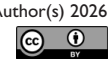
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Young graduate jobs in Southern European countries: Persistent patterns during and after the economic recession

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Abstract

The Great Recession led to unfavourable labour market conditions for young people in Southern European countries. We compare the jobs of young graduates (⩽29 years) in Greece, Italy, Portugal, and Spain (GIPS), during recession (2011), at the beginning of recovery (2014), and in the expansion phase (2017, 2019). A fuzzy clustering of European Labour Force Survey data pointed to a taxonomy of three types of jobs: Quasi-Standard, Insecure, and Precarious. A subsequent regression analysis allowed us to explore the drivers of job typologies and showed that institutional settings and higher education expansion help understand the job quality of young graduates in GIPS.

Keywords

job quality, graduates, economic conditions, labour market regulation, Southern Europe

Introduction

The debate around jobs was launched by segmentation arguments to refer to the division of labour market into distinct segments that impacts job quality, security, and mobility (Doeringer and Piore, 1971). Another stream of division arguments focuses on institutionally driven segmentation that distinguishes insiders and outsiders, that is, protected

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and unprotected workers (Lindbeck and Snower, 1989). Job quality then became an enduring topic that has long since attracted widespread attention from social scientists and entered the European employment agenda in 2000 under the slogan "more and better jobs for all" (Davoine et al., 2008).

The massification of higher education (HE) and the increasing supply of graduates laid the ground for a new policy push and called for renewed academic research and policy recommendations to explore the varying dimensions of job quality (Knight et al., 2017; Mok, 2016). While governments have undoubtedly created education opportunities to supply skilled workers to the economy and satisfy the demands from families, their ability to create more and better jobs has been limited. It is argued that the massification of HE and the increasing supply of graduates have not been accompanied by an increase in highly skilled jobs (Caroleo and Pastore, 2016). Often, degree holders tend to accept any available job including those requiring fewer skills, that is, jobs which were traditionally for non-graduates (Figueiredo et al., 2017). An analysis of jobs assigned to graduates is thus required, especially in countries that have recently suffered from a poor economic performance and live with the threat of losing skilled labour to more developed countries. More importantly, those countries have implemented varying labour legislation reforms towards increasing liberalisation of labour markets (Bulfone and Tassinari, 2021). Simultaneously, unionisation has fallen, and it is now seen as unattractive to young people (Vandaele, 2019).

Our study examines the types of job held by young graduates (bachelors and masters) from Southern European (SE) countries, namely Greece, Italy, Portugal, and Spain (GIPS). These countries have made huge investments to advance the massification of HE, albeit to different degrees, given that some underwent more intense expansion than others. Furthermore, the SE countries were harder hit by the 2008 Great Recession than other EU countries, triggering unfavourable labour market conditions for young people. Not only do these countries share institutional and economic features, but they also undertook major regulatory reforms to improve labour market performance.

The context of increasing supply of graduates, lower supply of skilled jobs and, as Piasna (2018) states, a non-standard job recovery raises the following questions: What are the characteristics of jobs assigned to young graduates? How the jobs differ across the SE countries? What influences the quality of jobs? Ultimately, we aim to examine the extent of non-standard job recovery in SE, with a particular focus on the graduate labour market, and explore the influence of a set of economic characteristics (supply and demand) and institutional settings on the quality of graduates' jobs. We assume that deregulated labour markets, combined with increasing supply of graduates, make it difficult for young people to find good jobs, with stable contract and decent wage, that reflects the true value of a HE degree.

Our empirical research draws on European Labour Force Survey (EU-LFS) data and compares the jobs of young graduates ($\leqslant$29 years) in GIPS during the economic recession (2011), at the beginning of recovery (2014), and in the expansion phase (2017 and 2019). We aim to compare the type of graduate jobs in recessionary times with those in periods of economic growth. Some research examines dimensions of job quality in recession times (Aronson et al., 2015; Bartoll and Ramos, 2020) but studies on how different economic phases affect the quality of graduate jobs remain scarce.

It is well-known that the assessment of job quality is a complex task due to conceptual and methodological issues as well as disciplinary borders (Findlay et al., 2013; Muñoz de Bustillo et al., 2011). Cluster analysis (Holman, 2013) or a combination of multiple correspondence factor analysis and cluster analysis (López-Roldán and Fachelli, 2021) are often used to group job characteristics and identify types of job. We assume that jobs can be grouped by prevalent characteristics, but membership is not mutually exclusive. We therefore apply a soft clustering technique based on a fuzzy analysis to identify job typologies and to account for the overlapping that prevails in the graduate labour market in the abovementioned SE countries. Subsequently, we explore a regression model to examine the factors that might be influencing membership in more favourable (unfavourable) job typologies, as it allows a more complete characterisation of institutional settings, graduates and employers.

The job quality of young people

Job quality entered the European employment agenda in 2000 under the slogan "more and better jobs for all" (Davoine et al., 2008). The concept of job quality, as well as the methodological issues around it, requires further assessment and is beyond the scope of this study. Nonetheless, a varying number of dimensions and indicators are used in practice to classify jobs (Muñoz de Bustillo et al., 2011). Job quality was inspired by the labour market segmentation arguments that recognise two broad segments, primary and secondary, with different job characteristics (Doeringer and Piore, 1971). In any case, it is recognised that job quality involves multi-disciplinary and multidimensional approach (Findlay et al., 2013). Subsequent empirical analysis tried therefore to classify jobs according to their monetary and non-monetary characteristics and propose taxonomies of types of jobs, either through dichotomic clusters, as good and bad jobs (Kalleberg, 2011) or multiple types of jobs in the EU (Holman, 2013).

Researchers have examined the types of jobs taken by young HE graduates (Boccuzzo and Gianecchini, 2015; Okay-Somerville and Scholarios, 2013) and highlight the increasing difficulties they face on entering the labour market, particularly poor-quality entry-level jobs, with flexible and precarious conditions, despite their qualifications (Lodovici and Semenza, 2012). Scarpetta et al. (2010) labelled them as "poorly integrated new entrants" not only because they can hardly find a stable job but also due to their entrapment in low-quality jobs.

Flexible jobs are also associated with other specificities, notably decreasing returns to education for new skilled entrants in some countries (Knight et al., 2017); overeducation (Berloffa et al., 2019; Boccuzzo and Gianecchini, 2015; Figueiredo et al., 2017; Nordlund, 2018; Okay-Somerville and Scholarios, 2013) because degree holders tend to accept any available job including those requiring fewer skills, for example, jobs which were traditionally for non-graduates (Figueiredo et al., 2017), in the service sector (Okay-Somerville and Scholarios, 2013) or in low-wage occupations in restaurants and sales (Nordlund, 2018). In sum, graduates today face significant challenges, notably difficulties in finding a job that matches their degree, securing full-time work, obtaining high wages, and/or identifying prospects for career development (Aronson et al., 2015).

Researchers are also concerned with the drivers of such challenges. The trends of employment conditions derive from a set of economic and political factors, such as political initiatives for the liberalisation of the labour market; industrial decline; decline of trade unions, usually linked to the industrial sectors; privatisation and the reduction of employment in the public sector; and a lack of skilled jobs for qualified young people (Furlong et al., 2018). It is argued that economic recessions create unfavourable conditions, affecting earnings (Oreopoulos et al., 2012), and employment trajectories in the labour market (Berloffa et al., 2019) especially for young people including graduates. The poorer employment conditions, in particular, flexible forms of employment, are an outcome of a long transformation process in the labour market that has systematically created precarious work for young people, while leaving untouchable older workers (Barbieri, 2009). In this regard, Passaretta and Wolbers (2019) study corroborates the insider–outsider divide, illustrating the entrapment effect of unbalanced protection of employment of insiders that is, higher segmentation reduces the probability of young workers leaving a fixed-term contract. However, the referred authors found that the union strength has no influence on contractual mobility. Ultimately, despite some variations across countries, the drivers of these trends in the youth labour market may be cyclical, economic, or institutional (O'Reilly et al., 2019).

General features of SE countries

Job quality has been a major issue in SE countries because of the prevalence of temporary jobs among young people (Barbieri, 2009). The Great Recession created unfavourable labour market for them, including graduates, who are no longer protected. It is argued that non-standard jobs, that is, temporary jobs (Piasna, 2018) and the deregulation of the labour market, translated into labour law reforms (Rodríguez and Lucio, 2023; Tassinari et al., 2023), are distinctive features of the SE countries. GIPS governments have implemented varying reforms (Bulfone and Tassinari, 2021; Tassinari et al., 2023) and developed a neoliberal approach and alignment which have been translated into market-led strategies by employers and the state (Rodríguez and Lucio, 2023). These reforms affected young people and created a two-tier labour market in Greece (Gouglas, 2013); Italy (Barbieri et al., 2019); Portugal (Centeno and Novo, 2013); and Spain (Polavieja, 2003). In short, the already strong divide between insiders and outsiders was exacerbated by the reforms of labour market regulation, which increased young people's vulnerability in GIPS (Serracant, 2015). More importantly, it compelled employers to generate temporary jobs in low-value-added activities, thereby reinforcing an economic model grounded in cheap and flexible labour (Tassinari et al., 2023).

Unions are facing complex challenges in this liberalisation context in SE countries. Although having different institutional trajectory, GIPS unions are navigating in a strong segmented labour market, with reduced union density and widespread of temporary employment (see Rigby and García Calavia, 2018). Important reforms underwent during economic recession, especially wage cuts or moderation, where government has used its power to devaluate labour (Lima and Caldas, 2023). However, Asensio and Ferreira (2024) underline differences among SE countries. The highest wage cut has occurred in

Greece and Portugal (less markedly in Spain), where social partners are confronted with higher levels of state interventionism. In contrast, state intervention is limited, and employers and unions autonomy may have less impact on adjustment, in Italy. Asensio and Ferreira insist that in Italy, social partners are strong and the tools available for labour cost reduction and reducing employment conditions are very limited.

Additionally, varying instruments were implemented to transform collective bargaining structures, aiming to make wages more adjustable to economic conditions at the firm level, that is, to increase the decentralisation of wage and employment conditions settings (Asensio and Ferreira, 2024). However, according to the EUROFOUND study, the coverage of collective agreement is higher in SE countries, although with relevant differences: in Italy and Spain the coverage is 98% and 94%, respectively, while in Portugal and Greece it is 65% and 54%, respectively (Aumayr-Pintar, 2020). More importantly, the coverage level is higher in sector- or regional-level agreements.

In sum, the two complementary institutional structures, labour legislation and collective bargaining, are being transformed in the same direction. Liberalisation and decentralisation aim to enhance employers' autonomy to make decisions more freely and efficiently; however, reducing regulations often leads to increased vulnerabilities for workers, poorer working conditions and less job security. Furthermore, deregulation impacts severely young people and fosters inequality among similar workers.

In addition to institutional and cyclical features, some authors looked at the types of jobs destroyed during the recession and found a dichotomy across countries. Garofalo et al. (2018) report significant losses of highly paid jobs and the increase (or slight decrease) in lower-paid jobs in Italy and Spain, while Hurley et al. (2013) find that the job losses in Portugal and Greece were mainly in medium and low-paid jobs.

Other studies show that there are some labour market characteristics that help understand job patterns. This includes the size of the firms (Boccuzzo and Gianecchini, 2015; Suleman and Figueiredo, 2020); the industry affiliation and the wage strategy (Nordlund, 2018; Okay-Somerville and Scholarios, 2013). Other literature looks at the supply side and finds that graduates from *soft* fields tend to have low-quality jobs (García-Espejo and Ibanez, 2006; Karamessini, 2010; Lombardo and Passarelli, 2011; Ramos et al., 2014); are often mismatched (Liagouras et al., 2003); may be assigned to jobs that traditionally do not require a HE degree (Figueiredo et al., 2017); or simply find it difficult to access the labour market and to get their first permanent job (Pastore, 2018). There is broad agreement that graduates from humanities are employed in lower quality jobs, whereas those from technical fields are more likely to have a high-quality job in Greece (Livanos and Pouliakas, 2011), Italy (Boccuzzo and Gianecchini, 2015; Lombardo and Passarelli, 2011); and Portugal (Ramos et al., 2014). Other studies additionally report a gender gap and indicate that women prevail in lower quality jobs in Italy (Boccuzzo and Gianecchini, 2015).

Examining the labour market characteristics of the GIPS in the past decade (Figure 1), we noticed that while Greece remains distinctive for its persistently high youth unemployment, including that of graduates, a downward trend has been observed across all countries since 2014. In the Portuguese case, the labour market exhibited favourable outcomes with respect to unemployment, yet these gains were undermined by a comparatively extensive use of temporary contracts.

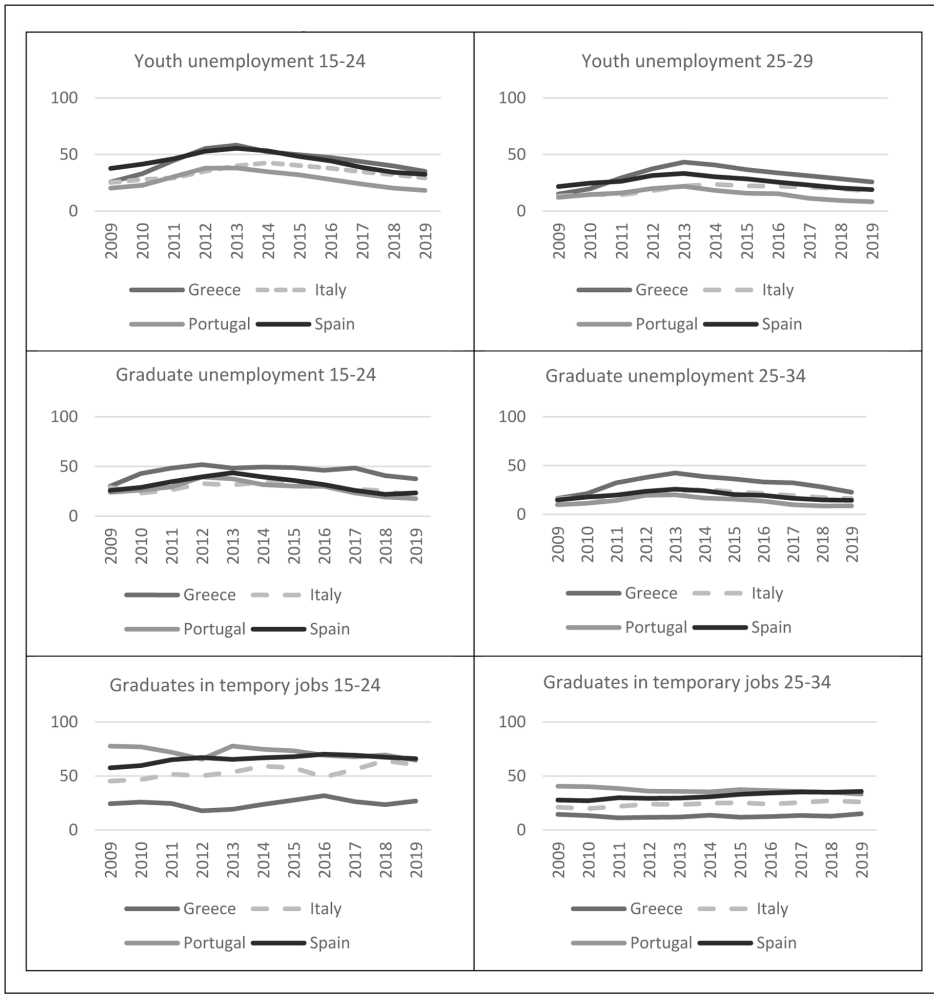


Figure 1. Major labour market outcomes in GIPS.
Source: EUROSTAT.
GIPS: Greece, Italy, Portugal, and Spain.

Considering the above literature, we expect the SE countries to converge towards lower job quality, with a recovery based on non-standard employment (Piasna, 2018). Furthermore, we admit that institutional mechanisms that taken place with economic recession contributed to reshaping youth labour market, including for graduates. Therefore, the following hypotheses are submitted to empirical testing:

Hypothesis 1: Poor-quality jobs tend to prevail in SE countries regardless of the economic condition.

Hypothesis 2: Institutional settings shape the jobs available to generations of workers.

Hypothesis 3: Supply and demand side characteristics affect the type of jobs in each economy.

Data and method

Description of data

The basic assumption of the empirical analysis is that job quality is a multidimensional concept, and segments are hierarchised according to the employment conditions (López-Roldán and Fachelli, 2021). Moreover, there is broad consensus on the relevance of a set of dimensions used when measuring job quality, notably pay, employment security, job satisfaction, skill development, and work autonomy. The empirical analysis includes the set of variables that covers the above-mentioned dimensions and draws on EU-LFS data from EUROSTAT (EU-LFS), referring to the years 2011, 2014, 2017, and 2019.

The EU-LFS is a sample-based survey and provides information on the labour market status of individuals, their demographic characteristics, qualifications, employment conditions, and wages. It also includes information on the reasons behind the type of contractual arrangement and working time, which is useful when examining voluntary (involuntary) non-standard jobs. Our sample comprises graduates aged 29 or below[1] to ensure it covers differences in the education system in SE countries and limits our research to early-stage jobs.

We split our variables into internal and external. The former contributes substantially to grouping (job typologies), while external variables are used to subsequently examine what might affect data grouping. Our research includes 16 internal variables, most of them follow the three dimensions proposed by Boccuzzo and Gianecchini (2015): economic, professional, and work–life balance. The economic dimension includes income, contractual arrangements, and the source of hiring (temporary agency); the professional dimension is explored through the education mismatch and training opportunities; and the work–life balance involves examining full/part time work and atypical work (evening, night, and weekend work). The 14th variable is Skill Mismatch, which represents the difference between the graduates' level of education and the level of education required for a job. Following Kiker et al. (1997), the skill mismatch is the deviation of the graduates' education level from the mode of education level in each occupation as codified in the International Standard Classification of Occupations (ISCO). Overeducation is signalled by a positive value while a negative value indicates undereducation.

Additionally, we considered the subjective dimension of job quality. The EU-LFS provides two variables on the perception of the quality of a job. One variable is job satisfaction, which is proxied by the intention to change job. Although the dataset lacks a direct measure of job satisfaction, this dimension of job quality can be assessed indirectly by the individuals' intention to work more hours or search for another job. In fact, Waaijer et al. (2017) note that PhD graduates are less satisfied in temporary contracts

Table 1. Characteristics of jobs (internal variables).

Dimension	Variable	Indicator
Economic	Wage	I1: Monthly pay in decile
	Contractual arrangements	I2: Number of months of contract
		I3: Involuntary FC
		I4: Voluntary FC
		I5: Hiring source = temporary agency
Work–life balance	Working time and workplace	I6: Working time PT/FT
		I7: Working hours (number of hours worked)
		I8: Involuntary PT
		I9: Shift work
		I10: Atypical work
		I11: Homework
		I12: Second job
Professional	Skill acquisition and utilisation	I13: Opportunity to have further training
		I14: Skill mismatch
Satisfaction	Job satisfaction	I15: Overall satisfaction
		I16: Perception of the current job

FC: Flexible contract; PT: part time; FT: Full time.

than those with a permanent contract. We assume the intention to change job as a proxy for dissatisfaction with the current job. The second variable is related to the reasons for searching for a new job. The variable I15: "Overall Satisfaction" (see Table 1) includes the perception of the risk or certainty of loss or termination of the current job, the assumption that the job is transitional, and the desire to access better working conditions (e.g. pay, working or travel time, quality of work).

Table 1 describes the internal variables used to cluster the job in GIPS. These variables are used in the first step of data analysis, that is, in segmentation of the graduates' labour market according to the quality of jobs.

In the next step of the data analysis, we considered the following three main variables that might affect the quality of jobs. First, we explored the two complementary institutional settings related to insider–outsider model (Passaretta and Wolbers, 2019), namely the employment protection (EPL) gap between regular contracts–individual dismissal (ID) and temporary contracts (TC) (x_1) and unions strengthen, proxied by union density (x_2). These variables were collected from OECD database (see Figure 2). The EPL gap varies between −6 and 6.[2]The former means outsiders are fully protected (TC = 6; ID = 0); the later represents fully protection of insiders (ID = 6; TC = 0). We used a linear interpolation technique to input missing values for union density for Greece and Portugal.

The third main variable regards the supply of graduates measured through the population of young people (20–29 years old) holding a HE degree (x_3), as reported by EUROSTAT data. We used the data from *t-1* assuming the lag effect of those variables.

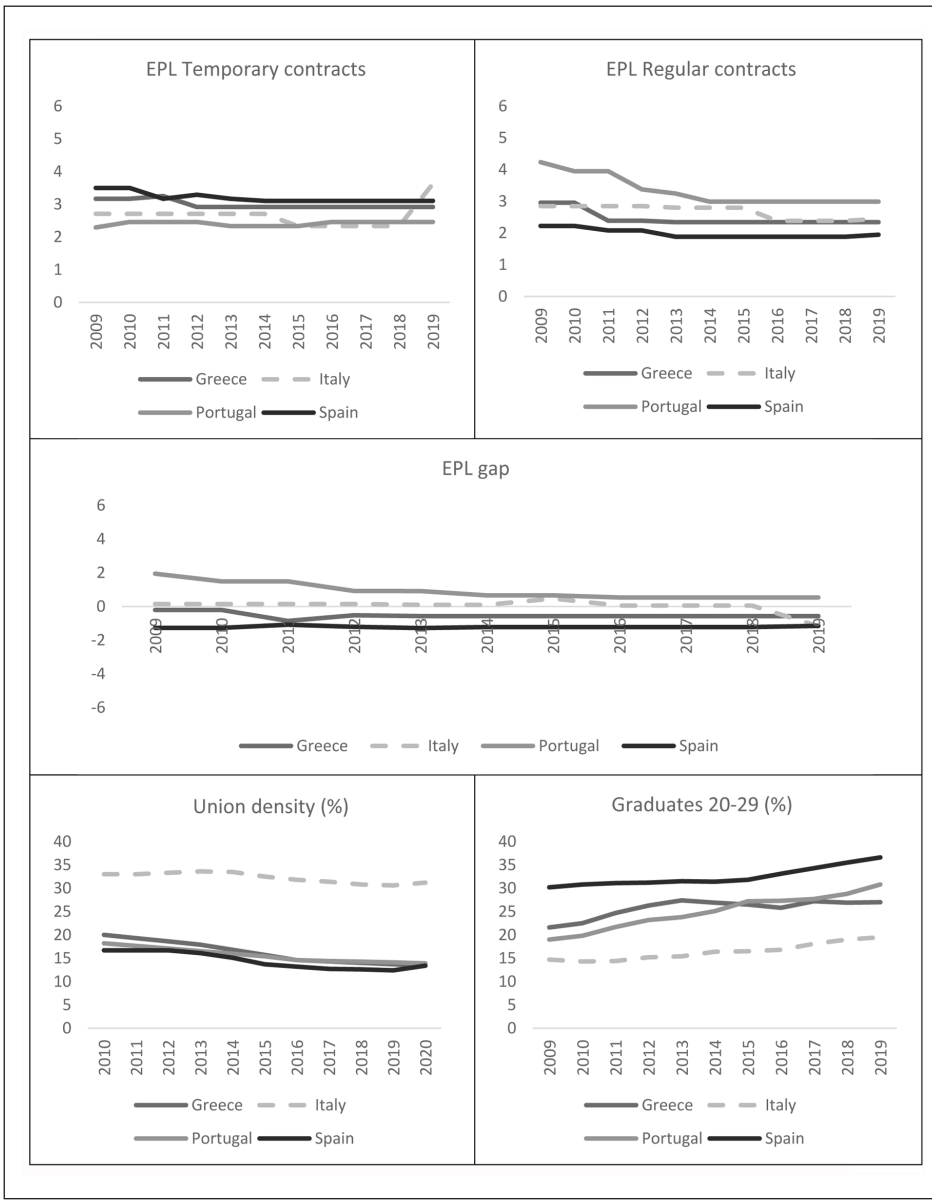


Figure 2. Main drivers of job quality: institutional setting and HE expansion.
Source: EUROSTAT, for graduate data; OECD for EPL and union density.
EPL: Employment protection legislation.

Additionally, we controlled for x_4: labour market status 1 year before survey (employed, unemployed, student); x_5: gender; x_6: Field of programme completed at the highest education level; x_7: Occupation two-digit ISCO-08; x_8: firm size as measured

through the number of persons working in the local unit; and x_9: Economic activity of the local unit, using one-digit Nomenclature statistique des activités économiques dans la Communauté européenne (NACE) and aggregating it according to EUROSTAT classification.

Multivariate data analysis

We use fuzzy or soft clustering to reduce the data on job characteristics and to identify job typologies that prevail in SE countries. It is a more flexible approach since it allows multiple cluster membership; it is particularly useful when there is no sharp boundary between the observations that belong to one cluster and those that do not. Consequently, each data point is represented by a vector where each coordinate accounts for the membership degree in the respective cluster. The typologies are characterised by full members or prototypes. As an example: suppose there are two prototypes, black and white represented by (0,1) and (1,0), respectively; in other words, the full membership is signalled by one coordinate equal to 1 and another (others) 0. If we move from (1,0) to (0,1), the impact of the white decreases and that of black increases by the same amount. In the middle, we should have the "balanced grey" (0.5, 0.5); a darker grey can be represented, for example, by (0.2, 0.8). Prototypes therefore act as a basis to analytically represent any grey, that is, partial members in different sets. This reasoning applies in the same way to the case of three prototypes or more. Noticeable is the fact that fuzzy clustering provides a measure of membership, while crisp clustering forces the membership to a unique cluster, like black or white. Eventually, we can consider the membership in a specific cluster as a dependent variable and try to identify factors or external variables that might be influencing this membership by means of a regression model. We will explore this feature in our study, using external variables as predictors.

The clustering was accomplished by means of the grade of membership model devised by Woodbury and Clive (1974). Here, it is assumed that the underlying population is structured by a normal fuzzy K-partition, where $K \geqslant 2$ is the unknown number of clusters in the data. Normality ensures that each fuzzy cluster has at least one prototype, that is, full member in the classical sense. The fuzzy clusters represent jobs; the prevailing conditions in prototypes shed light on the quality of different jobs, that is, define job typologies.

Empirical findings

In all 4 years under analysis, we find that young graduates can be modelled by three fuzzy clusters. The characterisation of these clusters followed the 25% criterion, that is, the categories accounting for more than 25% of the corresponding marginal frequencies in each cluster are tagged as its distinctive features or conditions. These features must be interpreted as relevant characteristics; however, they do not prevent the presence of other characteristics in clusters. Informally, their prevalence in clusters is higher than in the population regarded as a whole. For higher marginal

frequencies, for example, $\tau > 0.90$, we consider the category as a discriminant condition if it exceeds τ in typology.

Job typologies: General description

The fuzzy cluster analysis identified three job typologies (see Table A1 in Appendix A) that recurrently follow the same pattern across the 4 years under study; we label them as Quasi-Standard, Insecure, and Precarious. However, the graduates may have partial membership in different typologies. As its distinctive feature, the fuzzy analysis also provides a quantification of the membership in each typology, which is denoted here by g_1, g_2, and g_3, respectively, such that $g_1 + g_2 + g_3 = 1$. For example, increasing values of g_1 lead graduates closer to Quasi-Standard typology. While Insecure and Quasi-Standard typologies reflect objective characteristics, the Precarious label introduces the subjective feature of job quality, notably the graduates' perceptions of their job prospects. Furthermore, Quasi-Standard may be comparable to standard jobs but have limited features, as we will examine later.

Graduates in Precarious jobs earn lower wages and are engaged in an unstable employment relationship with a very short duration and part-time contracts. Apparently, they accept any available job since this typology comprises the highest proportion of graduates involuntarily in flexible and part-time jobs. Furthermore, most state that they are unable to find a permanent position and consider the current job to be transitional. Some have proactively acquired a second job to mitigate the risk of first job contract termination. They are unsatisfied since they are searching for better working conditions; and they are aware of the marked risk and uncertainty in the labour market. The label of this typology shows the precarity of jobs, but more importantly, it reflects the sense of precariousness among young graduates.

The Insecure job category combines contractual flexibility with full-time employment. Working time arrangements are the same as for Quasi-Standard jobs, but the duration of contracts varies. In contrast to Precarious jobs, we found long-duration temporary contracts in all years except 2011. Some graduates in Insecure jobs are involuntarily in flexible and part-time jobs but not engaged in atypical work.

The Quasi-Standard job typology is characterised by long duration and full-time contracts but with longer working hours, and atypical (evening and night work, or at least Saturday or Sunday) and shift work. In 2011, the proportion is similar though not higher than the sample mean. It should be noted that although graduates have stability in the economic expansion stage, the wages of some are lower (third decile).

Graduates in the Quasi-Standard typology are often overeducated for their job but are not looking for another job. They are graduated in health and welfare and services. Some graduates are employed in non-graduate jobs, such as service and sales workers in wholesale and retail trade; repairing motor vehicles; and in accommodation and food service activities. However, many are working in human health and social work activities. Two subsegments in this cluster, namely health and trade sectors, have atypical work as a common feature. Similarly to graduates in Insecure jobs, those in this cluster are willing to work more hours.

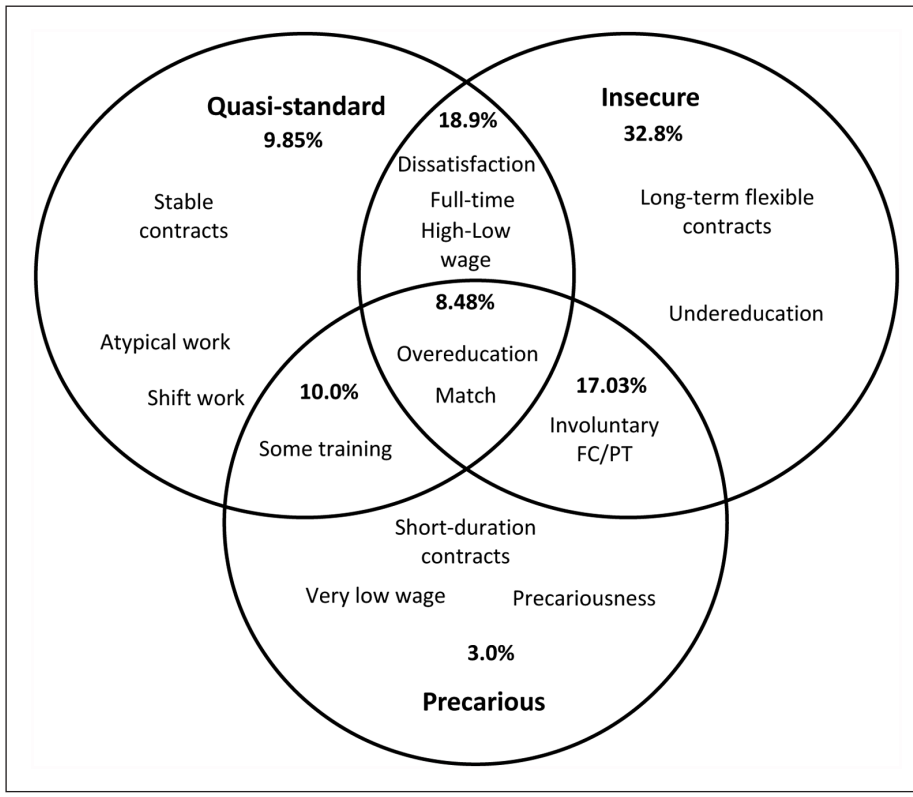


Figure 3. Characteristics of jobs of graduates and distribution in GIPS.
GIPS: Greece, Italy, Portugal, and Spain.

In sum, the graduates report dissatisfaction in the three job categories. While those in Precarious jobs fear job loss and feel insecure due to the contractual arrangements, the graduates in the other two categories think about more working hours in stable or less flexible jobs, expectedly to earn higher wages. Apparently, there is a trade-off between more working time and ultimately high wages and job stability in Quasi-Standard jobs.

In addition to job typologies, fuzzy clustering provides information on the employment conditions of graduates that share two or more clusters at the same time[3] (Figure 3). Specifically, those with at least two positive membership degrees, g_1, g_2, or g_3. As can be seen, all clusters have matched and overqualified graduates, but the incidence of mismatch varies across typologies. It prevails in Insecure jobs, which means instability clusters with under and over education. More importantly, the matched jobs are in the lowest proportion.

The Insecure and Precarious job clusters share graduates who are involuntary in temporary or part-time jobs, while low and high wages and dissatisfaction are common to Quasi-Standard and Insecure clusters. Figure 3 additionally includes the average proportion of graduates in the 4 years; it illustrates the distribution of graduates across three

fuzzy clusters and intersections between clusters in the 4 years under analysis. It comprises the whole sample.

Fuzzy clustering offers a clearer classification of both the proportion of graduates in each typology, Quasi-Standard, Insecure, and Precarious, and the jobs that share characteristics of two prototypes or more. For example, on average, 18.9% of graduates share the characteristics of Quasi-Standard and Insecure categories, while 8.48% share the characteristics of all types of jobs (Figure 3). We note that more than 50% of graduates have low-quality jobs, that is, are in the Insecure or Precarious clusters, or are between these two segments.[4] Apparently, it is the wage level that moves the sampled graduates away from the prototypes because low wages (deciles 1 and 2) are found between Quasi-Standard and Precarious jobs, indicating a combination of contractual stability with low pay (Figure 3).

Job typologies: Cross-country and analyses over time

The next issue is how job typologies vary across SE countries and whether the economic recession and expansion affected the employment conditions of recent graduates; this is addressed in Figure 4. We noticed that what distinguishes SE countries is the incidence of each type of job rather than the type of job itself.

Figure 4 shows that while the proportion of graduates in Insecure jobs prevails in all countries, it tends to decrease (increase) in some countries over time. The higher records in the Insecure job category are clearly a distinctive feature of the Italian, Spanish, and Portuguese labour markets in the economic expansion stage. Although this category predominates in all years, it increased in 2019 to reach the highest values in these three countries. On the other hand, the evolution of graduates in Quasi-Standard jobs is heterogeneous: after a marked increase in Greece from 2011 to 2014, the percentage remained steady during the recovery phases. This indicates that the economic recovery helped create better jobs in Greece. The remaining SE countries followed the same pattern though less intensively, that is, the proportion of graduates in Quasi-Standard jobs was clearly lower.

We now turn to the overlapping job categories, particularly those with partial membership in exactly two clusters. Figure 5 displays the proportion of graduates aligned with Precarious and Insecure job typologies and those sharing their characteristics to some degree. It clarifies the incidence of flexible jobs in GIPS; notably, in Spain and Italy, around 60% of young graduates were in flexible jobs in 2019.[5] These figures provide a more comprehensive picture of graduates' entry jobs; despite the lower proportion of graduates in Precarious jobs, Insecure jobs clearly prevail within the graduate labour market, especially in Italy and Spain. In sum, despite a marked decrease in the lowest quality jobs after the economic recession in Greece, this category increased in the other SE countries in the recovery stage (2019).

Although Quasi-Standard jobs are the second category of jobs in all countries, the proportion in this category is lower in Spain. In Greece, it increased from 2011 to 2014, indicating some improvement in the labour market. On the other hand, the outcomes for the figures on the edge connecting Insecure and Quasi-Standard jobs are striking. In short, graduates in the Greek labour market experienced better employment conditions

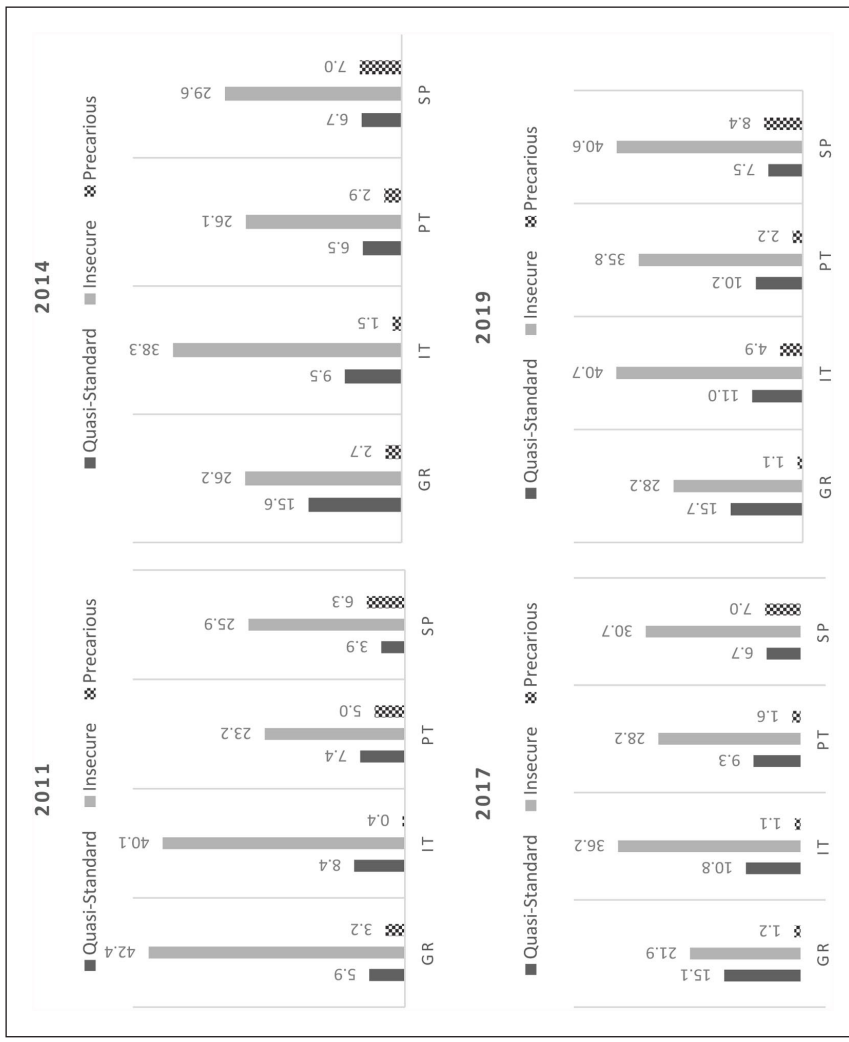


Figure 4. Distribution of job typologies over time across countries (% of graduates in the prototypes).
Source: EU-LFS, own calculation.
EU-LFS: European Labour Force Survey.

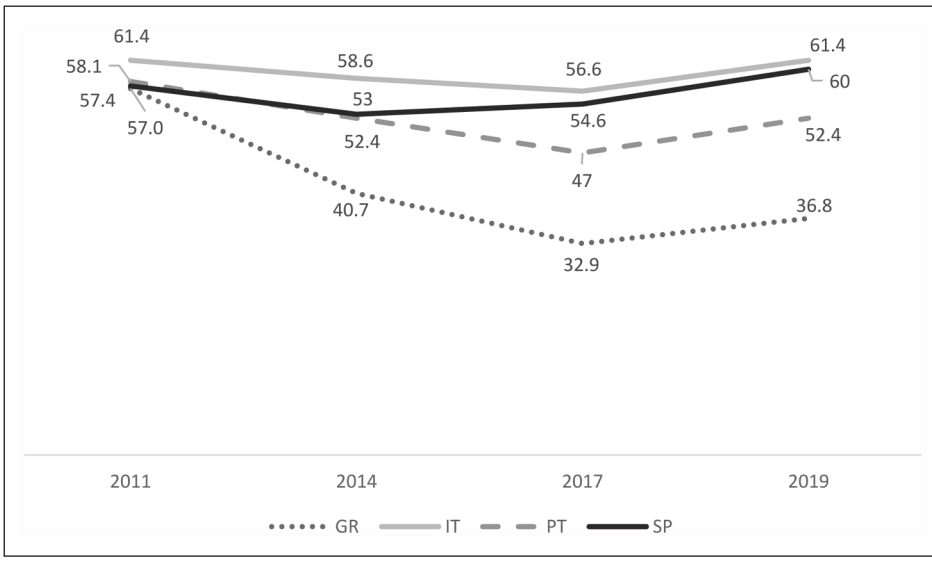


Figure 5. Graduates within or between Insecure and Precarious jobs in GIPS (%).
Source: EU-LFS, own calculation.
GIPS: Greece, Italy, Portugal, and Spain; EU-LFS: European Labour Force Survey.

than those in other SE countries, and these conditions tended to improve with economic expansion. On the other hand, the employment conditions of new entrants in Portugal are better than those in Spain and Italy, especially in relation to flexible jobs as evidenced in Figure 5.

Path to good quality jobs: A fractional regression approach

In a post-hoc analysis, we looked for the factors (external variables) that might be influencing the move towards the Quasi-Standard job typology by performing a regression analysis and using the membership degree of each graduate in this typology as the dependent variable, that is, g_1. More precisely, we divided the graduates' jobs into two broad categories, Quasi-Standard (g_1) versus non-stable jobs (Insecure and Precarious, $1-g_1 = g_2 + g_3$), and tried to ascertain the drivers of stability. Higher values of g_1 lead graduates closer to that typology (Quasi-Standard) while lower values take them in the opposite direction, that is, to other typologies (Insecure or Precarious). We denote by $\hat{g}_1$ the predictive value of g_1.

The starting point is the population model

$$E\left(g_1 \mid \mathbf{x}\right) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots\ldots + \beta_c x_c = \mathbf{x}\beta,$$

where $\beta's$ are the coefficients of $c = 9$ independent factors (see above the correspondence $\mathbf{x} \rightarrow$ external factors). Given the limited range of dependent variable g_1, that is, unit

interval $[0,1]$, we cannot expect that the effect of a particular x_j be constant throughout the range of $\mathbf{x}$. Besides, the predictive values of the usual ordinary least squares regression do not necessarily lie between 0 and 1. To overcome these and other difficulties, Papke and Wooldridge (1996) propose a fractional regression model (FRM) by postulating that the conditional mean of the response variable, here g_1, takes the form

$$E(g_1 \mid \mathbf{x}) = G(\mathbf{x}\beta)$$

where $G(.)$ is a differentiable function mapping to the interval $[0,1]$. Given the nature of $G(.)$, the referred authors propose using cumulative distribution functions (cdf) for $G(.)$, for example, the logistic function, $G(z) = \Lambda(z) = \exp(z)/(1+\exp(z))$, or the standard normal cdf, $G(z) = f(z)$, stressing, however, that $G(.)$ needs not to be a cdf. Each function determines a specific model type; for instance, the logit and probit models result when $G(.)$ is the logistic or standard normal cumulative distribution function, respectively. A more complete set of possible functions for $G(.)$, and the corresponding model designation, is given by Ramalho et al. (2011).

We estimated two FRM models, namely probit and logit, and see no substantial difference between them in terms of their adjustments. For this purpose, we considered the following measures of goodness of fit to assess the congruence of different models with the data: (i) The coefficient of determination or *R*-squared (R^2) that accounts for the proportion of variance in dependent variable explained by the predictors, and was calculated as square of the correlation between the observed values and the values predicted by the models; (ii) root mean square error (RMSE), corrected for the degrees of freedom, which accounts for the average magnitude of residuals; (iii) Ramsey (1969) Regression Equation Specification Error Test (RESET) that helps detect misspecification in regression models, in particular, omitted variables or incorrect functional forms. This statistic was calculated by adding in regression models powers of two, three and four of the predictive values, $\hat{g}_1^{\,2}$, $\hat{g}_1^{\,3}$, and $\hat{g}_1^{\,4}$, respectively; (iv) finally, we also considered a McFadden-type measure, known as pseudo-R^2, which accounts for the improvement provided by the full model when compared to that of intercept-only. In both cases, there is evidence of functional form misspecification, as measured by RESET statistic; therefore, the results presented here must be read with care. In all other criteria, the logit and probit models behave similarly. In what follows, we present estimates based on probit model, where: $R^2 = 0.3171$, RMSE = 0.2801, RESET (Chi2(3)) = 569.99 ($p < 0.01$), and Pseudo-R^2 = 0.1682.

Given the non-linear nature of FRM, we report average marginal effect (AME); Table 2 to interpret this model in terms of the average change in the expected value of g_1, following a one-unit change in external variables. For continuous variables, the AME captures the instantaneous rate of change; for categorical variables, it represents the discrete change from the reference group.

We created a pooled dataset that includes all countries and data from all examined years, which allowed us for cross-country and temporal analyses. The analysis involved conducting a FRM collectively for all countries combined and individually for each country, allowing for comparison of country-specific factors influencing the

Table 2. Average marginal effects of FRM: dependent variable: g_1 – Quasi-Standard jobs (external variables).

Dimension	Variables	Categories	GIPS	Greece	Italy	Portugal	Spain
Institutional settings	x_1 – Labour legislation	EPL gap	−0.2412***	−2.3078***	−2.1728**	−0.6454**	−7.5463**
			(0.0212)	(0.6341)	(0.9120)	(0.3086)	(3.4255)
	x_2 – Collective bargaining	Union density	−0.0090***	0.0003	−0.0048	−0.0423	−0.0279**
			(0.0006)	(0.0027)	(0.0084)	(0.0261)	(0.0117)
Market	x_3 – Supply of skills	Graduates 20–29	−0.0105***	−0.0176**	−0.0082	−0.0275***	−0.0042
			(0.0009)	(0.0069)	(0.0055)	(0.0100)	(0.0034)
Individual characteristics	x_4 – Status in the labour market in previous year Reference: Employed	Unemployed = 1	−0.0367***	−0.0354***	−0.0212***	−0.0587***	−0.0212*
			(0.0050)	(0.0096)	(0.0079)	(0.0100)	(0.0128)
		Student = 1	−0.0448***	−0.0006	−0.0353***	−0.0555***	−0.0377***
			(0.0046)	(0.0127)	(0.0071)	(0.0083)	(0.0104)
	x_5 – Gender Reference: Male	Female = 1	−0.0333***	−0.0827***	−0.0127*	−0.0104	−0.0186**
			(0.0038)	(0.0073)	(0.0069)	(0.0077)	(0.0092)
	x_6 – Field of education Reference: Social sciences, business and law	Education science and training	−0.0138**	−0.0525***	0.0676***	−0.0181	−0.0320***
			(0.0056)	(0.0111)	(0.0122)	(0.0111)	(0.0110)
		Humanities, languages and arts	0.0562***	0.0752***	0.0628***	0.0403***	0.0482***
			(0.0053)	(0.0097)	(0.0085)	(0.0120)	(0.0162)
		Science and mathematics	0.0422***	0.1025***	0.0444***	0.0412**	−0.0076
			(0.0076)	(0.0170)	(0.0109)	(0.0171)	(0.0171)
		Computer science, computer use	−0.0251***	−0.0145	−0.0399***	−0.0206	−0.0632***
			(0.0074)	(0.0126)	(0.0122)	(0.0242)	(0.0153)
		Engineering, manufacturing, construction	0.0020	0.0219*	0.0028	−0.0028	−0.0309**
			(0.0052)	(0.0112)	(0.0080)	(0.0096)	(0.0137)

(continued)

Table 2. (continued)

Dimension	Variables	Categories	GIPS	Greece	Italy	Portugal	Spain
		Agriculture and veterinary	0.1003***	0.0848***	0.0528**	0.1612***	0.1320***
			(0.0132)	(0.0197)	(0.0226)	(0.0312)	(0.0436)
		Health and welfare	0.3122***	0.2632***	0.3795***	0.2630***	0.3011***
			(0.0063)	(0.0138)	(0.0134)	(0.0103)	(0.0155)
		Services	0.1720***	0.2679***	0.1085***	0.1033***	0.1496***
			(0.0082)	(0.0155)	(0.0174)	(0.0132)	(0.0240)
	x_7 – Occupations (ISCO2D) Reference: Professionals	Managers	−0.1000***	−0.0195	−0.1786***	−0.0983***	−0.0779**
			(0.0156)	(0.0389)	(0.0602)	(0.0206)	(0.0365)
		Technicians and associate professionals	−0.0334**	0.0397	−0.1053*	−0.0777***	−0.0612
			(0.0160)	(0.0397)	(0.0602)	(0.0217)	(0.0375)
		Clerical support workers	−0.0502***	0.0583	−0.1438**	−0.0492**	−0.0773**
			(0.0161)	(0.0397)	(0.0601)	(0.0228)	(0.0372)
		Service and sales workers	0.2024***	0.2865***	0.1145*	0.1842***	0.1334***
			(0.0164)	(0.0398)	(0.0608)	(0.0237)	(0.0383)
		Craft and related trades workers	0.0578**	0.0714	0.0400	0.0157	−0.0409
			(0.0247)	(0.0466)	(0.0715)	(0.0496)	(0.0794)
		Plant and machine operators, and assemblers	0.1912***	0.2141***	0.1202	0.1534***	0.1877***
			(0.0285)	(0.0523)	(0.0830)	(0.0557)	(0.0617)

(continued)

Table 2. (continued)

Dimension	Variables	Categories	GIPS	Greece	Italy	Portugal	Spain
Employers' characteristics	x_8 – Firm size Reference: 1–10 employees	Between 11 and 49 employees	0.0352***	0.0291***	0.0387***	0.0463***	0.0417***
			(0.0038)	(0.0071)	(0.0066)	(0.0076)	(0.0093)
		More than 50 employees	0.1149***	0.0862***	0.1049***	0.1434***	0.1379***
			(0.0045)	(0.0101)	(0.0078)	(0.0083)	(0.0106)
	x_9 – Industry affiliation Reference: Manufacturing	Knowledge-intensive services	0.0963***	0.0532***	0.0999***	0.0764***	0.0716***
			(0.0055)	(0.0143)	(0.0074)	(0.0115)	(0.0147)
		Less knowledge-intensive services	0.1671***	0.1299***	0.1668***	0.1627***	0.1523***
			(0.0065)	(0.0148)	(0.0097)	(0.0135)	(0.0176)
		Construction	0.0184	−0.0030	0.0290	−0.0135	0.0122
			(0.0116)	(0.0272)	(0.0209)	(0.0207)	(0.0257)
Model fit	Constant		0.2348*	−0.2826	−0.1104	3.897*	−5.6921***
	N		27474	7843	8233	7519	3879
	Pseudo-R^2		0.1682	0.1796	0.2136	0.1316	0.1609
	R^2		0.3172	0.3715	0.3566	0.2493	0.3145
	RMSE		0.2801	0.2849	0.2613	0.2999	0.2539
	RESET(Chi2(3))		569.99***	128.57***	96.13***	200.47***	92.06***

Source: LFS, own calculation.
*, **, and *** mean significant at 0.10, 0.05 and 0.01 level, respectively.
FRM: Fractional regression model; GIPS: Greece, Italy, Portugal, and Spain; EPL: Employment protection legislation; RMSE: Root mean square error; RESET: Regression equation specification error test; LFS: Labour Force Survey.

likelihood of being in Quasi-Standard jobs. The first approach employed Spain as the reference country and, for country-level analysis, contrasted the various recovery stages with the recession phase (2011). The negative AMEs indicate a move towards non-stable jobs, while the positive signs suggest the likelihood of being attached to more stable jobs (Table 2).

The primary analysis focused on the main variables related to institutional settings and HE expansion (x_1, x_2, x_3). Overall, the negative signs of the EPL gap and union density in GIPS confirm institutions create segmentation in the labour market positioning young people as outsiders. We also notice that higher rates of unionisation are combined with reduced propensity of young graduates being assigned to a good job. The HE expansion had a negative effect on the jobs of graduates putting their benefits of investments in education at risk.

Now we turn to single country estimates. The Spanish labour market shows a marked dualism, which substantially reduces the propensity of a young graduate access a Quasi-Standard job ($b=-7.5463$). In contrast, graduates in Portugal seem to have more opportunities to access good jobs, comparatively to other two countries. Furthermore, Spain is the single country where unionisation rates are associated with lower job quality. On the other hand, the negative and statistically significant coefficient of proportion of graduates indicates that Greek and Portuguese labour markets were especially affected by HE expansion. In sum, institutional settings and supply-side arguments help understanding the patterns of jobs in GIPS. Basically, graduates in Spain, Italy and Greece were more intensively affected by legislation, while in Portugal, but also Greece, the market failed to compensate graduates with good jobs.

We noticed the same pattern of other drivers. For example, it is striking that the transition into the labour market, either from a spell of unemployment or from education and training (except Italy), involves precarious jobs. Indeed, unemployment spells and the transition from education to the labour market often channel graduates into lower quality jobs; this effect is, however, considerably more pronounced in Portugal. As expected, graduates, from teacher training and education science (except Portugal), as well as computer science (except Spain), are less likely to find Quasi-Standard job in the labour market. While the direction of the estimates is consistent with those for other countries, the magnitude of the impact varies.

The Portuguese labour market appears to differ substantially in this respect. No statistically significant differences are observed between men and women regarding the propensity of being assigned to Quasi-Standard job or across fields of education that are often filled by female graduates.

In all other variables, it is important to highlight the more relevant drivers. Non-graduate jobs (clerical and services and sales) have different paths. Graduates working in clerical jobs are more likely to have Precarious and Insecure jobs, while those working in services and sales benefit from better quality jobs.[6] This propensity is higher in Greece and Portugal. Firm size and industry affiliation play a relevant role in all countries, although in varying degrees.

Discussion of the findings

Our research examined the jobs of graduates in SE countries. We found three types of jobs, which include varying employment conditions in GIPS. The Precarious jobs have the worst objective job characteristics, which indicate that some graduates may be seen as the so-called "poorly integrated new entrants" (Scarpetta et al., 2010). The awareness of the risk of losing their job and multiple jobs illustrates a sense of precariousness of graduates in this cluster. However, this is a less populated cluster with a share of about 3% of graduates. Insecure jobs with a fixed-term full-time contract predominate in GIPS and the Quasi-Standard are limited, and young graduates are involved in a trade-off between the benefits of employment conditions and work–life balance.

We also found a large overlap between Insecure and Quasi-Standard and Insecure and Precarious (Figure 3). This innovative finding indicates that good jobs (Quasi-Standard) have some less attractive characteristics, such as low pay, while the sum of graduates within and between Insecure and Precarious shows the actual flexibility in the graduate labour market in SE countries (Figure 5). In short, the job typologies of young HE graduates in the four SE countries confirm that a large proportion of graduates obtain work in the Precarious and Insecure categories in their early stages in the labour market (Lodovici and Semenza, 2012), including in economic expansion stage, suggesting the so-called non-standard recovery (Piasna, 2018). So, it is a persistent pattern for youth labour markets in SE countries (Barbieri, 2009; Furlong et al., 2018; Piasna, 2018), regardless of the economic conditions (Hypothesis 1).

However, country-specific factors should be considered, notably those related to institutional setting and supply of and demand for graduates. Estimates from fractional regression clearly revealed the impact of institutionally driven segmentation in SE countries (Hypothesis 2), highlighting Spain as one undergoing a profound dualisation. It is worth pointing out that economic recession had other far-reaching consequences that may have affected the quality of jobs. SE countries' governments have pursued labour market reforms that accelerated the neoliberal agenda (Rodríguez and Lucio, 2023; Tassinari et al., 2023). Among them, Spain and Italy moved further towards greater flexibility than their counterparts. While the economic recession cannot be considered entirely to blame for the job quality of graduates, it had some side effects, notably it created space for liberalisation of labour markets as a mean to improve economic performance, pushing, as usual, young people to the margins. Ultimately, the patterns of graduate jobs point to a generation problem (Barbieri et al., 2019), which reflects a long-term trend towards placing young people in precarious employment and marginalised labour market positions (Furlong et al., 2018).

The signs of union density follow the same path and illustrate the join impact of institutional settings on the quality of jobs of graduates (Hypothesis 2). We found a negative association between unionisation and job quality that reinforces the divide between insider (protected) and outsiders (unprotected). Probably, the concentration of young people in Insecure jobs, associated with high turnover rates, makes it difficult for unions to develop dedicated/protective rules for them or to graduates to join formal associations. This explains Vandaele (2019) claim that unions should move from a job-centred to a life cycle approach to help young people to become unionised. He noticed that unions across

Europe have started to take varying actions to engage young people and raise awareness among them.

The decline of returns to HE through the quality of jobs can also be attributed to the increasing supply of graduates (Figueiredo et al., 2017). This is especially the case of Portugal and Greece (Hypothesis 3) that followed a similar pattern of HE expansion (Figure 2). Similarly, studies indicate that liberalisation contributed to the expansion of employment in low value-added sectors (Tassinari et al., 2023). LFS data indicate that, after 2011, the share of graduates employed in services, sales occupations, and less knowledge-intensive activities increased across all countries, albeit to varying degrees. Conversely, employment in knowledge-intensive services followed a declining trajectory (Hypothesis 3). This pattern suggests that investments in HE were not paralleled by a structural requalification of the economic model, but rather by a strengthening of competition based on cheap work and flexible forms of employment. Consequently, graduates encounter limited opportunities in occupational fields that correspond to their qualifications and support their long-term career development.

Other studies indicate that there were significant losses of highly paid jobs in the Italian and Spanish labour markets in recession period, lower-paid work increased or declined only slightly (Garofalo et al., 2018), while job losses in Portugal and Greece occurred mainly in medium and low-paid jobs (Hurley et al., 2013). Whereas the Portuguese economy was able to create high-skilled jobs, promoted an upgrading of occupations and tended to reward the human capital of its workforce, Greece moved towards more skill-intensive services and a demand for high-skilled workers (Garofalo et al., 2018). These arguments deserve proper scrutiny in future research.

Our findings suggest that the types of jobs provided to graduates are shaped not only by economic changes, but also reflect some structural factors associated with the institutional settings (Hypothesis 2) and supply and demand characteristics (Hypothesis 3). The estimates from the FRM show that the young graduates who experienced an unemployment spell or transit from education to labour market are more likely in Insecure and Precarious jobs suggesting that they tend to accept any available job even those not requiring a degree (Figueiredo et al., 2017). These graduates find it difficult to access the labour market and to get their first permanent job (Pastore, 2018) facing big challenges (Aronson et al., 2015). More importantly, precariousness affects especially women from soft fields of education (Boccuzzo and Gianecchini, 2015; Livanos and Pouliakas, 2011; Lombardo and Passarelli, 2011; Ramos et al., 2014). However, we noted some variation across countries, especially in Portugal, where no statistical differences were found. On the other hand, the graduates from health and welfare are more likely to enjoy some of the good employment conditions (Ramos et al., 2014) in Portugal. Nevertheless, the magnitude of this impact is particularly pronounced in Italy and Spain. The negative signs of IT graduates might be related to voluntary temporary jobs (Kaduk et al., 2019), oversupply or to destruction of jobs in technological fields. This finding deserves further scrutiny.

The empirical research presented in this study corroborates O'Reilly et al. (2019) argument that the drivers of young people labour market outcomes may be cyclical, economic or institutional although some variation exists across countries. There are also

some drivers associated with supply and demand side that pervasively push young people, including graduates, to the margins. More importantly, institutional settings seem to exhibit path dependence and show limited changes that pervasively exclude young people. The evolution of labour market and workers' rights, notably the young workers, is shaped by historical institutional patterns that created segmentation between insiders and outsiders. The investments in HE seem limited to disrupt the cycle of low-quality jobs, since deep changes of labour regulations have the undesirable risks of undermining the protections of insiders.

Concluding remarks

Our findings indicate that significant divergences emerge in the quality of jobs available to graduates in SE countries that share the capitalism model. The economic recession played a double role: directly, by reducing opportunities in high-skilled occupations; and indirectly, by intensifying the long-term trend towards labour market liberalisation. Current reforms insist on the same path of deregulation, including laws that affect incumbents and reinforce the vulnerability of young people. Decentralisation of bargaining reduces the unions' power and, ultimately, contributes to reinforce segmentation and inequality among similar workers.

In other words, these trends cancel out the economic arguments in that inequality is an outcome of the differential in educational attainment; so, it is a natural consequence of investment in education, rather than being inherently unfair or subjective disparities. We found a segmented graduate labour market in which a minority of graduates benefits from their degrees far more than others. This inequality reflects a structural problem of the youth labour market that buffers the impacts of economic recessions, while enabling deregulation and other transformations of the economy and society.

A balanced reform of institutional settings is the major challenge for social actors. The labour legislation reform must find out channels to reduce segmentation, combining the protection of insiders and outsiders, while unions should learn about the perception of young people and implement appropriate tools to raise awareness and attract to the collective action. They face the challenge of balancing centralisation to ensure equitable benefits among all workers and address specific needs of firms and workers.

Political action is therefore required to improve the quality of jobs and mitigate the entrapment of graduates in low-quality jobs and its scarring effects. Countries risk losing qualified young people to other developed countries, which benefit from investments in education at no cost.

Our work focused on one single capitalist economy, while others have explored similar issues related to youth labour market in more economies. It would be interesting to extend this work to other welfare regimes and examine how countries accommodate the increasing supply of graduates and varying labour market regulations that impact transition and professional path. The literature has shown similar outcomes in European and non-European countries, but research with similar data and the same methodological approach is still missing.

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Notes

1. Only age groups are available in the EU-LFS dataset
2. See Barbieri and Cutuli (2016) and Passaretta and Wolbers (2019) for details on EPL gap. These authors have normalised the variables to vary between 0–10 and 0–100. This transformation places two in four countries with zero. Our strategy seems to be more suitable for a small number of countries.
3. We set the threshold for full membership to 0.90.
4. In Figure 3: 32.8% + 17.03 + 3.0%
5. In Spain, 40.6% of graduates were in Insecure jobs and 8.4% in Precarious jobs. The edge connecting these two types of jobs is 11%. The sum is equal to 60.0%. The same calculation was applied to other countries.
6. Even working in low-intensive services, graduates in Quasi-Standard jobs are less likely to be overeducated.

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Appendix A

Table A1. Characteristics of jobs of graduates in GIPS.

Job typology	Quasi-Standard				Insecure				Precarious			
Variables	2011	2014	2017	2019	2011	2014	2017	2019	2011	2014	2017	2019
I1- Monthly pay	8–10	8–10; 3	8–10; 3	8–10	4–7	5; 7–8	4–7	4–7	1–2			
I2- Contract (months)	>36				>36	13–36	13–36	13–36	⩽12			
I3- Involuntary FC (%)						10.31	9.0	10.24	±100			
I4- Voluntary FC (%)					0.22	---	---	---	4.98	6.47	8.0	8.15
I5- Hiring source: Temp agency	No				No				Yes	No	Yes	No
I6- Working time	Full-time				Full-time				PT			
I7- Worked hours	>40				31–40				1–30			
I8- Involuntary PT (%)									92.92	94.72	93.42	92.40
I9- Shift work	Yes				No				No			
I10- Atypical work	Yes				No				No			
I11- Homework	No				No				1/3	Some		
I12- Second job	No				No				Some			1/5
I13- Training opportunity	Some	---	No	---	No	---	No	---	Some	---	No	Some
I14- Skill mismatch	Over		---	Over/match	Match	Under/over	---	Over/match	Over/match	Over	---	Over/match
I15- Satisfaction	Yes				Yes				No			
I16- Perception of current job									Risky and transitional			
Sample size (*N*)			7291			7643			8183		8378	
Greece			1468			2296			2101		1967	
Italy		2011	2866		2014	2437		2017	2891	2019	3164	
Portugal			1686			1845			2005		2010	
Spain			1271			1065			1186		1237	

---: means no differences exist comparatively to the sample.
FC: Flexible contracts: PT: Part-time.