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## Working Paper

# Workplace or working environment? Job quality and economic crisis in Spain

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# Workplace or working environment? Job quality and economic crisis in Spain

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## **Abstract**

Through a representative sample of 9,100 and 8,755 employees in 2008 and 2010, and a using structural equation model, this working paper empirically analyses the multi-dimensional determinants (direct effects) of job quality in Spain. The research concludes that: #1 despite the economic crisis, job quality improved over the analysis period; #2 intrinsic job quality, work organisation, and inclusion and access to the labor market are the key explanatory dimensions of job quality; and #3 the main effect of the economic crisis on job quality was a significant restructuring of its explanatory dimensions in favour of those more directly linked to the working environment, and specifically to social relations, health and safety at work, working conditions, and gender equality and work-life balance. These results suggest the importance of the working environment and social relationships, beyond the quality of the workplace, as important tools of employment public policy to improve labor markets and to overcoming the economic crisis.

## **Keywords**

Job quality, Quality of working life, Economic crisis; Structural equation modelling (SEM), Micro-data; Spain.

## Introduction

During the last decades the quality of work, especially the debate on the quantity and quality of jobs, has been established as a growing field of economic, sociological and psychological research (Paoli, 1992, 1997; Guillén and Dahl, 2009). During the nineties the gradual fall in unemployment and the worrying rise in job insecurity in Europe placed the issue of job quality at the heart of the design of public policies in the labour, economic and social fields (Kalleberg, 2009; Drobic and Guillén, 2011). The International Labour Organization's introduction of the 'decent work' concept (1999) and the creation of the European Employment Strategy (EES), that set the EU objective of creating "more and better jobs", are two unequivocal examples of the renewed concern for job quality in Europe.

In light of this new objective, the European Commission (2001a, 2001b) highlighted the problem of conceptually defining job quality and underscored its multidimensional nature. Since then, political and social actors, and even the academic community, have developed a new approach to employment policies that, without overlooking labour market performance, seeks to ensure that their levels of quality are sustained (Green, 2006; Gallie, 2007; Royuela et al., 2008). Although the purpose of balance, soon appeared serious contradictions between the job quantity and quality that public policies pursued, with a clear predominance of the quantity approach (full employment) and only some specific issues relating to quality (Davoine, 2006; Martel and Dupuis, 2006). The onset and deepening of the economic crisis has done nothing but increase the strain between job quantity and quality (Erhel et al., 2012; Leschke et al., 2012). For example, in the revised EES for 2008-2010, interest in quantity-related issues was renewed and prioritised in a context of an obvious slowdown in economic growth and the re-emergence of significant unemployment problems.

However, the empirical evidence plainly shows that high quality jobs improve working conditions, increase workers' development and skills, reduce unemployment, increase firm productivity, improve an economy's competitiveness and foster social wellbeing in an increasingly globalised environment (European Commission, 2002, 2003, 2008; Davoine et al., 2008a, 2008b; Dahl et al., 2009). Consequently, and despite the logical concern for creating jobs in contexts of economic crisis, employment public policies should not overlook the quality dimension, because it feeds back into the quantity dimension. In a global economy, where knowledge, technology and innovation are key to developing firm competitiveness and to overcoming the economic crisis, new value generation processes and co-innovative sources of productivity inevitably call for quality jobs (Torrent and Ficapal, 2010). In other words, in the global

economy, employment creation depends to a large extent on job quality, of its ability to generate jobs with trained, autonomous, committed and satisfied workers, who are able to innovate and improve the creation of added value in firms.

In this context, the most recent research on job quality has noted the emergence of new problems associated with the work structural change (Osterman, 2013). In particular, the literature has shown the existence of growing inequalities in the quality of job (Green et al., 2013), the negative effects of work intensity on some dimensions of occupational health (Cottini and Lucifora, 2013), and the importance of the unions involvement in organizational change processes in order to reduce the contractive effects of the change on the quality of job (Bryson et al., 2013). From the point of view of the tensions between quantity and quality of job, recent research has also made significant progress. Specifically, it has highlighted the importance of the future employment expectations by workers, clearly linked to educational level (Gallie et al., 2012). Workers with a high perception about the future of their jobs tend to get higher job quality (Graso and Probst, 2012). Thus, with the aim of contributing new evidence and reconciling the quantity and quality dimensions of employment policies in times of economic crisis (Green and Mostafa, 2012), this paper, which takes a multidimensional and micro-data empirical approach, analyses the determinants of job quality (Handel, 2005; Olsen et al., 2010; Esser and Olsen, 2012) in Spain for 2008 and 2010.

The analysis of the job quality in Spain is useful because labor markets in Spain have been deteriorated markedly by the economic crisis (now the unemployment rate reaches values higher than 25%). In this sense, the obtained results are in part extrapolated to another labor markets where job destruction and job insecurity have increased significantly with the economic crisis. In this context, this research aims to continue with an analysis of microdata, the work done by Royuela et al. (2008, 2009). They compute a composite index for quality of work life using the dimensional structure provided by the European Commission, and present their results for regions, sectors, professional categories and sizes of firm in Spain in the period 2001–2004. The paper finds that better results are found in the more developed regions, in service sectors, in bigger firms and in jobs with more responsibility. For the analysis, we used the microdata from the Quality of Working Life Survey (ECVT, as abbreviated in Spanish) conducted annually by Spain's Ministry of Employment and Social Security (2010 was the last year for which data were available). This source of information provides very comprehensive data on the perceptions of workers setting the multiple dimensions of their job and family situation. Furthermore, analysis of the 2010 data we will be able to start capturing the effects of the economic crisis on job quality.

The remainder of the working paper is structured as follows: first, the multiple dimensions and indicators used to measure job quality are examined and empirical examples are given; second, the determinants of job quality are analysed using a structural equation model that we designed and tested; third, the results are described; and fourth, the conclusions, discussion and future research section completes the body of the article. The references used are listed at the end.



# 1. Job quality: A literature review

Early approaches to job quality already emphasised its multiple economic, sociological and psychological dimensions (Nadler and Lawler, 1983; Weinert, 1985). In the neo-classical view of the labor economy, job quality was initially connected with wage level, whereas the first macroeconomic approaches suggested that market failings could lead to a lack of investment in human capital. In this respect, human capital theory acknowledges the importance of education and training as a job quality indicator. It also finds that the diversity of jobs and workers allows various degrees of quality to be distinguished (Becker, 1964; European Commission, 2001a). Meanwhile, experience and the working environment, relationships between workers and organisation, social movements, affective and cognitive relationships, and worker conduct were all considered in the initial sociological and psychological studies. In this respect, the Sociotechnical approach began to advocate the need for a change in Taylorist and Fordist models of work organisation by introducing job quality considerations into workplace design (Cherns, 1987). In this early literature, job quality was linked to job satisfaction, understood as a worker's reactions, sensations, feelings and motivation towards his job. It also began to be associated with a worker's physical, mental and emotional health, which had clear effects on organisations' results (May and Lau, 1988).

In later literature, two perspectives soon began to take shape: the subjective perspective, relating to workers; and the objective perspective, relating to the working environment (Elizur and Shye, 1990; Muñoz de Bustillo et al., 2011). In the subjective dimension, job quality is linked, among others things, to certain worker characteristics like satisfaction, attitudes, motivation, commitment and pride (Marks et al., 1986; Cohen et al., 1997; Sirgy, 2001). In the objective dimension, job quality is linked to characteristics like security, lighting, ergonomics, technology, management systems and organisational processes (Wilcock and Wright, 1991; Souza-Poza, 2000; Vieira and Díaz-Serrano, 2005). Other authors attempted to integrate both perspectives (Mirvis and Lawler, 1984; Muñoz de Bustillo et al., 2012).

More recently, the flexibilisation, segmentation and individualisation of labor markets, the advent of new work organisation practices, the technological revolution and the growing strain between job quantity and quality arising from the global economic crisis have fostered new approaches to labour market research in general (Díaz, 2008; Torrent, 2008; Torrent and Ficapal, 2009) and to job quality research in particular (Salais and Villeneuve, 2004; Osterman, 2013). Some studies have noted the influence of the labour market's growing flexibility and the advent of new contracts and labour relations frameworks (Eyraud and Vaughan-Whitehead, 2007; Kalleberg et al., 2007; Esser and Olsen, 2012; Bryson et al., 2013). It has also been found that job quality affects workers' physical, mental and emotional health, which, in turn, impacts on organisations' results (Lau and May, 1998; Harter et al., 2002; Cottini and Lucifora,

2013). Other contributions to the literature have associated job quality with the interactions between working and family-related situations. Basically, the evidence shows that work and family feed back into each other in the sense that job satisfaction and work achievement interact with personal and family-related satisfaction and happiness (Clark, 2000a, 2000b; Schmid and Gazier, 2002; Schmid, 2006; Grzywacz and Carlson, 2007; Green, 2010; McMillan et al., 2011; Orton, 2011).

In short, from this new analytical angle, it is acknowledged that the main objective of job quality is the integration, support and improved personal and social wellbeing of workers (Aycañ and Kanungo, 2001; Guillén and Dahl, 2009; Drobnić and Guillén, 2011; Green et al., 2013), as well the improved results of firms and overall economic activity (Green and Mostafa, 2012; Royuela and Suriñach, 2013).

From an empirical perspective, job quality measurement was initially linked to the analysis of job-related conditions and their development, and especially to wage determinants. Other non-salary elements then began to be considered, such as human capital, working conditions, physical and contractual security, institutions and labour market outcomes (Belfield and Harris, 2002; Clark, 2005). In the analytical framework of happiness economics, this approach is enriched by taking workers' viewpoints into account (Layard, 2005, 2010). Subjective data about workers' job satisfaction and wellbeing has tended to moderate the importance of wage as an explanatory element. In fact, the effects of wage dynamics and comparison do appear to be important. Workers are less satisfied if they are paid less than their colleagues. Likewise, an impact, albeit temporary, is also perceived on wage increase satisfaction.

Empirical research has evolved to the extent that it is now interested in the quantitative and qualitative measurement of labour markets (Eurofound, 2002; Green, 2006; European Commission, 2008). In this context, the literature points out that job quality should be considered as an object of multidimensional and multidisciplinary analysis (Davoine et al., 2008b; Brown et al., 2012) because of the various agents forming part of it (jobs, workers and firms) and perspectives from which it can be analysed (micro and macroeconomic, psychological and sociological).

From a microeconomic perspective, its determining factors are usually expressed by the 'perceived job satisfaction' concept. This refers to a worker's perception of satisfaction with his job and with the characteristics defining labour relations and job stability. In this context, objective indicators are usually used, such as hours worked, flexible working hours, salary, non-financial rewards and job security (Ahn and García, 2004). From a macroeconomic perspective, research has focused on the analysis of job quality evolution in different countries or regions. In this dimension, the determinants used to measure it are qualifications and training of the working population, productivity, technological change, wage dynamics and sectorial composition of jobs (Schwerdt and Turunen, 2006). Other dimensions of a psychological or sociological nature have also been included, such as relationships established in the workplace, effort made, occupational prestige, autonomy and opportunities for promotion. In this approach, job quality is subjective and is measured

through a process whereby workers score each of the different components of their jobs (Clark, 2004).

The recent incorporation of workers' perceived satisfaction into the literature has generated intense debate about the dimensions and indicators required to faithfully capture the determinants of job quality. In general, these dimensions have been analysed by using a combination of objective and subjective data, as well as dynamic and static interpretations. In a seminal approach, the European Commission (2001a, 2001b) developed its own methodology for measuring job quality in Member States. This methodology is based on the use of ten dimensions: #1 intrinsic job quality; #2 skills, lifelong learning and career development; #3 gender equality; #4 health and safety at work; #5 flexibility and security; #6 inclusion and access to the labor market; #7 work organisation and work-life balance; #8 social dialogue and worker involvement; #9 diversity and non-discrimination; and #10 overall economic performance and productivity. The first two dimensions refer to the intrinsic characteristics of the job itself, whereas the remaining eight refer to the job and the general labour market context. Eurofound (2002) also takes a multidimensional approach through four dimensions: #1 ensuring career and employment security; #2 maintaining the health and wellbeing of workers; #3 developing skills and competencies; and #4 reconciling work with non-work life.

Handel (2005) and Green et al. (2013) points out that it is possible to measure job quality through two dimensions, a neo-Fordist one and a post-Fordist one. The neo-Fordist dimension suggests that quality has worsened in recent years because of outsourcing, downsizing and the increased use of contingent employment. In contrast, the post-Fordist dimension suggests that quality has improved due to greater job autonomy, increased workplace cooperation, higher pay and better working conditions, and also to organisational changes and the incorporation of information and communication technologies (ICTs). Green (2006) also acknowledges its multidimensional nature and uses five dimensions: #1 skill requirements; #2 work effort intensity; #3 personal discretion over work tasks and participation in workplace decisions; #4 pay; and #5 workers' risks and job insecurity. From the perspective of analysing poor quality jobs in the United States, Kalleberg et al. (2007) use three dimensions: #1 financial rewards (wages, health insurance and pensions); #2 non-financial rewards (autonomy, control over work and intrinsic compensation); and #3 perceived job security.

In the European context, Davoine et al. (2008a, 2008b) use four dimensions: #1 socioeconomic security (decent wages and good transitions from one job to another); #2 skills and training; #3 working conditions; and #4 ability to combine work and family life, and promotion of gender equality. Dahl et al. (2009) have constructed a widely used empirical approach based on six dimensions: #1 skills; #2 work intensity; #3 autonomy and control; #4 pay and fringe benefits; #5 intrinsic job rewards; #6 job security: having a job vs no job. The first three dimensions refer to the intrinsic characteristics of the job itself, whereas 4 and 5 refer to job pay and rewards, and 6 to

the labor market. In a comparative study analysing differences in perceived job quality among workers in the United States, the United Kingdom, Norway and Germany, Olsen et al. (2010) use six dimensions: #1 extrinsic rewards (security, pay and professional development); #2 intrinsic rewards (interest and social connection); #3 work intensity; #4 working conditions; #5 interpersonal relationships; and #6 overall job satisfaction. Finally, the fifth survey on working conditions in Europe (Green and Mostafa 2012; Green et al 2013) uses four dimensions to capture the job quality: #1 wages, #2 job prospects (security, career and contract quality); #3 intrinsic job quality (skills and autonomy, employment social environment, physical environment, and labor intensity); and #4 quality of working time (duration, discretion and flexibility).

Thus, according to the multidimensional approaches examined, job quality is an element that provides and promotes work and economic growth in the new competitive environment. It reflects workers' desires and fosters a rise in standards, thus balancing out and sharing progress. It could be said that it is the level of objective and subjective wellbeing that workers express, feel and have in their jobs. This level of wellbeing is not limited to jobs alone. Indeed, it has effects on firms, on issues outside work and on workers' future prospects. Thus, in order to parameterise a set of dimensions and indicators to capture the determinants of job quality, we propose the following definition: *"job quality is an overall state of satisfaction that includes objective aspects of material wellbeing, satisfactory relationships with the physical and social environment, and objectively perceived health; and subjective aspects of physical, psychological and social wellbeing"*.

To measure the above-mentioned approach, the starting point for this study was the methodology defined by the European Commission (2008). This methodology considers the following ten dimensions: #1 intrinsic job quality; #2 skills, lifelong learning and career development; #3 gender equality; #4 health and safety at work; #5 flexibility and security; #6 inclusion and access to the labor market; #7 work organisation and work-life balance; #8 social dialogue and worker involvement; #9 diversity and non-discrimination; and #10 overall economic performance and productivity. Table I summarises the key dimensions proposed in recent empirical studies. This choice is justified by the extent of dimensions addressed in this approach.

**Table I.** Empirical dimensions of job quality

Authors	Dimensions
Green and Mostafa (2012); Green et al. (2013)	<ul style="list-style-type: none"> <li>- Wages</li> <li>- Job prospects (security, career and contract quality)</li> <li>- Intrinsic job Quality (skills and autonomy, social and physical environment and labor intensity)</li> <li>- Quality of Working time (duration, discretion and flexibility)</li> </ul>
Olsen, Kalleberg and Nesheim (2010)	<ul style="list-style-type: none"> <li>- Extrinsic rewards (security, pay and development)</li> <li>- Intrinsic rewards (interest and social connection)</li> <li>- Work intensity</li> <li>- Working conditions</li> <li>- Interpersonal relationships</li> <li>- Overall job satisfaction</li> </ul>
Dahl, Nesheim and Olsen (2009)	<ul style="list-style-type: none"> <li>- Skills</li> <li>- Work intensity</li> <li>- Autonomy and control</li> <li>- Pay and fringe benefits</li> <li>- Intrinsic job rewards</li> <li>- Job security: having a job vs no job</li> </ul>
Davoine, Erhel and Guergoat (2008a; 2008b)	<ul style="list-style-type: none"> <li>- Socioeconomic security (decent wages and good transitions from one job to another)</li> <li>- Skills and training</li> <li>- Working conditions</li> <li>- Ability to combine work, family life, and gender equality</li> </ul>
Kalleberg, Reskin and Hudson (2007)	<ul style="list-style-type: none"> <li>- Financial rewards (wages, health insurance and pensions)</li> <li>- Non-financial rewards (autonomy, control over work and intrinsic compensation)</li> <li>- Perceived job security</li> </ul>
Green (2006)	<ul style="list-style-type: none"> <li>- Skill requirements</li> <li>- Work effort intensity</li> <li>- Personal discretion over work tasks and participation in workplace decisions</li> <li>- Pay</li> <li>- Workers' risks and job insecurity</li> </ul>
Handel (2005)	<ul style="list-style-type: none"> <li>- Neo-Fordist dimension: <ul style="list-style-type: none"> <li>- Outsourcing</li> <li>- Downsizing</li> <li>- Increased use of contingent employment</li> </ul> </li> <li>- Post-Fordist dimension: <ul style="list-style-type: none"> <li>- Greater job autonomy</li> <li>- Increased workplace cooperation</li> <li>- Higher pay</li> <li>- Better working conditions</li> <li>- Organisational changes</li> <li>- Use of ICTs</li> </ul> </li> </ul>
Eurofound (2002)	<ul style="list-style-type: none"> <li>- Ensuring career and employment security</li> <li>- Maintaining the health and wellbeing of workers</li> <li>- Reconciling work with non-work life</li> <li>- Developing skills and competencies</li> </ul>
European Commission (2001a; 2001b; 2008)	<ul style="list-style-type: none"> <li>- Intrinsic job quality</li> <li>- Skills, lifelong learning and career development</li> <li>- Gender equality</li> <li>- Health and safety at work</li> <li>- Flexibility and security</li> <li>- Inclusion and access to the labour market.</li> <li>- Work organisation and work-life balance</li> <li>- Social dialogue and worker involvement</li> <li>- Diversity and non-discrimination</li> <li>- Overall economic performance and productivity</li> </ul>

Source: Own elaboration.

## 2. Model, data and empirical methodology

From an empirical perspective, the explanation of factors determining job quality raises two particular difficulties. First, the approach to the concept requires a multi-dimensional base that is not usually captured in a single variable. In fact, the most common approaches found in the literature perform partial analyses of its various dimensions. This type of analysis has the disadvantage of not taking a full snapshot of the explanatory determinants, which gives rise to the second difficulty: econometric modelling. In other words, job quality can be interpreted as a latent, non-observable concept, which therefore calls for econometric techniques that allow variables of this type, which are not directly measurable, to be used.

In the empirical literature, structural equation modelling (SEM) with latent variables has been used to overcome this problem. A general structural equation model is a formal mathematical model. It is a set of linear equations that encompasses various types of model, such as regression analysis models, simultaneous equation systems, factor analysis and path analysis. The main advantage of this method of analysis is the incorporation of different types of variables into the structural equation model. Directly observable and measurable variables, and theoretical or latent variables representing concepts that are not directly observed can therefore be incorporated. When the variable to be explained (dependent) is latent, it must be continuous, whereas dependent observed variables can be continuous, censored, binary, ordered, categorical (ordinals) or combinations of any of these variable types.

This method of analysis allows us to define job quality as a latent variable, thus enabling us to calculate the specific explanatory effect of the variables that compose. Hence, besides building an overall explanatory model of the determinants of job quality, it is also possible, in a second phase and by coefficients aggregation, to identify which of its explanatory dimensions are more important. In addition, SEM enables the relationships between the different observable variables included in the model (indirect effects) to be estimated. In this initial approach, however, only the direct effects are presented, that is to say, the coefficients of causality between the individual indicators, and later their dimensions, on the latent variable to be estimated. In this context, and to capture the effect of the economic crisis, we propose and test a structural equation model with a variable latent and measurement errors for 2008 and 2010.

The first step that needs to establish a structural equation model that explains job quality in Spain is to construct its indicators. We used the microdata from the Quality of Working Life Survey (ECVT in Spanish language) for 2008 and 2010 (latest available data). The ECVT is a statistical operation conducted by the Government of Spain's Ministry of Employment and Social Security for Spanish territory as a whole. It is a tool that is useful for analysing the situation of employees in the labor market, and for learning about their perceptions and degrees of satisfaction. The ECVT allows



objective data, obtained from research into working environment situations and related activities, and subjective data, such as the degree of job satisfaction, labor relations, and the physical and emotional conditions of the job. The ECVT provides data about an employee's work situation and family environment, occupation or job characteristics, labour mobility, job satisfaction, work organisation, collective bargaining, labor relations, working hours, rewards, training and job security, and work-life balance.

The study universe was the working population aged 16 or over living in main family homes. The geographical scope is Spanish territory, with the exception of Ceuta and Melilla (autonomous cities of Spain in North Africa). These sample sizes were 9,604 and 9,240 employees in 2008 and 2010, respectively, with sampling fractions  $[(n/N)*1000]$  of 0.470 and 0.320, respectively. Data was collected in the final quarters of 2008 and 2010 by means of computer-assisted telephone interviews (CATI). When potential respondents could not be located by telephone, personal interviews were conducted. The questionnaire was divided into three main sections: socio-demographic data, work situation and quality of working life (Ministry of Employment and Social Security, 2010).

Table II presents the results of socio-demographic and occupational characteristics of the workers in the samples of the analysis. Between 2008 and 2010 some changes were observed in the profile of workers in Spain. First, note a slight increase in the percentage of working women (43.9% in 2010) and in the age of workers (40.9 years). Second, note the improvement of the educational level of workers, with 28.6% of higher-educated workers in 2010 (22.9% in 2008). Third, noted a marked increase in the number of workers in larger firms, with more than 250 workers (31.2% in 2010, from 20.3% in 2008). Fourth, note a decline in industrial employment and, especially in construction. And note an improvement of employment in services (up 69.7% of the total in 2010). Fifth, highlight a significant fall in the share of employment in the private sector (79.0% in 2010, from 85.8% in 2008) at the expense of the share of employment in the public sector (19.6% in 2010). Finally, noting job growth with a permanent contract (77.2% in 2010) and practice stabilization of the working day. In summary, it can be noted that Spain's economic crisis has hit particularly hard the less educated workers, those employed in small-scale firms, workers in industry and construction, employees in the private sector and employees with temporary contracts.

**Table II.** Comparison of ECVT workers characteristics in Spain. 2008 and 2010

	2008	2010
<i>Total Employment<sup>1</sup></i>	9,100	8,755
<i>Sex (%)</i>		
Man	58.5	56.1
Woman	41.5	43.9
<i>Age (average in years)</i>	38.6	40.9
<i>Education (%)</i>		
Primary	19.9	15.7
Compulsory secondary	18.9	20.6
Lower vocational and technical training	10.3	13.4
Upper vocational and technical training	11.8	11.1
Upper secondary general	16.2	13.5
Higher education: medium degree	9.7	11.2
Higher education: superior degree	13.2	14.6
<i>Size of the firm (%)</i>		
1 worker	12.6	11.5
2 to 9 workers	27.7	25.2
10 to 49 workers	21.9	18.4
50 to 249 workers	17.5	13.7
Over 250 workers	20.3	31.2
<i>Economic Activity (%)</i>		
Agriculture	5.1	5.1
Industry	16.7	15.6
Construction	12.7	9.6
Services	65.5	69.7
<i>Professional situation (%)</i>		
Public sector worker	11.9	19.6
Private sector worker	85.8	79.0
Other	2.3	1.4
<i>Contract type</i>		
Permanent	71.8	77.2
Temporary	28.2	22.8
<i>Working time</i>		
Full-time	85.8	86.4
Part-time	14.2	13.6

1. All figures refer to weighted data. Valid percentages.

Source: Authors' calculations.

As already mentioned, the dependent variable –job quality – is a latent variable in the model proposed in this study. In this regard, we used a reflective explanatory model that has been contrasted with microdata from a validated instrument (Requena-Santos, 2000). The empirical methodology relates the job quality with 34 explanatory measurable variables, defining a reflective second-order construct. Although the latent variable is directly related to explanatory variables, regardless of dimensions, once the explanatory coefficients are obtained, and considering the literature review, a composite index of job quality has been built. This indicator aggregates the individual



explanatory factors in each dimension, and once obtained the value of each of the 10 dimensions; the value of the composite index is reached. The composite indicator of job quality allows us to sort and group the obtained coefficients and, additionally, to draw conclusions about the effect of each dimension on the aggregate results. The sample includes 9,100 and 8,755 employees in 2008 and 2010, respectively, as computed in the ECVT. Immediately, 34 explanatory variables and their grouping into 10 dimensions are presented (figure I):

- *Dimension 1. Intrinsic job quality.* Intrinsic job quality was captured by a set of three variables: Variable 1: the worker's overall satisfaction with his/her current job (OVERSAT); Variable 2: the worker's motivation (MOTIV); and Variable 3: personal development (PERDEV), in the sense of job performance. These three discrete variables measure the worker's level of satisfaction on a scale from 0 to 10 (0=Zero satisfaction; 10=Very high satisfaction).
- *Dimension 2. Work organisation.* This dimension includes a set of seven variables connected with work organisation and practices, and with the worker's conduct in performing their job duties: Variable 4: autonomy (AUTON); Variable 5: superiors' assessment of the tasks performed by the worker (SUPASS); Variable 6: participation in decision-making (DECMAX); Variable 7: teamwork (TEAMW); Variable 8: the worker's perceived opportunities for promotion (PROMOP); Variable 9: degree of stress (STRESS); and Variable 10: monotony or routine in tasks performed (MONOT). All of these variables are discrete. They measure the worker's level/degree of satisfaction/agreement on a scale from 0 to 10 (0=Zero satisfaction/agreement; 10=Very high satisfaction/agreement).
- *Dimension 3. Working conditions.* Working conditions are also an important dimension in the explanation of job quality. Two variables about the working environment were captured in this dimension: Variable 11: the workspace (WSPACE); and Variable 12: commuting time (COMMUT). The first variable, WSPACE, was captured by means of a subjective assessment of workspace conditions by the individuals. This assessment is measured on a scale from 0 to 10 (0=Very bad conditions; 10=Very good conditions). The second variable, COMMUT, is a continuous variable that measures, in hours and minutes, the commute time reported by the worker.
- *Dimension 4. Social relations.* Affective relationships among workers, as well as conduct towards the job, the working environment, superiors and the organisation as whole also generate levels of satisfaction or dissatisfaction that have an impact on job quality. In order to capture the dimension of social relations in the workplace, two variables were incorporated into the

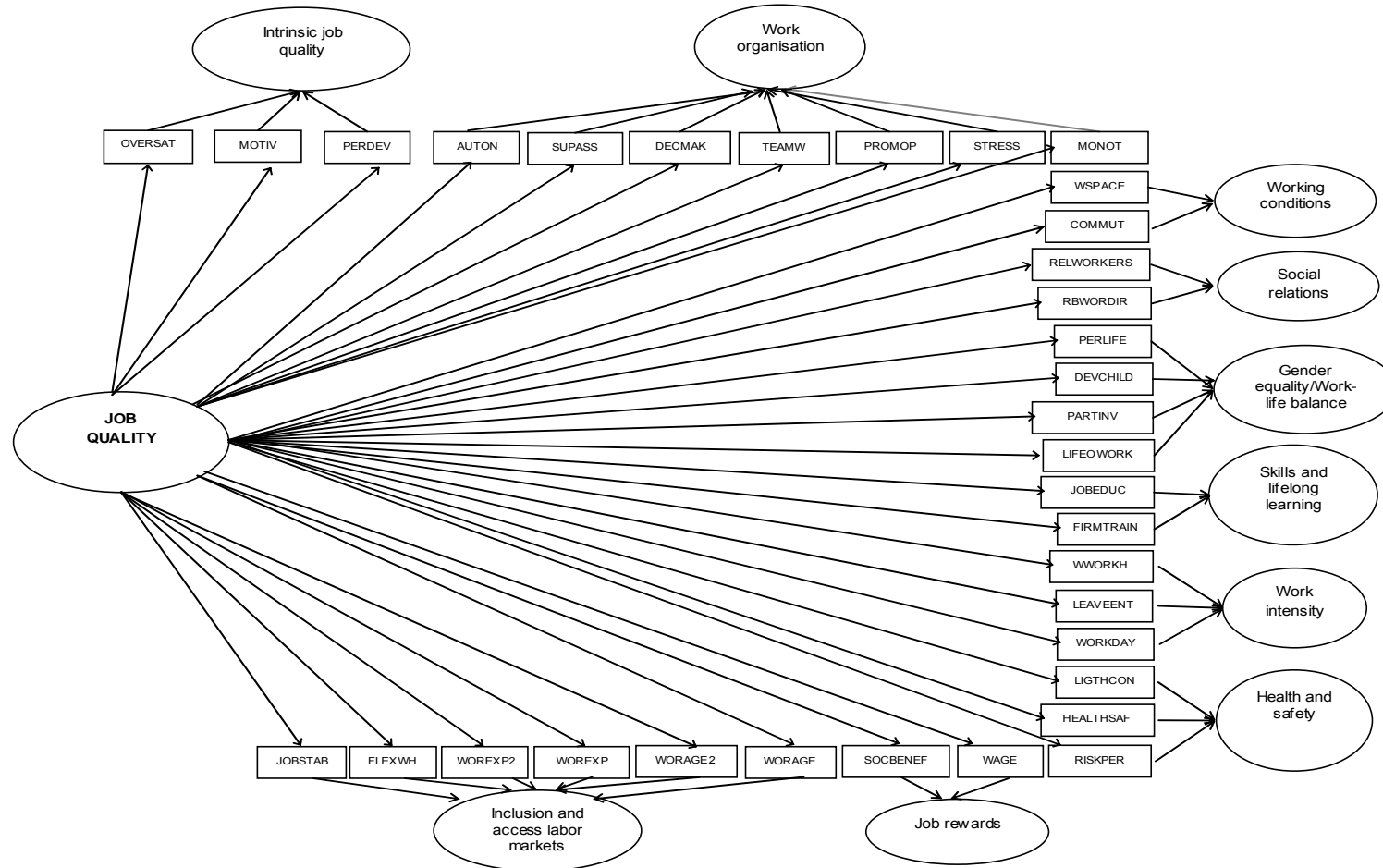
explanatory model: Variable 13: relationships among workers (RELWORKERS); and Variable 14: relationships between workers and directors (RBWORDIR). Both variables are discrete. They measure the workers' perceptions of relationships in their workplaces and working environments on a scale from 0 to 10 (0=Very bad; 10=Very good).

- *Dimension 5. Gender equality and work-life balance.* The literature shows the importance of gender equality and work-life balance in the explanation of job quality. In this respect, workers' perceptions of their personal lives (particularly outside work), the time available to devote to their children and their partners' involvement in household chores have all been used as important indicators in this dimension. Bringing both aspects together in one dimension, our model proposes the inclusion of four variables: Variable 15: personal life (PERLIFE); Variable 16: time devoted to children (DEVCHILD); Variable 17: partner's involvement in household chores (PARTINV); and Variable 18: time available for personal life outside work (LIFEOWORK). All of these variables are discrete. They measure the worker's level of satisfaction on a scale from 0 to 10 (0=Zero satisfaction; 10=Very high satisfaction).
- *Dimension 6. Skills and lifelong learning.* This dimension captures the importance of education and training in the explanation of job quality. Two variables were used: Variable 19: education for the job (JOBEDUC) measures the degree of usefulness that the worker assigns to his/her education in terms of enabling him/her to do his/her job on a scale from 0 to 10 (0=Useless; and 10, Very useful); and Variable 20: firm training (FIRMTRAIN) measures the worker's degree of satisfaction with training provided by the firm or organisation on a scale from 0 to 10 (0=Zero satisfaction; 10= Very high satisfaction).
- *Dimension 7. Work intensity.* As already mentioned, the literature has identified the recent intensification of work pressure and workload as restrictive factors of job quality. In order to capture the impact of work intensity on job quality, three variables were incorporated into this dimension of the model: Variable 21: weekly working hours (WWORKH); Variable 22: leave entitlements (LEAVEENT); and 23: working day (WORKDAY). WWORKH is a continuous variable that measures weekly working hours, whereas the remaining two are discrete variables that measure the worker's degree of satisfaction with leave entitlements and the working day on a scale from 0 to 10 (0= Zero satisfaction; and 10=Very high satisfaction).
- *Dimension 8. Health and safety at work.* Dimension 8 of the model is connected with health and safety at work. Three variables were incorporated

into this dimension: Variable 24: lighting conditions (LIGHTCON) measures the worker's subjective assessment of these conditions on a scale from 0 to 10; Variable 25: health and safety at work (HEALTHSAF) measures the worker's degree of satisfaction with health and safety at work on a scale from 0 to 10 (0= Zero satisfaction; and 10=Very high satisfaction); and Variable 26: perception of risks in the workplace (RISKPER) measures the worker's perceived degree of risks or dangers in the workplace on a scale from 0 to 10 (0=Low risk; and 10: High risk).

- *Dimension 9. Job rewards.* Dimension 9 of the model refers to the rewards for salaried work. While some studies incorporate this dimension into overall satisfaction, the approach taken in this study deliberately treats it separately in order to capture its specific effect on job quality. Two variables were included: Variable 27: wage (WAGE); and Variable 28: social benefits (SOCBENEF). Both discrete variables measure the worker's degree of satisfaction with his/her salary and with the social benefits provided by the firm or the organisation on a scale from 0 to 10.
- *Dimension 10. Inclusion and access to the labor market.* Finally, dimension 10 of the model includes socio-demographic and workplace structure variables as determining factors of job quality. The variables incorporated into this dimensions were: Variable 29: the worker's age (WORAGE); and Variable 31: the worker's years of experience in the firm or organisation (WOREXP). The squares of both variables were also included to prevent the effect on job quality from being linear: Variable 30: WORAGE2; and Variable 32: WOREXP2. In other words, an additional year of experience cannot be expected to have the same effect on job quality when a worker has just joined a firm as when a worker has been working for many years. Lastly, two important variables in the explanation of the conditions of inclusion and access to the labor market were incorporated into the dimension: Variable 33: flexible working hours (FLEXWH); and Variable 34: job stability (JOBSTAB). Both variables are discrete. They measure the worker's degree of satisfaction with flexibility and security conditions on a scale from 0 to 10.

Figure I. Model of the direct effects on job quality in Spain



### 3. Results

Regarding direct effects, tables III and IV show the standardised coefficients for the determinants of job quality in Spain for 2008 and 2010. They were estimated using a structural equation model with a latent dependent variable and measurement errors. Firstly, it should be noted that all the variables specified in the model were statistically significant apart from weekly working hours.

Secondly, the goodness-of-fit measurements for the proposed models were highly satisfactory. Thus, the indices NFI (0.940 and 0.928 in 2008 and 2010, respectively), RFI (0.924 and 0.910), IFI (0.944 and 0.933), TLI (0.930 and 0.916) and CFI (0.944 and 0.933) had very high values, approaching the optimal value of 1. The RMSEA values were less than 0.05 (0.045 and 0.047 in 2008 and 2010, respectively), thus corroborating the validity of the estimated models.

To establish the starting point for the results analysis, the importance of the following dimensions should be stressed: intrinsic job quality, work organisation, and inclusion and access to the labour market. By aggregating coefficients and dimensions, it was possible to construct a composite indicator of job quality in Spain. Despite the economic crisis, the composite indicator showed that job quality in Spain had improved over the analysis period. Thus, as a result of SEM estimation, the value of this composite indicator was 8.496 points in 2008 and 10.339 points in 2010.

An analysis of the indicator's internal weighting structure revealed the importance of the three dimensions mentioned above. In 2008, these three dimensions accounted for two thirds of the composite indicator total: intrinsic job quality (28.2%), work organisation (24.2%), and inclusion and access to the labor market (13.6%). In descending order, these were followed by the dimensions of work intensity (10.8%), skills and lifelong learning (10.3%) and job rewards (8.9%).

The relative importance of these dimensions was due to the high values obtained for the standardised coefficients, significant at the 99% confidence level, in SEM regression analysis. Indeed, in the intrinsic job quality dimension, the worker's overall satisfaction ( $\beta=0.879$ ), the worker's motivation ( $\beta=0.788$ ) and personal development ( $\beta=0.732$ ) had a value of 2.399 points for the intrinsic job quality dimension (out of a total of 8.496 points for the composite indicator). For their part, the indicators of satisfaction with autonomy ( $\beta=0.611$ ), superiors' assessment ( $\beta=0.631$ ), decision-making ( $\beta=0.645$ ), teamwork ( $\beta=0.133$ ) and opportunities for promotion ( $\beta=0.462$ ), lessened by degree of stress ( $\beta=-0.089$ ) and monotony or routine ( $\beta=-0.340$ ), had a value of 2.053 points for the work organisation dimension. In the inclusion and access to the labor market dimension, with a value of 1.156 points, the most notable results

were satisfaction with flexible working hours ( $\beta=0.424$ ) and job stability ( $\beta=0.485$ ). Although they were highly significant ( $p<0.005$ ), the coefficients obtained for the age and experience variables had very low values, with fewer than 0.08 points in all cases. In the work intensity dimension (with a value of 0.92 points out of the composite indicator total), of note are the high values of the standardised coefficients for satisfaction with leave entitlements ( $\beta=0.485$ ) and the working day ( $\beta=0.451$ ). In the skills and lifelong learning dimension (0.872 points out of the composite indicator total), the coefficients for satisfaction with education for the job ( $\beta=0.355$ ,  $p<0.005$ ) and firm training ( $\beta=0.517$ ) were also important. Finally, the job rewards dimension (0.760 points out of the composite indicator total) was important because of the good scores for satisfaction with wage ( $\beta=0.488$ ) and social benefits ( $\beta=0.272$ ).

In contrast, the scores in 2008 for the dimensions of working conditions (-0.087 points), social relations (0.122 points), gender equality and work-life balance (0.061 points), and health and safety at work (0.240 points) only accounted for 4% of the composite indicator total.

Table III. Determinants (direct effects) of job quality in Spain\*. 2008

Dimension/variable	Coefficient	Standardised coefficients	S.E.	C.R.	P-value
<b>1. Intrinsic job quality</b>		<b>2.399</b>			
1. Worker's overall satisfaction (OVERSAT)	1.000	0.879	-	-	***
2. Satisfaction with motivation level (MOTIV)	1.271	0.788	0.017	72.705	***
3. Satisfaction with personal development (PERDEV)	0.999	0.732	0.015	64.740	***
<b>2. Work organisation</b>		<b>2.053</b>			
4. Satisfaction with autonomy (AUTON)	0.929	0.611	0.019	49.702	***
5. Satisfaction with superiors' assessment (SUPASS)	0.965	0.631	0.019	51.636	***
6. Satisfaction with decision-making (DECMAC)	1.197	0.645	0.022	53.564	***
7. Level of teamwork (TEAMW)	0.035	0.133	0.004	8.133	***
8. Satisfaction with opportunities for promotion (PROMOP)	1.026	0.462	0.030	34.170	***
9. Degree of stress (STRESS)	-0.185	-0.089	0.030	-6.216	***
10. Level of monotony or routine in tasks performed (MONOT)	-0.739	-0.340	0.030	-24.442	***
<b>3. Working conditions</b>		<b>-0.087</b>			
11. Level of workspace conditions (WSPACE)	-0.708	-0.037	0.268	-2.645	**
12. Commuting time (COMMUT)	-0.010	-0.050	0.003	-3.543	***
<b>4. Social relations</b>		<b>0.122</b>			
13. Relationships among workers (RELWORKERS)	0.239	0.030	0.114	2.096	**
14. Relationships between workers and directors (RBWORDIR)	0.671	0.092	0.103	6.530	***
<b>5. Gender equality and work-life balance</b>		<b>0.061</b>			
15. Satisfaction with personal life (PERLIFE)	0.440	0.361	0.016	26.982	***
16. Satisfaction with time devoted to children (DEVCHILD)	-0.398	-0.117	0.047	-8.420	***
17. Satisfaction with partner's involvement in chores (PARTINV)	-0.372	-0.096	0.054	-6.848	***
18. Satisfaction with personal life outside work (LIFEOWORK)	-0.331	-0.087	0.053	-6.258	***
<b>6. Skills and lifelong learning</b>		<b>0.872</b>			
19. Satisfaction with education for the job (JOBEDUC)	0.834	0.355	0.032	26.393	***
20. Satisfaction with firm training (FIRMTRAIN)	1.141	0.517	0.034	33.230	***
<b>7. Work intensity</b>		<b>0.920</b>			
21. Weekly working hours (WWORKH)	-0.086	-0.016	0.078	-1.097	N.S.
22. Satisfaction with leave entitlements (LEAVEENT)	0.792	0.485	0.021	37.750	***
23. Satisfaction with working day (WORKDAY)	0.706	0.451	0.020	34.630	***
<b>8. Health and safety at work</b>		<b>0.240</b>			
24. Level of lighting conditions (LIGTHCON)	-0.809	-0.042	0.269	-3.004	**
25. Health and safety at work (HEALTHSAF)	0.627	0.413	0.020	31.150	***
26. Perception of risks in the workplace (RISKPER)	-0.288	-0.131	0.031	-9.401	***
<b>9. Job rewards</b>		<b>0.760</b>			
27. Satisfaction with wage (WAGE)	0.790	0.488	0.021	38.030	***
28. Satisfaction with social benefits (SOCBENE)	0.584	0.272	0.029	19.964	***
<b>10. Inclusion and access to the labour market</b>		<b>1.156</b>			
29. Worker's age (WORAGE)	0.389	0.053	0.103	3.762	***
30. Worker's age squared (WORAGE2)	32.208	0.052	8.629	3.744	***
31. Worker's years of experience (WOREXP)	0.562	0.079	0.100	5.634	***
32. Worker's years of experience squared (WOREXP2)	15.119	0.063	3.345	4.520	***
33. Satisfaction with flexible working hours (FLEXWH)	0.966	0.424	0.030	32.278	***
34. Satisfaction with job stability (JOBSTAB)	0.876	0.485	0.023	37.734	***
<b>Job quality composite indicator</b>	-	<b>8.496</b>	-	-	-

\* Regression analysis: Structural equation modelling (SEM). Estimated coefficients: direct effects.

P-value: \*\*\* Significant at 99% confidence level; \*\* Significant at 95% confidence level; \* Significant at 90% confidence level; N.S.: Not Significant.

Goodness-of-fit indices: NFI: 0.940; RFI: 0.924; IFI: 0.944; TLI: 0.930; CFI: 0.944; RMSEA: 0.045.

Source: Own elaboration.



Table IV. Determinants (direct effects) of job quality in Spain\*. 2010

Dimension/variable	Coefficient	Standardised coefficients	S.E.	C.R.	P-value
<b>1. Intrinsic job quality</b>		<b>2.352</b>			
1. Worker's overall satisfaction (OVERSAT)	1.000	0.817	-	-	***
2. Satisfaction with motivation level (MOTIV)	1.302	0.808	0.018	72.176	***
3. Satisfaction with personal development (PERDEV)	1.007	0.727	0.016	62.982	***
<b>2. Work organisation</b>		<b>2.035</b>			
4. Satisfaction with autonomy (AUTON)	0.930	0.605	0.019	50.005	***
5. Satisfaction with superiors' assessment (SUPASS)	1.002	0.659	0.018	54.914	***
6. Satisfaction with decision-making (DECMAC)	1.097	0.596	0.022	48.886	***
7. Level of teamwork (TEAMW)	0.030	0.109	0.004	7.542	***
8. Satisfaction with opportunities for promotion (PROMOP)	0.992	0.446	0.030	32.524	***
9. Degree of stress (STRESS)	-0.263	-0.126	0.027	-9.708	***
10. Level of monotony or routine in tasks performed (MONOT)	-0.542	-0.254	0.028	-19.536	***
<b>3. Working conditions</b>		<b>0.303</b>			
11. Level of workspace conditions (WSPACE)	0.530	0.347	0.022	24.112	***
12. Commuting time (COMMUT)	-0.009	-0.044	0.003	-3.393	***
<b>4. Social relations</b>		<b>1.054</b>			
13. Relationships among workers (RELWORKERS)	0.528	0.441	0.016	33.881	***
14. Relationships between workers and directors (RBWORDIR)	0.943	0.613	0.019	49.859	***
<b>5. Gender equality and work-life balance</b>		<b>0.201</b>			
15. Satisfaction with personal life (PERLIFE)	0.473	0.382	0.016	30.399	***
16. Satisfaction with time devoted to children (DEVCHILD)	-1.649	-0.075	0.286	-5.758	***
17. Satisfaction with partner's involvement in chores (PARTINV)	-1.649	-0.063	0.339	-4.861	***
18. Satisfaction with personal life outside work (LIFEOWORK)	-1.117	-0.043	0.337	-3.316	***
<b>6. Skills and lifelong learning</b>		<b>0.848</b>			
19. Satisfaction with education for the job (JOBEDUC)	0.673	0.302	0.029	23.541	***
20. Satisfaction with firm training (FIRMTRAIN)	1.122	0.546	0.029	38.040	***
<b>7. Work intensity</b>		<b>0.950</b>			
21. Weekly working hours (WWORKH)	-0.094	-0.015	0.085	-1.108	N.S.
22. Satisfaction with leave entitlements (LEAVEENT)	0.799	0.484	0.020	39.207	***
23. Satisfaction with working day (WORKDAY)	0.758	0.481	0.019	38.947	***
<b>8. Health and safety at work</b>		<b>0.693</b>			
24. Level of lighting conditions (LIGHTCON)	0.493	0.353	0.020	24.629	***
25. Health and safety at work (HEALTHSAF)	0.686	0.472	0.018	37.735	***
26. Perception of risks in the workplace (RISKPER)	-0.291	-0.132	0.029	-10.153	***
<b>9. Job rewards</b>		<b>0.784</b>			
27. Satisfaction with wage (WAGE)	0.805	0.493	0.020	40.700	***
28. Satisfaction with social benefits (SOCBENE)	0.636	0.291	0.028	22.823	***
<b>10. Inclusion and access to the labour market</b>		<b>1.119</b>			
29. Worker's age (WORAGE)	0.354	0.048	0.095	3.715	***
30. Worker's age squared (WORAGE2)	32.442	0.052	8.101	4.005	***
31. Worker's years of experience (WOREXP)	0.441	0.061	0.093	4.728	***
32. Worker's years of experience squared (WOREXP2)	12.206	0.049	3.219	3.792	***
33. Satisfaction with flexible working hours (FLEXWH)	0.947	0.437	0.027	35.019	***
34. Satisfaction with job stability (JOBSTAB)	0.845	0.472	0.022	38.161	***
<b>Job quality composite indicator</b>	-	<b>10.339</b>	-	-	-

\* Regression analysis: Structural equation modelling (SEM). Estimated coefficients: direct effects.

P-value: \*\*\* Significant at 99% confidence level; \*\* Significant at 95% confidence level; \* Significant at 90% confidence level; N.S.: Not Significant.

Goodness-of-fit indices: GFI: 0.928; RFI: 0.910; IFI: 0.933; TLI: 0.916; CFI: 0.933; RMSEA: 0.047.

Source: Own elaboration.



By extending the analysis to 2010 and thus taking account of the impact of the economic crisis since 2008, several important changes in the evolution and the determinants of job quality in Spain were revealed. Such changes can be explained by three basic ideas.

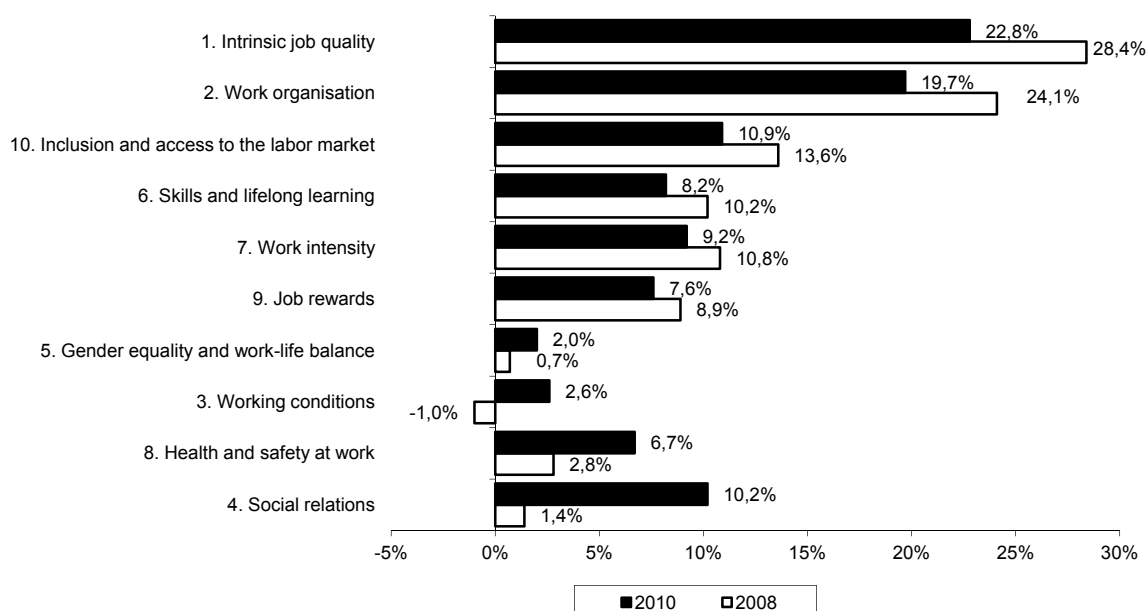
First, it should be noted that the dimensions of intrinsic job quality (accounting for 22.7% of the composite indicator total), work organisation (19.7% of the total), and inclusion and access to the labor market (10.8% of the total) continued to explain more than half of the compound indicator (figure II). However, with the unremitting economic crisis, their scores were significantly lower. Of particular note is the deterioration in worker's overall satisfaction ( $\beta=0.817$ ), decision-making ( $\beta=0.596$ ) and degree of stress ( $\beta=-0.126$ ). Likewise, the skills and lifelong learning dimension (accounting for 8.2% of the compound indicator total) also saw its significance fall as a result of the deterioration in satisfaction with education for the job ( $\beta=0.302$ ).

Second, it should be noted that the dimensions of work intensity (accounting for 9.2% of the composite indicator total) and job rewards (7.6% of the total) improved slightly in 2010. The higher scores for satisfaction with the working day ( $\beta=0.481$ ) and social benefits ( $\beta=0.291$ ) explained this slight improvement.

Third, and as a more important result, of particular note is the considerable improvement in certain dimensions that, in 2008, had a lesser preponderance on job quality. Indeed, the improvement in the composite indicator in 2010 is explained by the substantial increase in scores for social relations (50.6% up on 2008, and accounting for 10.2% of the 2010 composite indicator total), for health and safety at work (24.6% up on 2008, and 6.7% of the 2010 total), working conditions (21.2% up on 2008, and 2.9% of the 2010 total), and gender equality and work-life balance (7.6% up on 2008, and 1.9% of the 2010 total). Together, these four dimensions were the main causes of the improvement in job quality in Spain, which went from explaining a modest 4% of the compound indicator total in 2008 to a sizeable 21.8% in 2010.

On the one hand, this is explained by the considerable increases in the standardised coefficients, significant at the 99% confidence level, for the variables of satisfaction with relationships among workers ( $\beta=0.441$ ), relationships between workers and directors ( $\beta=0.613$ ), lighting conditions ( $\beta=0.353$ ), workspace conditions ( $\beta=0.347$ ), health and safety at work ( $\beta=0.472$ ) and personal life ( $\beta=0.382$ ). On the other hand, it is explained by the less negative scores for time devoted to children ( $\beta=-0.075$ ), time available for personal life outside work ( $\beta=-0.043$ ) and partner's involvement in household chores ( $\beta=-0.063$ ).

Thus, the onset of the economic crisis in Spain substantially altered the determinants of job quality. Indeed, there was a shift towards a greater preponderance of dimensions connected with the working conditions and social relations in detriment to dimensions connected with the quality of workplace (figure II).

**Figure II.** Explanatory dimensions of job quality in Spain\*. 2008 and 2010


\* Explanatory coefficient percentages for the job quality latent indicator dimensions, in order of greatest to least relative loss between 2008 and 2010.

Source: Own elaboration.

## 4. Concluding remarks, discussion and future research

Job quality has become a subject of growing interest to economic, sociological and psychological research. There is empirical evidence of it developing into a fundamental element in the explanation of productivity, economic growth and workers' material and non-material wellbeing. Furthermore, the profound structural changes that work has undergone and the creation of new public policies to foster job quality explain the considerable growth of research in this field. Despite the priority given to it, the onset and deepening of the economic crisis has done nothing but increase the strain between the objectives of job quantity and quality that employment public policies should pursue.

Thus, with the aim of contributing new evidence and reconciling the quantity and quality dimensions of employment policies in times of economic crisis, this paper,

which took a multidimensional and micro-data empirical approach, analysed the determinants of job quality in Spain for 2008 and 2010. For the analysis, microdata were used from the Quality of Working Life Survey (ECVT, as abbreviated in Spanish) conducted annually by Spain's Ministry of Employment and Social Security (2010 was the last year for which data were available). A reflective structural equation model was proposed, which had a latent dependent variable and measurement errors, and contemplated 34 explanatory variables. As a result of this estimation, it has been possible to construct a multi-dimensional composite indicator, grouped into 10 dimensions that measure job quality in Spain.

The research revealed three main results. First, despite the economic crisis, that job quality in Spain had improved over the analysis period. Thus, the value of this composite indicator was 8.496 points in 2008 and 10.339 points in 2010. Second, the following dimensions were very important: intrinsic job quality, work organisation, and inclusion and access to the labor market. Although the percentage participation of these three dimensions clearly fell over the analysis period, in 2010 they continued to explain more than half of the composite indicator (down from two thirds of the composite indicator total in 2008). Third, the main effect of the economic crisis on job quality in Spain was a significant restructuring of its explanatory dimensions. Indeed, the improvement in the composite indicator in 2010 is explained by the substantial increase in scores for social relations, health and safety at work, working conditions, and gender equality and work-life balance. Together, these four dimensions went from explaining a modest 4% of the composite indicator total in 2008 to a sizeable 21.8% in 2010.

Over the economic crisis period analysed, it can therefore be concluded that there was a shift in job quality towards a greater preponderance of dimensions connected with the working environment and social relations in detriment to dimensions connected with the workplace quality. These results are quite consistent with those obtained by other macrodata-oriented European studies (Morley, 2010; Pot, 2011). Particularly, noteworthy are the results of recent research for a set of European countries between 1995 and 2010 (Green and Mostafa, 2012, Green et al., 2013). In the case of Spain, this research suggests a slight increase in job quality between 2005 and 2010, linked to a decrease in the work intensity, and clear improvements in physical, social environments and the working time quality. In another investigation for a wide range of European countries (Esser and Olsen, 2012), the results for the job quality put Spain in an intermediate position in terms of worker autonomy and job security. However, the research also indicates the importance of the economic cycle and the unemployment rate in the perceptions of job security. On the same line, Leschke and Watt (2013) put the job quality in Spain close to the mean average of the 27 European Union countries, with a practical stabilization of results between 2005 and 2010. Indeed, and in line with the our microdata results, recent empirical literature confirms the need for a multidimensional approach as a result of a broad set of explanatory dimensions that go beyond the workplace quality analysis.

In terms of employment public policy our research results suggest two important conclusions. In the first place, the importance of paying much greater attention to working environment and social relation dimensions in employment public policies. It is not simply a debate between job quantity and quality. To overcome the economic crisis, the results obtained reveal that social relations, health and safety at work, working conditions, and gender equality and work-life balance are increasingly becoming the cornerstones on which to build jobs where workers are trained, innovative, autonomous, committed and satisfied. Indeed, Spanish economy should deepen into these jobs quality foundations to transform its extensive economic growth model and to improve their social wellbeing. Second, and in line with the latest research, employment public policy should also address the new problems associated with the accelerated changes in the work. In particular, the growing inequality in job quality, different job quality problems between knowledge-based workers and less skilled workers, and the new problems that work intensity and organizational change define on some worker's health and psychosocial risks dimensions (Osterman and Chimienti, 2012; Cottini and Lucifora, 2013).

The paper presented here had a number of limitations, particularly in relation to the indicators and dimensions used in the analysis. Nevertheless, the availability of survey micro-data on a representative sample of workers in Spain in 2008 and 2010 revealed the highly suggestive idea of establishing multidimensional determinants of job quality and, in particular, of studying the effects of the economic crisis. In this respect, and bearing in mind the importance of this type of analysis to the material and non-material outcomes of work, the availability of #1 more detailed data for other countries and worker specifications, specially knowledge-based work, #2 other sources of data on job quality, specially to capture job inequality, and #3 new statistical methods for analysing causal relationships, specially SEM-PLS, would allow new approaches to be taken and major improvements to be made. The preliminary nature of this study therefore suggests the need for future research on the issue of job quality.

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### **Resumen**

*A través de una muestra representativa para 9.100 y 8.755 trabajadores en 2008 y 2010, y utilizando un modelo de ecuaciones estructurales, el documento de trabajo analiza los determinantes multidimensionales (efectos directos) de la calidad del trabajo en España. La investigación concluye que: 1) a pesar de la crisis económica, la calidad del trabajo ha mejorado en el período analizado; 2) la calidad intrínseca del trabajo, la organización del trabajo, y la inclusión y acceso a los mercados de trabajo son las principales dimensiones explicativas de la calidad del trabajo; y 3) el principal efecto de la crisis económica sobre la calidad del trabajo ha sido una reestructuración significativa de sus dimensiones explicativas a favor de las más directamente relacionadas con el entorno de trabajo, y específicamente con las relaciones sociales, la salud y seguridad en el empleo, las condiciones de trabajo, y la igualdad de género y el equilibrio trabajo-vida personal. Estos resultados sugieren la importancia del entorno de trabajo y las relaciones sociales, más allá de la calidad en el puesto de trabajo, como importantes elementos a considerar para las políticas públicas de empleo en el objetivo de mejorar los mercados de trabajo y superar la crisis económica.*

### **Palabras clave**

*Calidad del trabajo, Calidad de vida en el trabajo, Crisis económica, Modelos de ecuaciones estructurales (SEM), Microdatos, España*

### **Resum**

*A través d'una mostra representativa per a 9.100 i 8.755 treballadors el 2008 y el 2010, i utilitzant un model d'equacions estructurals, el document de treball analitza els determinants (efectes directes) de la qualitat del treball a Espanya. La investigació conclou que: 1) tot i la crisi econòmica, la qualitat del treball ha millorat en el període analitzat; 2) la qualitat intrínseca del treball, l'organització del treball, i la inclusió i l'accés als mercats de treball són les principals dimensions explicatives de la qualitat del treball; i 3) el principal efecte de la crisi econòmica sobre la qualitat del treball ha estat una reestructuració significativa de les seves dimensions explicatives a favor de les més directament vinculades amb l'entorn de treball i, específicament, amb les relacions socials, la salut i la seguretat del treball, les condicions de treball, i la igualtat de gènere i l'equilibri treball-vida personal. Aquests resultats suggereixen la importància de l'entorn de treball i les relacions socials, més enllà de la qualitat en el lloc de treball, com a importants elements a considerar per les polítiques públiques d'ocupació en l'objectiu de millorar els mercats de treball i superar la crisi econòmica.*

### **Paraules clau:**

*Qualitat del treball, Qualitat de vida en el treball, Crisi econòmica, Models d'equacions estructurals (SEM), Microdades, España*

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