28.78</b>
Person has more than one job	Missing	0.18	0.00	<b>0.37</b>	<b>1.64</b>
	No	99.26	<b>99.49</b>	99.20	99.01
	Yes	0.74	0.51	0.80	<b>0.99</b>
<b>Socio-Demographic</b>					
Age	Range 20 to 24 years old	17.48	<b>24.15</b>	9.94	<b>26.33</b>
	Range 25 to 29 years old	82.52	75.85	<b>90.06</b>	73.67
Gender	Male	41.42	<b>63.11</b>	34.35	23.03
	Female	58.58	36.89	65.65	<b>76.97</b>
Civil status	Widowed, divorced	0.18	0.02	<b>0.36</b>	0.00
	Single	88.98	<b>91.40</b>	85.56	<b>94.14</b>
	Married	10.84	8.59	<b>14.08</b>	5.86
Situation with regard to activity one year before survey	Carries out a job or profession, including unpaid work for a family business or holding, including an apprenticeship or paid traineeship, etc,	78.97	86.23	87.06	44.45
	Unemployed	14.62	7.80	8.00	<b>44.42</b>
	Pupil, student, further training, unpaid work experience	6.41	5.97	4.94	<b>11.13</b>
University degree	Bachelor's or equivalent level	96.08	<b>100.00</b>	92.08	<b>100.00</b>
	Master's or equivalent level	3.92	0.00	<b>7.92</b>	0.00
Disciplinary field	Missing	0.05	0.00	<b>0.09</b>	<b>0.40</b>
	Teacher training and education science	9.92	1.35	<b>16.11</b>	8.03
	Humanities, languages and arts	11.21	4.11	7.32	<b>35.48</b>
	Social sciences, business and law	30.73	19.09	<b>40.85</b>	23.31
	Science, mathematics and computing	9.69	7.17	10.87	10.97
	Engineering, manufacturing and construction	14.91	<b>22.28</b>	13.57	5.08
	Agriculture and veterinary	3.00	<b>4.14</b>	2.20	3.18
	Health and welfare	10.24	<b>15.00</b>	6.60	11.87
	Services	10.29	<b>26.85</b>	2.47	2.07
Tenure	Until 1 year in the organisation	17.90	15.43	11.70	<b>35.74</b>
	Until 2 years in the organisation	26.71	21.95	25.21	<b>37.11</b>
	Until 3 years in the organisation	16.42	16.23	14.68	<b>20.71</b>
	Until 4 years in the organisation	12.36	10.85	<b>17.38</b>	3.06
	Until 5 years in the organisation	8.30	7.13	<b>11.62</b>	2.40
	More than 6 years in the organisation	18.31	<b>28.41</b>	19.40	0.99

## Job Quality of Young Graduates in Southern European Countries

Table A3 – Fuzzy cluster analysis of the Greek sample data (cont.)

Firm Characteristics					
Size firm	< 10	51.06	44.65	44.92	<b>79.32</b>
	11 to 49	33.90	34.03	38.62	20.68
	> 50	15.04	<b>21.32</b>	16.46	0.00
Economic activity	C - Manufacturing	6.13	2.35	<b>10.39</b>	0.99
	D - Electricity, gas, steam and air conditioning supply	0.32	<b>0.50</b>	0.28	0.00
	E - Water Supply; sewerage, waste management and remediation activities	0.09	<b>0.25</b>	0.00	0.00
	F - Construction	1.20	0.00	<b>2.26</b>	0.58
	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	20.48	<b>36.96</b>	10.41	12.83
	H - Transportation and storage	3.97	4.17	4.94	0.00
	I - Accommodation and food service activities	9.36	<b>24.57</b>	0.00	2.63
	J - Information and communication	5.07	1.36	<b>7.18</b>	<b>7.33</b>
	K - Financial and insurance activities	2.77	0.00	<b>5.60</b>	0.00
	L - Real estate activities	0.28	0.00	<b>0.56</b>	0.00
	M - Professional, scientific and technical activities	13.24	0.00	<b>24.57</b>	7.82
	N - Administrative and support service activities	2.63	1.81	2.22	<b>6.17</b>
	O - Public administration and defence; compulsory social security	8.39	<b>17.64</b>	2.82	3.86
	P - Education	14.99	0.00	<b>20.00</b>	<b>36.29</b>
	Q - Human health and social work activities	8.03	7.99	5.82	<b>15.80</b>
	R - Arts, entertainment and recreation	2.08	1.66	2.02	<b>3.34</b>
	S - Other service activities	0.83	0.42	0.93	<b>1.55</b>
T - Activities of households as employers; undifferentiated goods - and services - producing activities of households for own use	0.14	<b>0.32</b>	0.00	<b>0.82</b>	
Source: Labour Force Survey 2015					