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Abstract

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1. Introduction

1.1 *Quality in work: More jobs through better jobs*

Within Europe the aim of promoting the quality of available work, along with that of creating full employment, has recently risen to the top of the political agenda. “Previously, during periods of low employment rates, the emphasis was on job creation. Quantity took precedence over the quality – the nature and content – of the jobs created” (Eurofound, 2002, p.3). Following, however, the Conclusions of the Extraordinary European Council in Lisbon (2000), which were subsequently reaffirmed by the Social Policy Agenda approved by the Council of Nice (2000), Member States adopted the goal of improving quality in work as a complementary and mutually supportive objective to those of full employment and social cohesion. Quality promotion was therefore firmly established as one of the three overarching objectives of the EU’s Employment Guidelines for the period 2003-2005.

Indeed, this renewed focus on job quality was deemed necessary for confronting the profound challenges resulting from Europe’s transition to a competitive and knowledge-based economy. In light of the increased globalisation of economic activity, rapid technological, social, and demographic change, the ongoing restructuring of workplace organization, as well as the need to combat Europe’s persistent long-term unemployment problem, new and flexible employment patterns were deployed as a means of providing employers with adequate leeway to respond to ever-changing circumstances. Sabethai (2000), for example, documents the widespread use of such flexible forms of work (e.g. shifts, overtime, part-time employment, contracts of temporary duration, seasonal employment etc.) in Greece in the late 1990s, as well as numerous legislative measures concerning the utilisation of

labour, that sought to adapt employment and production needs of Greek enterprises to changes in demand. Nonetheless, while the shift towards atypical forms of employment may have favoured job creation and the adjustment of the economy to cyclical fluctuations, concerns were expressed regarding the potential downsides in terms of job quality, such as the impact on job security, work-life balance, possibilities of further training and career prospects, health and safety at work etc. It was within this context that some commentators claimed that quantity-quality trade-offs exist, and that quality improvements can have negative effects, leading to either increases in labour costs or obstacles to hiring and firing and/or wage flexibility (Employment in Europe, 2002, p. 81).

Concerns about job quality also came to the fore following the strong evidence of a close link between quality in work, on the one hand, and labour market segmentation and social exclusion, on the other. *Employment in Europe 2001* was the first to argue that those employed in jobs of relatively poor quality, which combine low skills with temporary or precarious work and lack of career development opportunities, are at much higher risk of job loss or of dropping out of the labour force. Moreover, “previous experience of unemployment and labour market exclusion, in turn, lowers the probability of returning to employment in general and into high quality employment in particular, thus leading to substantial risk of vicious circles of low quality – low productivity employment, and unemployment, inactivity and social exclusion” (Employment in Europe, 2002). Indeed, *Employment in Europe 2003* (p. 138) reports for Greece that between 1995 and 2000 it was among the EU countries with the least favourable career opportunities for people in low-quality employment, with above EU-average transition rates into unemployment, and below EU-average transition into high quality employment. Also striking is the persistence of the no

job/low quality trap in Greece, with almost 30 percent of unemployed Greeks in 1999 moving into low-quality employment in 2000, and almost 20 percent in inactivity. Little above 5 percent moved into high-quality jobs.

The fear of a vicious cycle between low-quality jobs and non-employment was further exacerbated by the possibility that the trend of increasing employment in the services sector would lead to a proliferation of dead-end jobs of bad quality. For Greece, in particular, which has experienced rapid growth of the services sector over the past twenty years, it has been argued that the demand for high profitability by Greek firms, in the face of slow growth of productivity and high unemployment, has enabled the propagation of low-wage/bad jobs in the Greek economy (Ioakimoglou and Soumeli, 2002).

The focus of the EU on job quality was also stimulated by the acknowledgement that the full potential of job creation cannot be achieved if the jobs on offer are unattractive in terms of quality of work, consequently proving difficult to fill (Eurofound, 2001, p. 4). This problem has recently become starker in European labour markets, as marked improvements in the quality of the European labour supply have been met by an increasing demand for high-quality jobs, characterised by reasonable pay, high skill requirements, relative job security, work-life balance, access to training and possibilities for career advancement (European Commission, 2001, p. 9). An acute example of this phenomenon can be found in Greece, whereby a common complaint on behalf of Greek employers is that the large stock of young educated Greek workers are unwilling to take up jobs that are perceived by them as of bad quality. These jobs, instead, are regarded as suitable for low-skilled economic immigrants only.

Finally, placing greater emphasis on job quality was also dictated by the evidence that better quality in work results in faster employment growth and higher productivity (European Commission, 2003, p. 6-8). Specifically, better jobs are expected to be more attractive to non-participants, especially women. Safer jobs that offer access to training are also more likely to result in productivity gains, by reducing turnover and absenteeism and by leading to the production of better goods and services, respectively. At the same time employees are likely to reciprocate to their employer's gift-exchange offer of better working conditions by exerting greater effort (much in the spirit of the 'reciprocity' arguments put forward by Fehr and Falk (2004)). Furthermore, high-quality employment is also believed to contribute to the positive mental and psychical well-being of employees, thus serving as a precondition for a rich, satisfying, and productive life (Eurofound, 2001, p. 7).

It is not least for these reasons that European decision-makers in the Barcelona European Council (2002) sought for *more and better jobs, stressing that the objective of creating better jobs complements and reinforces that of creating more jobs*. Quality promotion was hence acknowledged as a cornerstone for modernising Europe's social model, as a means of ensuring the dynamic positive complementarity between flexible and competitive economic policies, on the one hand, and social cohesion, achieved through strong and supportive social systems, on the other. Fostering more jobs through better jobs thus became a key element for achieving the EU'S strategic goal, proclaimed in the Lisbon 2000 Summit, *to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion*.

1.2 *Low-paid workers and the two-tier labour market*

Along with the increased emphasis on work quality, the strong rise in earnings inequality in some countries since the late 1980s also raised concerns that this could result in a growing proportion of the workforce falling into the category of the ‘working poor’. In fact, within the EU there was an attempt to link the declining relative (and sometimes real) position of low-paid workers with the perceived low quality of work, with the Commission arguing that such low-paid jobs suffer a double penalty as they are also of low quality (Jones and Sloane, 2004, p. 2). In other words, it was asserted that in the context of skill-biased technological change, growing international trade with low-wage countries, and deregulation of the traditional institutional framework that supported the wages of low-skilled workers (trade unions, centralized collective bargaining, minimum wages etc.), a two-tier labour market was fostered in Europe. In this dual market “the first tier is made up of jobs subject to decent pay, relative job security and career prospects, involving generally good working conditions. The second tier comprises not only the unemployed and discouraged workers, but also those employed in jobs of low quality which have low pay, precarious employment relationships or lack of further education and career development prospects” (Employment in Europe, 2001, p. 79). In light of this alleged segmentation, one report put forward the claim that “policies towards low-wage jobs should centre on their quality at least as importantly as on the level of pay which they provide” (Salverda et. al., p. xi; cited in Leontaridi and Sloane, 2004, p. 1).

Of course, the theoretical framework underlying the EU’s rationale of low wage jobs also being of low quality is the *dual labour market hypothesis*. According to this theory, the lack of perfect mobility, and subsequent lack of competition, between distinct labour markets fosters the development of ‘good’ and ‘bad’ jobs, whereby the

former enjoy not only better working conditions than the latter, but also higher pay. In this case significant differences in the utility derived from work among otherwise identical individuals arise, with those in superior jobs enjoying greater job satisfaction. Such differences cannot be sustained, however, in markets that are characterised by a perfect flow of information and lack of barriers to mobility. For in that case Adam Smith's (1776) paradigm of *compensating wage differentials* would prevail. According to Smith, employers of jobs with many disamenities would be expected in the long run to compensate for these with higher pay, all other things equal, in order to recruit and retain their workers. Thus, according to the theory of compensating (or equalizing) differences, in perfectly competitive labour markets one expects to observe low-paid jobs with relatively good working conditions, and jobs with bad working conditions paying high wages. Two otherwise similar individuals, who have the same demographic, human capital, and job characteristics, but who work in different tiers (i.e. one as low-paid and the other as high-paid), should therefore enjoy similar utility from their jobs.

This study therefore attempts, firstly, to detect whether or not significant differences in perceived job quality exist among high and low-paid workers in Greece, and, secondly, to uncover the differential effect that certain socio-economic variables exert on the utility from high or low-paid work, respectively. By understanding if (and how) the determinants of job satisfaction between low-paid and high-paid workers differ, appropriate policy responses could then be developed to address the difference in quality between good and bad jobs. To do so we follow the practice of an ever-increasing number of economists who use self-reported job satisfaction data to proxy the overall quality of work as perceived by the individual worker. This is the approach of Leontaridi and Sloane (2001), who have shown with British data that low-paid

workers in the UK report greater job satisfaction than their higher paid counterparts, presumably because the former obtain compensation in the form of non-pecuniary benefits. Jones and Sloane (2004) have also recently illustrated that job satisfaction in the low-wage economy of Wales is not lower than the rest of the UK. In a similar spirit to these studies, this paper shows that low-paid workers in Greece are significantly less satisfied with their jobs, compared to equivalent higher paid workers, based on data from eight waves (1994-2001) of the European Community Household Panel (ECHP). Further analysis of the specific facets of jobs reveals that this discrepancy is the result of greater dissatisfaction among low wage employees with their pay and the type of work that they perform.

The structure of the paper is therefore organized as follows. Section 2 begins by describing the different attempts that have been made to quantify the concept of job quality, one of which is the use of self-reported survey responses on job satisfaction. Since we adopt this approach for the rest of the paper, section 3 offers a brief literature review of the growing research that has taken place using subjective well-being data. In section 4 the data used in this study and summary statistics are presented. Section 5 provides a simplified account of the econometric methodology and describes the empirical estimates of the relationship between low pay status and job satisfaction in Greece, while section 6 offers some policy recommendations. Section 7 concludes the discussion. For those interested in the technical details of estimation, an extensive discussion of the model specification and econometric methodology can be found in the Appendix.

2. Defining Quality in Work

Quality in work is a multifaceted concept, which makes any attempt to quantify the term highly contentious. The broadest description has been offered by *Employment in Europe 2001* (p. 65), which defined job quality as “a relative concept regarding a job-worker relationship, which takes into account both objective characteristics related to the job and the match between worker characteristics, on the one hand, and job requirements, on the other. It also involves subjective evaluation of these characteristics by the respective worker on the basis of his or her characteristics, experience, and expectations”. As is evident from the above definition, the difficulty of precisely assessing some of these elements explains the lack of any agreed definition of job quality among academics and policy-makers. In fact, it is for this reason that the Commission (2001, p. 7) has suggested that “given its relative and multidimensional nature, there can be no one single measure or index of employment quality”, which, in turn, implies that “an empirical analysis of job quality has to be based on data on both objective job and worker characteristics and subjective evaluations of the job-worker match” (Employment in Europe, 2001, p. 65). The Commission went on to suggest a set of indicators covering 10 main elements of quality within two broad categories – the characteristics of the job itself, and the work and wider labour market context. These include: intrinsic job quality; skills, lifelong learning and career development; gender equality; health and safety at work; flexibility and security; inclusion and access to the labour market; work organization and work-life balance; social dialogue and worker involvement; diversity and non-discrimination; and overall work performance.

Due to the complexity associated with evaluating and monitoring all of these indicators, however, most studies have focused on a subset of the more easily

quantifiable measures of job quality. The Commission itself has classified jobs according to certain key objective characteristics, such as job security, training possibilities and career prospects, and productivity and pay. Based on these three criteria, it distinguished jobs into four types: “dead-end jobs”, “jobs of reasonable quality”, “low pay/productivity jobs” and, finally, “jobs of good quality” (Employment in Europe, 2001, p. 74). Using this grouping, it showed that while a majority of jobs in the EU are of relatively high quality, a quarter of the workforce remain in jobs of lower quality, and that Spain and Greece, in particular, show above average employment shares of individuals in both “low pay/productivity jobs” and “dead-end jobs” (ibid., p. 75).

More recently economists have followed a different approach to the issue of measuring job quality, one that is based on self-reported satisfaction data from individual questionnaires. Specifically, many have argued that since overall subjective job satisfaction is the reflection of the worker’s weighting in his/her mind of all the job’s aspects (such as pay, job security, the type of work, hours and times of work, working conditions, commuting etc.), “then the former should serve as a reasonable proxy for the overall quality of work as perceived by the individual worker” (Hamermesh, 2001; Leontaridi and Sloane, 2004, p. 2). Indeed, the strength of this approach seems to lie in the fact that subjective assessments of job satisfaction have been found to be strong predictors of worker behaviour, such as quits, absenteeism, and worker productivity (Freeman, 1978; Clegg, 1983; *inter alia*). It is this method that we will therefore adopt for the rest of this study.

3. Subjective Job Satisfaction

3.1 Subjective Well-Being and Job Satisfaction

There has been a surge of interest among economists in recent years regarding the use of subjective survey questions on individuals' well-being and its domains, such as job satisfaction or health satisfaction. As mentioned above, much research has now started with the premise that *subjective well-being* (SWB) can serve as an empirical proxy for the theoretical concept of utility, thus overcoming the traditional economic practice of evaluating individual preferences by means of *revealed* behaviour in market situations. This initiative has followed the lead of many years of psychological research, which illustrated that comparisons of different measures of SWB are often mutually consistent. For example, self-reported SWB has been found to be correlated with physiological measures such as the amount of smiling or frowning, changes in facial muscles (see Kahneman et al., 1999) or the evaluation of the individual's experience by a third party observer (Kahneman et al., 1997). Van Praag (1991) has also shown that individuals belonging to the same language community have a very similar understanding of concepts such as welfare, well-being and happiness. In addition, the use of subjective well-being data was encouraged by the robust econometric findings that were spurred by Freeman's (1978) pioneering work on the inverse relationship between job satisfaction and quit behaviour.

Of course, it has been acknowledged that survey questions about satisfaction suffer from a number of weaknesses, such as the discrepancy between *remembered utility* and *experienced utility*. For example, it has been argued that when evaluating retrospectively the utility of an event (remembered utility), individuals give a relatively higher weight to events with a high intensity (Peak Effect) and those that have occurred last (End Effect) (hence the term *Peak-End evaluation rule*, which was coined by that the Nobel-prize winner Kahneman). Another problem arises due to the presence of the adaptation phenomenon (Easterlin, 2001). Specifically, the evidence

of wealthier individuals and economies being happier at a given point in time, but not over time, has led to the assertion that individuals adapt to new situations, such as an income increase or becoming handicapped, by changing their expectations. Both of these issues therefore arouse suspicion concerning the use of time-series data on subjective happiness.

In spite of these problems, economists have reported a number of interesting and robust results regarding the effect of individual socio-economic characteristics on SWB and its domains. Concentrating specifically on the domain of job satisfaction, which is taken as a proxy of the individual's utility from work (U), most of the empirical literature now follows the theoretical exposition of Clark and Oswald (1996). According to these authors, job satisfaction depends not only on absolute income (y) and working hours (h), as in standard indifference curve microeconomics, but also on a set of individual (i) and job-specific (j) features:

$$U = u(y, h, i, j) \quad u'_y > 0, u'_h < 0 \quad (1)$$

Based on this model, the estimating equations usually regress the indices of job satisfaction on a set of demographic (age, gender, marital status, number of children etc.), human capital (education, training), economic (wages and salaries, other income), work-related (firm size, hours of work, contractual arrangement), and social (unionization, institutions) determinants. In this manner the literature has found that unemployed individuals report substantially lower levels of well-being than the employed and are permanently 'scarred' as a result of their jobless experience (Clark and Oswald, 1994; Theodossiou, 1998). It has also been argued that much of the wage effect on job satisfaction operates through relative wages (Clark and Oswald, 1996;

Clark, 1999; Grund and Sliwka, 2003), or through the individual's own judgement about his past and future financial situation (Easterlin, 2001; Lydon and Chevalier, 2002).⁴ Interesting demographic differences have emerged in that women consistently declare higher job satisfaction scores than men (Clark, 1997) and the age effect has been reported as being U-shaped with middle-aged people being the least satisfied (Blanchflower and Oswald, 1999). Finally, satisfaction levels have been found to be negatively correlated with both education (Clark and Oswald, 1996; Sloane and Williams, 1996) and union status (Blanchflower and Oswald, 1999; Drakopoulos and Theodossiou, 1997).⁵

3.2 *Greek Specific Research on Job Satisfaction*⁶

In Greece the empirical research on job satisfaction is limited, with most of the relevant studies originating in the health sciences. Recent papers that have focused on the job satisfaction of Greek teachers include those of Koustelios (2001) and Stamouli and Ipfling (2003). Koustelios's (2001) sample of 345 teachers from 40 public schools in Thessaloniki showed that they are satisfied with the job itself and supervision, while they are dissatisfied with their pay and promotion opportunities. Holding a

⁴ In this case researchers assume a utility function that depends not only on absolute income, but also on relative income i.e. $U = u(y, y^*, h, i, j)$, where y^* is the reference level of income against which the individual compares his/her own earnings. The idea is that utility either declines with an increase in comparison income when this gives rise to feelings of relative deprivation, or increases when higher wages of co-workers are regarded as a signal of a higher potential wage for the individual himself (what is known as the 'tunnel effect' - see Panos, Theodossiou and Nicolaou (2004) for an empirical investigation of these two hypotheses). Contention exists, though, among economists as to what is exactly the comparison benchmark. While Clark and Oswald (1996) have defined it as the econometrically predicted 'going rate' for the job, that is the income of comparable employees of given characteristics, Clark (1999) and Grund and Sliwka (2003) have recently argued that it is the wage of the prior period that serves as reference.

⁵ Though difficult to test, several hypotheses for these facts have been put forward. For example, it has been argued that more educated workers are less satisfied since education raises aspiration targets. The lower ceteris paribus satisfaction of union workers has been attributed to voice mechanisms that allow workers to express their dissatisfaction, or to the fact that dissatisfaction is used by unions as a means to increase demands.

⁶ This section is heavily based on the literature review for Greece (Annex 3) that was undertaken as part of the EPICURUS project by Panos, G. A. and Vasileiou, E. at the University of Macedonia.

supervisory post or having promotion prospects also appears to have a positive effect on job satisfaction. Stamouli and Ipfling's (2003) cross-national research of four countries (Greece, Germany, Austria, Switzerland) also revealed that teachers with greater work autonomy, and those with good working conditions (such as administrative support, school environment, student acknowledgement), are more satisfied in all countries. A notable difference is that for Greek teachers the vacation period seems to be more relevant for their job satisfaction compared to their Central European counterparts.

Two more studies worth mentioning include those of Blanchflower and Oswald (1999) and Kaiser (2002), both of which examine job satisfaction in the whole of Europe including Greece. Blanchflower and Oswald (1999), using information from two waves (1995 and 1996) of the Eurobarometer survey, show that job satisfaction levels in Greece are the lowest in the EU, and Greece appears to be one of the most stressed countries in Europe. Kaiser (2002) confirms these results using data from the European Community Household Panel (ECHP) for the period 1994-1997. According to Kaiser, Greeks have the lowest average satisfaction in the EU with respect to their jobs in general, as well as with two specific aspects of their jobs, notably the number of working hours and job security. Such a bleak picture also emerges from the empirical analysis of this paper, to which we now turn.

4. Statistical Data and Descriptive Statistics

4.1 Data and Description of Main Variables

The empirical analysis uses statistical data for Greece drawn from the eight waves of the European Community Household Panel (ECHP), covering the period 1994-2001. Designed centrally at Eurostat, but in close coordination with the Member

States, the ECHP is a questionnaire database that contains information on more than 60,000 nationally representative households and 120,000 observations per year for all (pre-accession) EU countries.⁷ In constructing the ECHP emphasis was placed on developing comparable social statistics across Member States on income, labour, poverty and social exclusion, housing, health, as well as other social indicators concerning living conditions of private households and persons. More important for our purposes, it contains a considerable amount of information on the personal, human capital and employment characteristics of workers, as well as their stated satisfaction with their jobs. In particular, in the ECHP respondents are asked to rate their satisfaction levels with their main activity status (whether it is employment, unemployment, or inactivity). The employed are also asked to state their preference with respect to specific components of their jobs, such as earnings, job security, type of work, working hours, working times, working conditions/environment and distance to job/commuting. Each of these are given a number from one to six, where a value of one corresponds to ‘not satisfied at all’, six reflects ‘full satisfaction’, and the integers from two to five represent intermediate levels of utility. It is these self-reported responses that constitute the dependent variables in the econometric analysis that follows below.

Using the available ECHP data on Greece, the total number of interviewees for each of the eight years of the survey was approximately 11,000, resulting in a total of 85,748 observations on 15,374 individuals for the pooled sample.⁸ Keeping only those

⁷ In the first wave of the ECHP (1994) the sample comprised of 60,500 representative households and 130,000 interviewees aged 16 years or over, from 12 Member States. From 1995 onwards Austria was also included, and from 1996 and 1997 Finland and Sweden, respectively, joined the survey as well.

⁸ The decision to pool the eight years of data was made in order to maximise the number of observations in the sample, and to control for certain unobservable effects that change over time but are constant across individuals (such as inflation and other political and economic disturbances within the country). This is achieved via the inclusion of yearly dummy variables in the econometric analysis.

in paid employment, who are between 16 and 65 years of age, and excluding the self-employed and those in unpaid work in family enterprises for the purpose of retaining homogeneity in the sample, resulted in a pooled sample of 20,785 observations on 5,314 individuals, of which 3,162 are males and 2,152 are females. Although our sample excludes full-time students, those working in paid apprenticeship or those receiving job-related training were included, given that training possibilities constitute a key component of the quality of jobs.

As the main focus of this study is on investigating whether significant differences in job satisfaction exist between high and low-paid workers in Greece, we then proceeded to identify the fraction of Greek employees who are low-paid in the ECHP. In doing so, we firstly derived gross hourly earnings for each individual in the sample, by using the available information on current gross monthly earnings and the number of weekly hours of work in the main job. We then adopted a conventional definition that classifies as low-paid those earning less than two-thirds of the median of the hourly wage distribution per year. Such a relative measure is commonly used in the literature, since an absolute metric poses difficult conceptual and methodological problems for making international comparisons of the incidence of low pay (Employment Outlook, 1996, p. 69). Considering as low-paid those workers whose wages are less than two-thirds of the median wage is also the accepted definition of the Institute of Labour (INE) of the Greek Confederation of Labour (GSEE) (Ioakimoglou and Soumeli, 2002). Furthermore, given that the presence of part-time workers introduces the additional complexity of disentangling differences in time worked from differences in wage rates, hourly earnings were constructed in order to neutralize the effect of diverse working hours among part-time and full-time workers. Using this definition, Table 1 illustrates that the overall incidence of low-paid employment in Greece, based on

ECHP data for the period 1994-2001, is 17.24 percent.⁹ This figure closely mirrors the results of both Ioakimoglou and Soumeli (2002) and Marlier and Ponthieux (2000), who have shown, using slightly different definitions and data, that low wage workers in Greece amount to 16-17 percent of the total population.

4.2 *Descriptive Statistics*

Having identified the overall incidence of low pay in Greece, Table 2 depicts the composition of low wage employment in relation to categories of jobs and individuals. Specifically, Table 2 shows the percentage of workers in each category who are low-paid (*incidence*), the *distribution* of low wage employment among the particular categories, and the *concentration indicator*, a measure of the prevalence of low-paid employment in each group relative to the overall incidence in the population. This indicator is useful for conducting cross-national comparisons, as a value greater than one suggests a higher than average risk of being low-paid in any country. Taking the category of ‘sector’ as an example, Table 2 illustrates that being employed in the private sector is associated with a higher than average probability of being low-paid, since the concentration value is 1.48. This is in stark contrast to public sector workers, whose concentration value is 0.21, thus implying that the public sector in Greece acts a safeguard against low wage employment. These figures are a reflection of the fact that, as shown in column 1, almost 26 percent of private sector employees are low-paid, compared to only 4 percent in the public sector. Moreover, from column 2 one

⁹ It should be borne in mind, though, that in Greece there is a large number of atypical low-paid workers who are employed in the parallel economy, and who therefore do not form part of the official statistics. Thus, the 17 percent figure should be seen as a minimum estimate (Ioakimoglou and Soumeli, 2002). Of course, it should be pointed out that low-wage employees do not necessarily live in low-income households. In Greece, especially, “a person’s likelihood of being poor depends to a large extent on the income of his (closely knit) family and not exclusively on his individual income” (ibid., 2002). Apart from the fact that workers’ households often have two wages, as well as the continued support by parents and the extended family, non-labour income (such as property income) is also common.

can see that among the 17 percent of workers who are classified as low-paid in our sample, 92 percent work in private sector jobs, compared to only 8 percent who are employed in the public sector.

From the remaining rows in Table 2 it is clear that the likelihood of low-paid employment in Greece is higher for women and younger workers, as well as those with lower educational qualifications and absence of training opportunities in their jobs. This is not surprising, given that wages tend to increase with working experience, training, and the level of educational attainment, as has been noted long time ago by Becker (1964) and Mincer (1974), the two pioneers of human capital theory. In fact, our sample confirms that low-paid workers have fewer years of general experience and job tenure (11 and 3.5, respectively), compared to their higher-paid counterparts (17 and 9 years). Single workers, and to a lesser extent those who work in part-time jobs are also at higher than average risk of being in the low pay category. In addition, low wages are relatively less common in fairly ‘stable’ jobs, such as jobs with contracts of indefinite duration. The persistence of the no pay/low pay cycle that was mentioned above is also evident, since those who enter or re-enter employment after being unemployed or inactive a year earlier are much more likely to be in low wage jobs, compared to those who were employed. From Table 2 it is also apparent that fears of high-paid jobs in the shrinking manufacturing sector being increasingly replaced by low-paid jobs in the growing services sector have not yet materialized in Greece, as the possibility of low pay seems to be greater in the non-services sectors. Lastly, the occupational breakdown suggests that while being in a non-manual occupation (such as sales) is not a guarantee of being in a relatively high-paid job, very few managerial, technical and professional workers receive low wages. All of these correlations are in close agreement with the results that other authors have reported for many other

countries, thus indicating that the risk of low wage employment in Greece tends to be concentrated among the same types of workers and employment categories as elsewhere (Employment Outlook, 1996, p. 70; Marlier and Ponthieux, 2000, p. 4; and articles in the volume of Asplund, Sloane and Theodossiou, 1998).

Moving on to an analysis of the raw job satisfaction data, Figure 1 demonstrates that in 2001 Greece had the lowest average job satisfaction among the EU countries for which such data was available, thus confirming the findings of Blanchflower and Oswald (1999) and Kaiser (2002) for earlier years. From Figure 2, which illustrates the distribution of job satisfaction responses in Greece in 2001, it can be seen that 11 percent of Greeks ranked themselves at the bottom of the job satisfaction ladder (i.e. gave a score of 1 or 2), while 59 percent were in the middle rungs (scores 3 and 4). The remaining 30 percent of Greek employees reported a satisfaction value of 5 or 6, which constitutes one of the smallest fractions in the EU. Table 3 now depicts the means of overall job satisfaction and satisfaction with specific facets of jobs, broken down by various categories of interest for this study. As an example, one can see from column 1 of this table that the average job satisfaction score of high-paid workers in Greece in the years 1994-2001 was 4.02, which is larger than the average satisfaction value of 3.17 that low-paid workers reported. Accordingly, the following patterns emerge:

- Men in Greece seem to be more satisfied with their pay and security, compared to women, in line with Papapetrou's (2004) finding that average wages of Greek women are 25 percent less than those of men. Nevertheless, women express greater satisfaction with their working hours, times, conditions, and type of work.

- While full-time workers report greater satisfaction with respect to their pay, security, and type of work, part-time employees in Greece receive greater satisfaction from their working hours and conditions. Overall full-time workers seem to be happier than those who work part-time, which probably reflects the fact that part-time work in Greece is still limited and to a large extent involuntary. Specifically, among the 5.34 percent of employees who work in a part-time job in our sample, almost 47 percent declare that they do it because they were unable to find other work, while only 7.5 percent preferred this type of working arrangement. Furthermore, given that “part-time employment in Greece is directly interwoven with low pay, low-skilled jobs, limited prospects of career development, low social benefits and partial insurance coverage which also entails low pension rights” (Ioakimoglou and Soumeli, 2002), it is understandable why such workers report lower job satisfaction ratings.

- Public sector workers in Greece are more satisfied with their jobs in general, and with all of the facets in particular, compared to private sector employees. This is consistent with Papapetrou’s (2003, p. 45-7) finding that female and male wages in the Greek private sector are on average 37 and 34 percent less than in the public sector, respectively. The high level of security satisfaction expressed by Greek public sector workers can also be explained by the element of permanency in such jobs.

- Workers on permanent contracts receive greater utility from their jobs, especially with regards to the security of their employment, while those on casual work suffer the most.

- Married individuals, those in possession of more human capital, those who are employed in supervisory positions, and those working in the services sector are more satisfied with all of the components of their jobs.

- Finally, and more important for the purposes of this study, *low-paid workers in Greece are less satisfied with all aspects of their work compared to their high-paid counterparts.*

5. Econometric Methodology and Results

5.1 Statistical Methodology

These correlations may be spurious, as the influence of other factors that may obscure the relationship between the low pay and job satisfaction variables has not yet been controlled for. As shown above, we cannot be certain on the basis of the raw data only that low-paid workers in Greece are less satisfied than high-paid workers solely because of the fact that they are low paid. Since a large proportion of low-paid workers possess other characteristics that might have a negative effect on job satisfaction (e.g. they are more likely to be single, low-skilled, on non-permanent contracts, etc.) it might be these features that cause low-paid workers to appear as less satisfied, rather than the fact of being low-paid itself. Therefore, in order to uncover the true *ceteris paribus* effect of the low pay variable on job satisfaction, a multivariate regression methodology is required to net out the effects of other variables.

As mentioned in section 3, the estimation of job satisfaction equations usually involves job satisfaction “as the dependent variable” being regressed on a set of demographic, human capital, economic, work-related and other social determinants. In our case the set of independent variables also includes a dummy variable that distinguishes between high and low-paid workers by taking the value 1 for low-paid employees and 0 otherwise. The estimated coefficient on this low pay variable uncovers the difference in average job satisfaction between high and low-paid workers, *having controlled for the effect of all other factors that affect job satisfaction and that*

may be correlated with low pay status. Of course, given the difficulty of conditioning on every possible determinant of job satisfaction (since the researcher usually faces data constraints), it may be the case that the estimated coefficient on the low pay dummy also captures the effect of these ‘unobservable’ variables, and is thus biased. To give a relevant example, it is known by a number of studies that union density has an effect on job satisfaction, and that it is also a determining factor for the probability of a worker being low-paid.¹⁰ It follows that if a union-proxy variable is not included in the equation, the coefficient on the low pay dummy will also capture the effect of union status on job satisfaction, thus giving rise to what is known as ‘omitted variable bias’. In the results that are presented below we have therefore made an attempt to correct for this problem, and the reader interested in the technical details of how we achieve this can find a discussion in the Appendix. In what follows we offer a simplified account of the main results.

5.2 *Empirical Results for Overall Job Satisfaction*

From the estimation of a job satisfaction equation on the entire sample of workers (see Table A2 in the Appendix), we find that low-paid employees in Greece are significantly less satisfied with their jobs compared to those who are high-paid, all other things equal.¹¹ Two ‘statistically identical’ individuals, who have the same characteristics, would therefore not be equally satisfied with their jobs if one of them worked in the low pay tier of the labour market and the other in the high pay tier. In reality, the individual who is low-paid would, on average, receive lower utility from

¹⁰ While union status has been found to increase worker satisfaction with pay and security, overall, union workers usually report less satisfaction compared to non-union workers (Lillydahl and Singell, 1993). Furthermore, low-union density is also generally considered as a factor that contributes to low-paid employment (Ioakimoglou and Soumeli, 2002).

¹¹ Given that data for the type of contractual arrangement was not available for wave 1 in Greece, the regression output that is reported in this paper has been estimated on the basis of the 1995-2001 period.

his/her work. This is evidence in favour of the dual labour market hypothesis, as it indicates that non-pecuniary benefits do not seem to compensate low wage workers in Greece, as would be expected in a labour market with perfectly competitive market forces. The idea that there exist ‘bad jobs’ and ‘good jobs’ in the Greek labour market is therefore supported by our data.

From the coefficients of Table A2 one can also derive an estimated value of the amount of money that low-paid workers in Greece would need to receive, in order to have their utility equalized to that of their higher-paid equivalents. Alternatively, such a calculation allows us to put an approximate monetary value on the disutility of low pay employment in Greece i.e. on the ‘implicit’ (shadow) cost that workers are ‘paying’ for being in low-paid jobs that are also of low quality. This is done by looking at the relative size of the coefficients on the low pay and wage variables, as this provides information about how the wages of a marginal individual would need to change in the face of a change in his/her pay status, in order to keep his utility from work constant (Blanchflower and Oswald, 2004). In our case, the calculus suggests that if a previously high-paid worker were to work in a low-paid job, he/she would need to be compensated with approximately 1,400drx extra per hour if he/she were to retain the same utility as before the change. As an indication of the magnitude of this figure, one can note that the mean gross hourly wage of a low-paid worker in Greece in the years 1994-2001 was 826drx, while that of a high-paid worker was 2034drx. Thus, in order for a low-paid employee to enjoy the same utility as that of a higher-paid counterpart, he/she would need to receive on average approximately $(826+1400)$ 2,226drx per hour. It is therefore clear that equalizing the average wages of workers in the two tiers would not be enough to provide them with equal utility. Rather, it would be necessary to offer low-paid workers an additional $(2,226-2034)$ 192drx per hour,

presumably to compensate them for the fact that low-paid jobs are also of inherent 'bad' quality. Of course, these calculations should be treated cautiously, but they do illustrate the quantitative importance of the estimated coefficients.

From the other explanatory variables we observe further that higher absolute wages have a significant positive effect on individual job satisfaction, consistent with the traditional income-leisure trade-off of microeconomic theory.¹² Job satisfaction is also found to be U-shaped in age (thus confirming that the middle-aged are less satisfied), while we do not discover any significant effect of marital status or of the presence of young children in the household. After conditioning on the main job and worker characteristics, we also find that Greek men are less satisfied with their jobs compared to women. This might seem surprising, given that Papapetrou (2004) and others have found substantial and significant male-female earnings differentials across occupations and countries, while there is also evidence of discrimination against women in areas such as hiring/firing and promotion. Nevertheless, the fact that women consistently report higher job satisfaction scores than men is well established in the literature. Attempts to explain this paradox have usually focused on the difference in aspirations between the two genders, with women supposedly expecting less from their jobs due to more frequent career breaks and previous discriminatory behaviour in the workplace. The narrower gap between their current working state and what women expect might therefore explain their greater happiness (Clark, 1997).

¹² The positive coefficient on total hours of work, however, is inconsistent with traditional microeconomic theory. Nevertheless, it should be mentioned that we have not managed to exclude from our hours variable the effect of overtime (for which Greek employees receive up to 150% extra pay), and which in the low wage economy of Greece constitutes a recurrent and welcome element of workers' income. Thus, the positive impact of the hours variable on job satisfaction may reflect the fact that the compensatory wage effect of overtime outweighs the disutility of any additional hours of work. The positive wage effect is further reinforced by the fact that the total hours variable also includes time worked in additional jobs.

Considering now the variables that capture the ‘stability’ or ‘precariousness’ of the employment relationship, it is found that temporary, part-time, and private sector workers in Greece are strongly dissatisfied compared to those on permanent, full-time, and public sector contractual arrangements. These results seem to confirm popular worries that increased labour market flexibility affects the job security of employees, provided that only a minority of individuals who work on non-permanent and part-time contracts do so by choice.

Significant differences in the subjective evaluation of jobs are also found among those who have different human capital characteristics. In Greece, workers with tertiary education and above the second level of secondary education are more satisfied with their work, compared to those who have not completed the second stage secondary level. This is also the case for workers who possess more job tenure, probably reflecting the positive impact of specific training or the superior quality of the worker-employer job match. In addition, those who believe that their current job is not utilizing their skills to the full extent (i.e. self-reported over-qualification) have lower satisfaction scores than those who are content with their skills-job match. The provision of training by employers as a means of upskilling and career development also leads to significantly higher job satisfaction. Finally, very good health, which can also be considered a form of human capital in accordance with Mincer (1976), is an additional factor that leads to higher utility from work.

Another important result that has surfaced from the econometric analysis is that the well-documented non-pecuniary costs of unemployment seem to exert a negative effect on workers’ satisfaction with their jobs. This is evident by the fact that, everything else equal, an ‘ex-unemployed’ worker is more likely to be unhappy with his current job compared to someone who was employed a year earlier. In contrast,

ex-inactive employees are happier with their current jobs, which is consistent with the fact that these people mostly consist of women and younger individuals. This specific group is more likely to be in the process of entering or re-entering employment, after having taken some time off due to various care responsibilities or further education.

Finally, there is also evidence that absenteeism, non-supervisory positions in the hierarchy and working outside of Attica negatively impacts on the perceived quality of jobs.

5.3 Empirical Results for Facets of Job Satisfaction and by Sector

Given that we have established that there exist significant differences in the perceived job quality among high and low-paid workers in Greece, which points towards the existence of a segmented labour market, we now proceed to investigate the reasons for this discrepancy. To this end, seven satisfaction equations have been estimated with some of the available components of jobs (pay, security, type of work, working hours, working times, working conditions/environment and commuting) as dependent variables this time (see Table A3 in the Appendix). The results indicate that, with the exception of travelling distance to work, low-paid workers are particularly less satisfied with their pay and the type of work that they perform. Negative coefficients are also found with respect to the remaining facets, though these are not significant at conventional statistical levels. Overall these findings seem to support the assertion that low wage jobs in Greece are inherently of bad quality, though the insignificance of the working hours, security, and working conditions variables does point towards the existence of some compensating forces.

As an additional task we have split the sample into low and high-paid segments in order to unearth any differences in the manner in which the explanatory variables

determine the satisfaction of the two types of workers. In the previous estimation of overall job satisfaction the coefficients of the chosen control variables were constrained to be the same for both low-paid and high-paid workers. However, it may be the case that the individual's type interacts with the other personal and workplace characteristics, in which case high or low-paid employees will report different satisfaction values to any of these given traits. This disparity in the job satisfaction determination process would be possible if differences in institutional arrangements, hierarchical structures, and firm policies for the two types of workers existed.

Estimating two separate job satisfaction equations for the high and low pay segments reveals a number of interesting features (see columns 2 and 3 of Table A2). Gender and working time arrangements only affect the utility of high-paid workers in a significant manner, with males or part-time workers being less satisfied. General education and additional years of tenure also seem to exert an exclusive effect on the utility of the higher-paid, though employer-provided training is found to have a much larger marginal effect on the stated satisfaction of low-paid employees. The negative impact of non-supervisory duties, previous unemployment, and of working in Northern or Central Greece, is only evident for the high-paid group. In contrast, having been inactive a year earlier has a slight beneficial effect on the satisfaction of low wage employees. Finally, those individuals on casual contractual arrangements suffer from a significantly larger negative effect on job satisfaction in the low wage tier of the labour market. On the whole these results seem to imply that differences in personal and workplace characteristics among low-paid workers do not lead to significant deviations in perceived job quality as much as they do among employees in higher-paid jobs.

5.4 *Oaxaca decomposition*

Having estimated job satisfaction equations for the whole sample and for the two groups separately also allows for a breakdown according to standard Oaxaca or related decompositions. By applying this methodology it is possible to investigate, firstly, the extent to which differences in job satisfaction among high and low-paid employees in Greece is attributable to the endowments or characteristics differential between them, and, secondly, what is the unexplained part of this discrepancy i.e. that part whereby two ‘identical’ individuals of average characteristics, one employed in a high-paid job and one in a low-paid job, report a different satisfaction value, possibly due to the presence of institutional factors. Such a procedure is widespread in decomposing wage differences between various categories of interest (see Papapetrou, 2003 and 2004 for a recent application of this technique to the Greek labour market), but, to the authors’ knowledge, has not yet been attempted with subjective satisfaction data. The results that follow therefore constitute a significant novelty of this paper.

Table A4 in the Appendix presents the breakdown of the difference in job satisfaction between high and low-paid employees for the entire sample. The top section of the table, which decomposes the difference according to the Oaxaca procedure, illustrates that the most influential factor affecting the satisfaction disparity of individuals in the two groups is the fact that they have the different characteristics that were identified in this paper; this accounts for almost 90 percent of the total discrepancy. The remaining 10 percent is ‘unexplained’, reflecting disparate institutional features of the high and low pay labour markets. Given the greater weight of the endowments explanation, the bottom section of the table shows which part of the explained difference in satisfaction is attributable to specific employee characteristics. While the difference in mean wages understandably explains the lion’s

share of the overall satisfaction differential (56%), tenure (3.5%), age (-9%), the sector of employment (12%), employer-provided training (3%), non-permanent contractual arrangements (16.5%), and tertiary education (4%) also contribute to the difference in satisfaction between high and low wage employees in Greece.

6. Policies and Recommendations

As mentioned in the beginning of this paper, the aim of improving the quality of work is considered by the EU as closely interlinked with the move towards a competitive and knowledge-based economy, as stated in the Lisbon 2000 agenda. This reflects the evidence of a strong positive correlation between job quality, faster employment growth and higher productivity. At the same time, the declining economic prospects of workers on the lower rungs of the income distribution have raised concerns regarding the emergence of a two-tier labour market in Europe. In this paper evidence was presented that low-paid workers in Greece do in fact seem to suffer from a double penalty, as their jobs are also of bad quality. In view of this segmentation, combined with the fact that Greece remains a low wage economy, it becomes clear that policies that centre on the quality of jobs are of equal importance to those that focus on the level of pay that they provide. This, however, requires the design of a regulatory framework that supports transitional labour markets, by improving the dynamics that lead to jobs of superior quality and by encouraging the occupational and regional mobility of those workers who are trapped in low wage/low quality employment. Concerted efforts to promote life-long training and raise the qualifications of employees, to ease young workers' access to the labour market, to open up possibilities for career advancement, and to strengthen measures that help

reconcile work and private and family lives would be conducive to achieving this goal (Employment in Europe, 2001, p. 80).

The empirical findings of this paper illustrate that such policy implications are relevant for the Greek labour market as well. The challenge of balancing flexibility, on the one hand, and security, on the other – of supporting the competitiveness of firms in the global economy without resorting to precarious forms of employment – is a delicate one for the Greek economy. The fact that additional years of tenure do not have a significant impact on the perceived job quality of low wage workers may indicate the lack of rank progression or training opportunities in this sector. In addition, since both temporary contracts and involuntary part-time work are generally related to extreme worker dissatisfaction, it becomes clear that emphasis should be put on making these contractual forms function as stepping stones for reintegrating individuals into high quality employment. This can be achieved by focusing on increasing the share of voluntary part-time work, as well as introducing more flexibility in permanent contracts and more security in fixed-term ones. Implementation of the EU Directives for Temporary and Part-time work is also essential to ensure that workers under different contract statutes enjoy similar access to lifelong learning, good working conditions, appropriate protection against discrimination or unfair dismissal, support in the case of job loss, decent pay, and the right to transfer acquired social rights in the case of job mobility (Commission, 2003, p. 14).

Policies that enhance the quality and efficiency of investments in human resources are also relevant, given that higher educational attainment and more employer-provided training leads to a better perception of quality at work. However, the fact that more educational qualifications do not contribute to additional utility from work in

low wage jobs may reflect the discomfort of educated low-paid workers whose higher job aspirations have not materialized as expected. This highlights the need for general education and vocational training systems that do not contribute to skills mismatches in the labour market.

The strong negative correlation between absenteeism and job quality may also partly reflect the need for better working conditions with more health and safety, given that lost days at work are usually a consequence of accidents at work, work-related illnesses and occupational diseases. In this respect the EU has called for an intensification of efforts aimed at implementing the provisions of the Health and Safety at Work Directives.

Finally, policies that allow employees to adjust work with their working time preferences, and in particular with their other responsibilities such as care for children and other dependants, would also add to the improvement in quality of jobs. In Greece there is currently little flexibility in working time arrangements, with more than 90 percent of all employees working on fixed start and end times. Moreover, about 30 percent of Greek employees work outside core working hours, compared to an EU average of 20 hours, while more than half of them claim that they work in the evening at least sometimes (Employment in Europe, 2003, p. 148). These facts point to the need for policies that will reconcile the work-life balance in Greece in a more satisfactory fashion.

7. Conclusions

Following the establishment of job quality as one of the three overarching objectives of the EU's Employment Guidelines, and in the face of concerns regarding the declining economic prospects of workers on the lower rungs of the income

distribution, which has supposedly led to the emergence of a two-tier labour market in Europe, this study examined whether or not significant differences in perceived job quality exist among high and low-paid workers in Greece. To do so we followed the practice of an ever-increasing number of economists who use self-reported job satisfaction data to proxy the overall quality of work as perceived by the individual worker. Using data from the eight waves of the ECHP, evidence was presented that low-paid workers in Greece do in fact seem to suffer from a double penalty, as their jobs are also of bad quality. Further analysis of the specific facets of jobs revealed that this fact is the result of lower average satisfaction among low wage employees with their pay and the type of work that they perform. In view of this segmentation, combined with the fact that Greece remains a low wage economy, it becomes evident that policies that centre on the quality of jobs are of equal importance to those that focus on the level of pay that they provide. This, however, requires the design of a regulatory framework that supports transitional labour markets, by improving the dynamics that lead to jobs of superior quality and by encouraging the occupational and regional mobility of those workers who are trapped in low wage/low quality employment.

FIGURE 1

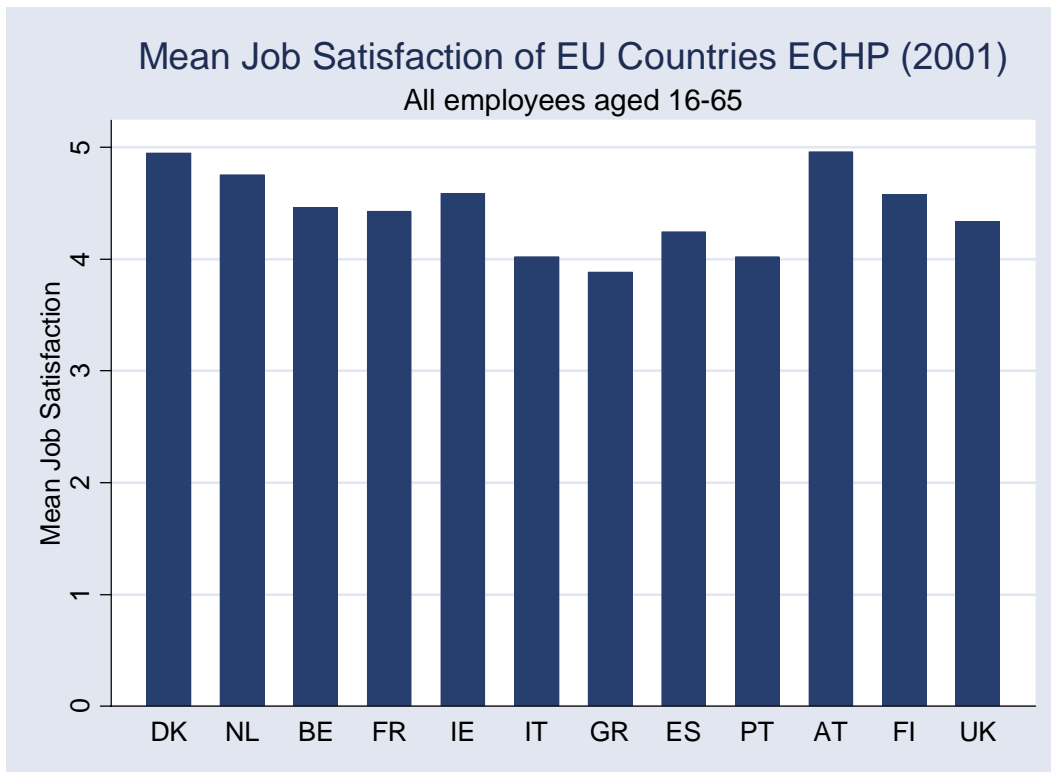


FIGURE 2



**TABLE 1 Median wages, thresholds, and low wage workers
in Greece, 1994-2001**

<i>Year</i>	<i>Median</i>	<i>Threshold</i>	<i>Low-paid</i>
1994	1214.674	809.7827	17.7
1995	1269.095	846.0635	16.65
1996	1448.031	965.3543	16.8
1997	1630.435	1086.957	17.66
1998	1702.517	1135.011	16.62
1999	1760.87	1173.913	16.9
2000	1795.196	1196.797	18.46
2001	1835.228	1223.485	17.22
1994-2001	1550.311	1033.541	17.24

Notes: Amounts quoted in drachmas (not adjusted for inflation); The threshold refers to 2/3rds of the median of the gross hourly wage distribution; The last column indicates the proportion of employees whose wages are below the threshold;

Source: own calculations using ECHP UDB;

TABLE 2 Incidence, distribution and concentration of low-paid employment in Greece, 1994-2001

<i>Category</i>	<i>Incidence^a</i>	<i>Distribution^b</i>	<i>Concentration^c</i>
Total	17.24	100	1
By sex			
Female	22.69	49.93	1.32
Male	13.9	50.07	0.81
By age			
16-25	47.37	40.41	2.75
26-35	16.35	29.56	0.95
36-45	9.06	15.02	0.53
46-55	8.97	10.47	0.52
56-65	14.41	4.55	0.84
By marital status			
Not married	30.6	61.31	1.77
Married	10.18	38.69	0.59
By working time status			
Part-time	19.08	5.9	1.11
Full-time	17.18	94.1	1.00
By sector			
Sector: public	3.66	8.22	0.21
Sector: private	25.55	91.78	1.48
By position in hierarchy			
Supervisory	2.29	0.84	0.13
Intermediate	4.15	1.8	0.24
Non-supervisory	18.99	97.35	1.10
By contractual arrangement			
Permanent	10.65	49.03	0.62
Fixed/short term	24.79	12.84	1.44
Casual/no contract	44.27	37.21	2.57
Other arrangement	26.73	0.92	1.55
By training incidence			
No training/education	21.93	76.91	1.27
Training/education	9.53	23.09	0.55
By educational attainment			
Tertiary	6.78	12.06	0.39
Second stage secondary	18.71	40.43	1.09
Below second stage secondary	24.67	47.51	1.43
By health			
Very good	17.72	72.76	1.03
Good	15.34	19.78	0.89
Fair	19.23	6.13	1.12
Bad	20.23	0.98	1.17
Very bad	36.11	0.36	2.09
By status last year			
Employed	14.14	73.09	0.82
Self-employed	16.75	0.90	0.97

Unemployed	45.10	12.48	2.61
Inactive	49.59	13.54	2.87
By industry			
Agriculture	44.44	3.81	2.58
Industry	18.69	32.09	1.08
Services	15.67	64.1	0.91
By occupation			
Legislators/managers	4.25	0.58	0.25
Professionals	3.41	3.38	0.20
Technicians/associate prof.	11.01	5.47	0.64
Clerks	10.63	11.32	0.62
Service and Sales	31.61	26.17	1.83
Skilled agriculture/fishery	38.06	2.74	2.21
Craft/trade	23.2	25.39	1.35
Plant/machine operators	13.47	7.83	0.78
Elementary	30.14	17.12	1.75

Notes: Low pay is defined as less than 2/3rds of median hourly earnings of all employees aged 16-65.

^aPercentage of workers in each category who are low-paid.

^bPercentage share of all low-paid employment in each category.

^cIncidence of low-paid employment in each category divided by overall incidence of low-paid employment. A value greater than 1 indicates a higher than average risk of being low-paid, while a value less than 1 indicates a smaller probability.

TABLE 3 Mean Job Satisfaction Scores for all Greek employees, 1994-2001

	<i>Overall</i>	<i>Pay</i>	<i>Security</i>	<i>Type work</i>	<i>Hours</i>	<i>Times</i>	<i>Conditions</i>	<i>Commuting</i>
<i>Low-paid</i>	3.17(1.23)	2.60(1.05)	3.01(1.39)	3.44(1.31)	3.46(1.23)	3.57(1.24)	3.63(1.31)	4.02(1.36)
<i>High-paid</i>	4.02(1.17)	3.39(1.09)	4.25(1.44)	4.15(1.24)	4.14(1.14)	4.12(1.23)	3.98(1.29)	4.15(1.33)
<i>By sex</i>								
Female	3.87(1.24)	3.21(1.14)	4.00(1.53)	4.08(1.27)	4.07(1.18)	4.12(1.24)	4.17(1.23)	4.13(1.35)
Male	3.88(1.22)	3.29(1.11)	4.06(1.50)	3.99(1.29)	3.99(1.19)	3.97(1.26)	3.77(1.33)	4.12(1.32)
<i>By age</i>								
16-25	3.55(1.21)	2.96(1.08)	3.36(1.38)	3.77(1.27)	3.77(1.20)	3.78(1.23)	3.88(1.28)	4.07(1.32)
26-35	3.81(1.19)	3.20(1.09)	3.88(1.47)	4.01(1.25)	3.95(1.18)	3.95(1.25)	3.93(1.29)	4.01(1.35)
36-45	4.03(1.21)	3.35(1.11)	4.31(1.47)	4.14(1.26)	4.13(1.18)	4.12(1.27)	3.96(1.30)	4.24(1.32)
46-55	4.00(1.22)	3.40(1.15)	4.34(1.49)	4.11(1.29)	4.16(1.15)	4.17(1.21)	3.92(1.30)	4.18(1.32)
56-65	3.83(1.33)	3.32(1.23)	4.10(1.63)	3.91(1.43)	4.03(1.23)	4.05(1.30)	3.80(1.45)	4.14(1.36)
<i>By marital status</i>								
Not married	3.70(1.24)	3.08(1.11)	3.67(1.49)	3.90(1.29)	3.87(1.19)	3.90(1.24)	3.91(1.30)	4.02(1.33)
Married	3.97(1.21)	3.35(1.11)	4.23(1.49)	4.09(1.27)	4.10(1.17)	4.09(1.26)	3.93(1.31)	4.18(1.33)
<i>By working time status</i>								
Part-time	3.37(1.51)	2.58(1.19)	3.37(1.79)	3.93(1.49)	4.05(1.42)	4.22(1.34)	4.00(1.36)	4.21(1.43)
Full-time	3.91(1.20)	3.29(1.11)	4.07(1.48)	4.03(1.27)	4.02(1.17)	4.01(1.25)	3.92(1.30)	4.12(1.33)
<i>By industry</i>								
Agriculture	2.89(1.27)	2.56(1.11)	2.64(1.47)	2.84(1.35)	3.20(1.21)	3.18(1.32)	2.91(1.41)	3.93(1.45)
Industry	3.57(1.20)	3.15(1.11)	3.57(1.45)	3.68(1.28)	3.89(1.15)	3.94(1.20)	3.47(1.32)	3.99(1.33)
Services	4.04(1.20)	3.33(1.12)	4.28(1.47)	4.21(1.23)	4.10(1.18)	4.09(1.26)	4.14(1.23)	4.19(1.33)
<i>By sector</i>								
Sector: public	4.38(1.10)	3.52(1.10)	4.91(1.30)	4.48(1.16)	4.44(1.09)	4.38(1.22)	4.19(1.25)	4.32(1.34)
Sector: private	3.58(1.19)	3.10(1.10)	3.50(1.37)	3.75(1.27)	3.77(1.17)	3.81(1.23)	3.76(1.31)	4.00(1.32)

By job status									
Supervisory	4.66(1.02)	3.93(1.14)	5.00(1.14)	4.75(1.10)	4.32(1.22)	4.37(1.27)	4.44(1.26)	4.37(1.40)	
Intermediate	4.35(1.07)	3.53(1.13)	4.69(1.33)	4.48(1.14)	4.15(1.18)	4.19(1.30)	4.09(1.30)	4.20(1.40)	
Non-supervisory	3.79(1.22)	3.19(1.10)	3.92(1.50)	3.93(1.28)	3.99(1.18)	3.98(1.24)	3.87(1.30)	4.10(1.32)	
By contractual arrangement									
Permanent	4.10(1.10)	3.46(1.04)	4.50(1.26)	4.24(1.17)	4.17(1.09)	4.13(1.19)	4.07(1.22)	4.19(1.29)	
Fixed/short term	3.50(1.15)	3.10(1.06)	2.74(1.23)	3.75(1.26)	3.78(1.12)	3.80(1.16)	3.77(1.29)	4.06(1.31)	
Casual/no contract	2.88(1.08)	2.60(1.01)	2.44(1.08)	3.12(1.21)	3.33(1.14)	3.44(1.18)	3.27(1.28)	3.85(1.27)	
Other arrangement	3.75(1.12)	3.39(1.11)	3.49(1.34)	3.85(1.36)	3.75(0.97)	3.86(1.12)	4.09(1.27)	4.34(1.26)	
By training incidence									
No training/education	3.62(1.22)	3.13(1.09)	3.76(1.50)	3.72(1.28)	3.87(1.17)	3.88(1.23)	3.73(1.30)	4.07(1.30)	
Training/education	4.27(1.12)	3.46(1.14)	4.44(1.42)	4.46(1.15)	4.24(1.17)	4.23(1.26)	4.20(1.25)	4.20(1.38)	
By educational attainment									
Tertiary	4.35(1.13)	3.53(1.14)	4.56(1.40)	4.61(1.11)	4.33(1.14)	4.40(1.19)	4.34(1.17)	4.20(1.37)	
Second stage secondary	3.89(1.15)	3.29(1.07)	4.05(1.45)	4.03(1.21)	4.01(1.15)	3.97(1.24)	4.02(1.25)	4.13(1.30)	
Below second stage secondary	3.43(1.22)	2.97(1.09)	3.53(1.50)	3.48(1.27)	3.75(1.19)	3.74(1.24)	3.42(1.32)	4.04(1.33)	
By health									
Very good	3.94(1.21)	3.32(1.11)	4.06(1.48)	4.08(1.26)	4.05(1.17)	4.04(1.24)	3.99(1.28)	4.16(1.31)	
Good	3.77(1.19)	3.15(1.10)	4.00(1.53)	3.94(1.28)	3.94(1.19)	3.97(1.26)	3.79(1.30)	4.03(1.35)	
Fair	3.61(1.37)	2.93(1.24)	3.84(1.71)	3.71(1.43)	4.01(1.26)	4.01(1.35)	3.61(1.48)	4.05(1.49)	
Bad	3.50(1.51)	2.79(1.24)	3.90(1.87)	3.59(1.53)	4.09(1.40)	4.11(1.37)	3.57(1.48)	4.13(1.56)	
Very bad	3.66(1.70)	2.88(1.23)	4.02(1.85)	3.97(1.46)	4.02(1.64)	4.00(1.80)	3.27(1.76)	4.30(1.67)	

Notes: Standard errors in parentheses.

Source: Own calculations based on ECHP UDB (1994-2001) data

Appendix

This section provides a detailed discussion of the model specification and econometric procedure that underpins the results that were presented in the main body of this paper. We have followed an increasingly popular trend in the economics literature, which estimates regression models based on subjective data. Given the ordinal nature of such data, most of this research uses ordered probit regression techniques with the aim of identifying the main determinants of self-reported well-being levels. Specifically, it usually seeks to identify the probability of observing a self-reported satisfaction value i ($i = 1, 2, \dots, k$), as a function of appropriate individual and labour market variables. In our case, where the interest lay in revealing potential differences in job satisfaction between high and low-paid workers, we have also included in the regressions a dummy variable indicating whether or not individuals are low-paid. The estimated coefficient on the low pay dummy will then unveil any differences in job satisfaction between the two groups of workers, *ceteris paribus*. In other words, we have estimated a model of the form:

$$JS = Xb + Ia + u \quad (2)$$

where **JS**, job satisfaction, is the categorical dependent variable, **X** is a vector of personal and labour market characteristics that affect job satisfaction, **I** is a dummy variable taking the value 1 if low-paid and 0 otherwise, and $u \sim N(0, \sigma_i^2)$ is the random disturbance term. Of course, if there exist unobservable variables that affect job satisfaction and are correlated with the low pay dummy (i.e. if $Cov(\mathbf{I}, u) \neq 0$), then it is well known that the estimated coefficient a will be biased.

It is for this reason that a “treatment effects model” has been utilized, which considers the effect of an endogenously chosen binary treatment on another endogenous continuous variable, conditional on two sets of independent variables. Such techniques use either Heckman's two-step consistent estimator or full maximum-likelihood, and estimate all of the parameters in the model

$$JS = Xb + Ia + u \text{ (regression equation)} \quad (3)$$

$$I = 1 \text{ iff } Z\gamma + \varepsilon > 0 \text{ (treatment equation)} \quad (4)$$

where equation (3) is defined as before, \mathbf{Z} is a matrix of identifying variables believed to determine whether assigned treatment in the low wage sector occurs or not, but with at least one not affecting job satisfaction, $\varepsilon \sim N(0, 1)$ and $Cov(\varepsilon, u) = \rho$. A point worth making at this stage is that since these models require that the dependent variable is continuous, we have transformed the ordinal job satisfaction variable into a standardized z-score. This is standard procedure following Freeman's (1978) finding that such a transformation does not lead to distortions in the regression results. It should also be noted that in all of the regressions robust (Hubert-White) standard errors are reported that also correct for correlation at the individual level.

Identification of the model is achieved provided that at least one non-overlapping variable in \mathbf{Z} , compared to \mathbf{X} , is present. For this purpose two identifying restrictions have been used in the selection equation, but not in the main job satisfaction equation. These consist of, firstly, dummy variables capturing the number of rooms in the household per person, ranging from 1 to more than 3 rooms. Secondly, dummies of an index summarizing the presence of good features in the household have also been

included. The good features consist of whether or not the dwelling possesses a separate kitchen, bath or shower, indoor flushing toilet, hot running water, and a place to sit outside. For both of these identifiers it is postulated that while their existence is correlated with the probability of an individual belonging in the low-paid group, it is uncorrelated with the utility that he receives from his work. Additional statistical tests, which are discussed in more detail below, also indicate that the restrictions for identifying the endogeneity effects are adequate.

The estimation of the selection equation (4) makes use of the probit method to identify the factors that determine whether an individual works in the low pay or high pay tier. The regression results, as well as the marginal effects of the included variables, are presented in Table A1.¹³ As usual, positive coefficients imply a greater likelihood of an individual having low wages, whereas the marginal effects indicate the change in the probability that an individual is low-paid when each of the independent variables, calculated at the mean values of the sample, is increased by one unit. For instance, if an employee works full-time the probability that he/she will be low-paid decreases by almost 4 percent, while being employed in the private sector increases the likelihood of low pay employment by 7 percent.

In line with the results of many other studies (see articles in volume of Asplund, Sloane, and Theodossiou, 1998) it is also revealed that the probability of being in the low wage group in Greece is U-shaped in age (so that the middle-aged are less likely to be low-paid), and negatively related with marriage and with the male gender. In addition, greater human capital reduces the chances of an individual falling into the low pay category, since more years of tenure, higher educational qualifications, and those who receive training are more likely to receive higher wages. The fact that there

¹³ A description of all of the variables that are used in this study can be found in Appendix Table A5.

is a negative correlation between those who have children under the age of 12 in the household and low wage employment confirms the Malthusian rationale of income being a crucial determinant of fertility patterns. Furthermore, those who are employed in non-supervisory positions, on non-permanent contracts, and who suffer from very bad health are more likely to be low-paid. Finally, the widespread concerns over the presence of a vicious circle between low pay and no pay are verified by the fact that individuals who were unemployed or inactive a year earlier face a higher probability of being in the low pay category.

With respect to the identifying restrictions now, it is clear that these are highly correlated with low pay status. Specifically, compared to those who live in households with only one room per person, those with two or more than three rooms per person are less likely to be low-paid. Accordingly, those with fewer good household features face a greater likelihood of being low-paid. The Wald test statistic for the joint significance of these selection variables in the probit equation is $\chi^2(6) = 59.59$, which is significant at the 1 percent level.

Following the estimation of the probit model, the predicted probabilities of being in the low pay segment are then calculated. The predictions are subsequently included in the regression of the main job satisfaction equation, in place of the low pay dummy. The estimates that have been corrected for endogeneity are depicted in Table A2, and have been extensively discussed in section 5.2 above. It is noteworthy, though, that the implementation of this technique leads to an increase in the marginal effect of the low pay dummy, compared to a simple application of OLS (not available here, but available from the author upon request).

In Table A3 estimates of the impact of the low pay determinant on the facets of job satisfaction (pay, security, type of work, working hours, working times, working

conditions/environment and commuting) are presented, using treatment effect modelling as above. The application of this two-step empirical procedure once again results in coefficients that differ with respect to OLS estimates. Specifically, while the OLS output does not reveal any significant effect of low pay status on the individual facets of job satisfaction (not reported here), the estimates that are corrected for endogeneity are significant for pay and type of work at the 5 percent level as discussed in the main text.

Statistical tests that examine the adequacy of the restrictions that identify the endogeneity effects were repeatedly undertaken. Regressions were run in each case to ascertain statistically that our chosen instruments are uncorrelated with the job satisfaction measures that were used. Specifically, the variables used as identifying restrictions were entered as regressors in the job satisfaction equations together with the other covariates. In all regressions the instruments as a group did not add any significant explanatory power as tested by an F test. The relevant F statistics are reported at the end of their respective tables.

Given the desire to investigate whether the explanatory variables exert a differential effect on the satisfaction of the two types of workers, a Heckman-type selection correction model was employed for both the low pay and high pay sample. This model, commonly known as a “switching regression model with endogenous switching”, was most notably espoused by Lee (1978).

The switching regression model consists of two job satisfaction equations, one for each sector:

$$JS_{Hi} = X_i b_H + u_{Hi} \quad (5)$$

$$JS_{Li} = X_i b_L + u_{Li} \quad (6)$$

and one “selection equation”, which determines which sector the individuals ends up in:

$$I_i^* = Z_i \gamma + \varepsilon_i \quad (7)$$

where \mathbf{I}^* is a latent variable which describes the agent’s propensity of joining each sector, and \mathbf{Z} is a vector of variables determining the employee’s selection, at least one not affecting his job satisfaction. Of course, \mathbf{I}^* is unobserved, but we know that:

$$I_i = 1 \quad \text{iff} \quad I_i^* > 0 \quad (8)$$

$$I_i = 0 \quad \text{iff} \quad I_i^* \leq 0 \quad (9)$$

Thus, our observed JS data are defined as follows:

$$JS_i = JS_{Li} \quad \text{iff} \quad I_i = 1 \quad (10)$$

$$JS_i = JS_{Hi} \quad \text{iff} \quad I_i = 0 \quad (11)$$

$$\text{Cov}(u_{Hi}, u_{Li}, \varepsilon_i) = \begin{pmatrix} \sigma_{HH} & \sigma_{HL} & \sigma_{H\varepsilon} \\ \sigma_{HL} & \sigma_{LL} & \sigma_{L\varepsilon} \\ \sigma_{H\varepsilon} & \sigma_{L\varepsilon} & 1 \end{pmatrix} \quad (12)$$

and it is evident that since $E(u_{Li} / I_i^* > 0) \neq 0$ and $E(u_{Hi} / I_i^* \leq 0) \neq 0$, estimation by OLS will result in inconsistency.

The estimation of the selection equation therefore follows the probit method, and then the coefficients from the probit are used for the calculation of the inverse Mill's ratio, as is illustrated in the following two steps:

Firstly, from (7) we retrieve $\hat{\gamma}$ from which we construct

$$\sigma_{L\varepsilon} = Cov(u_L, \varepsilon) \times \frac{\phi(Z\hat{\gamma})}{\Phi(Z\hat{\gamma})} \quad (13)$$

and

$$\sigma_{H\varepsilon} = Cov(u_H, \varepsilon) \times \frac{\phi(Z\hat{\gamma})}{1 - \Phi(Z\hat{\gamma})} \quad (14)$$

Secondly, the job satisfaction equations are estimated including the respective Mill's ratios as independent variables, as follows:

$$JS_{Hi} = X_i b_H - \sigma_{H\varepsilon} + \eta_{Hi} \quad (15)$$

$$JS_{Li} = X_i b_L - \sigma_{L\varepsilon} + \eta_{Li} \quad (16)$$

The estimated coefficients of b_H and b_L should now provide unbiased estimates of the effect of \mathbf{X} . The estimates reported in columns 2 and 3 of Table A2 have therefore allowed for this correction.

TABLE A1 Probit estimates of low pay status in Greece, 1995-2001

	(1)Low pay	(2)Marginal effect
Personal		
Male	-0.555 (0.054)***	-0.067
Age	-0.138 (0.015)***	-0.015
Agesq	0.002 (0.000)***	0.000
Married	-0.278 (0.059)***	-0.032
Child < 12yrs	-0.181 (0.055)***	-0.019
Unemployed 5yrs	0.069 (0.048)	0.008
Work-related		
Tenure	-0.033 (0.005)***	-0.004
Total hours	-0.555 (0.054)***	0.004
Full-time	0.041 (0.002)***	-0.043
Private	-0.317 (0.101)***	0.073
Absenteeism	0.760 (0.092)***	0.001
Duties		
Intermediate	0.128 (0.191)	0.015
Non-supervisory	0.572 (0.165)***	0.043
Contract		
Fix/short term	0.274 (0.062)***	0.035
Casual work	0.540 (0.052)***	0.079
Other	0.259 (0.221)	0.034
Human Capital		
Training	-0.160 (0.051)***	-0.016
Overqualified	0.052 (0.040)	0.006
Third level	-0.352 (0.079)***	-0.034
2 nd secondary	-0.128 (0.055)**	-0.013
Health		
Good	0.043 (0.046)	0.005
Fair	0.133 (0.087)	0.016
Bad/Very Bad	0.262 (0.194)	0.034
Status last year		
Self-employed	-0.117	-0.011

Unemployed	(0.159) 0.311 (0.064)***	0.041
Inactive	0.353 (0.070)***	0.048
Region		
Northern GR	0.293 (0.058)***	0.034
Central GR	0.105 (0.063)*	0.011
Aegean islands	0.092 (0.077)	0.010
Identifying variables		
2 rooms pp	-0.304 (0.064)***	-0.027
> 3 rooms pp	-0.399 (0.155)**	-0.031
< 2 good features	0.515 (0.158)***	0.081
3 good features	0.443 (0.096)***	0.065
4 good features	0.224 (0.062)***	0.026
5 good features	0.069 (0.052)	0.007
Constant	0.407 (0.396)	
Observations	15213	
Wald test (58)	1914.64***	
Pseudo R ²	0.37	
Notes: Standard errors in parentheses; robust to arbitrary heteroscedasticity and the repeat sampling of individuals over time; *significant at 10%; ** significant at 5%; *** significant at 1%; All regressions include controls for occupation (9), industry (10) and time (7); Reference groups: duties: supervisory; contract: permanent; education: below 2nd stage; health: very good; status last year: employed; region: Attica; rooms pp: 1 room pp; good features: 6;		

TABLE A2 Estimates of overall job satisfaction in Greece, 1995-2001

	(1) All	(2) Low-paid	(3) High-paid
Lowpay	-0.138 (0.062)**		
Personal			
Male	-0.067 (0.023)***	-0.061 (0.072)	-0.080 (0.025)***
Age	-0.017 (0.008)**	-0.034 (0.019)*	-0.012 (0.009)
Agesq	0.000 (0.000)**	0.000 (0.000)	0.000 (0.000)
Married	-0.025 (0.027)	0.046 (0.072)	-0.042 (0.028)
Child < 12yrs	0.030 (0.021)	-0.012 (0.058)	0.036 (0.022)*
Unemployed 5yrs	-0.027 (0.022)	-0.039 (0.044)	-0.022 (0.025)
Work-related			
Ln timer	0.409 (0.030)***	0.356 (0.081)***	0.410 (0.034)***
Tenure	0.004 (0.002)**	-0.000 (0.006)	0.003 (0.002)*
Total hours	0.010 (0.001)***	0.013 (0.004)***	0.010 (0.001)***
Full-time	0.197 (0.045)***	0.146 (0.096)	0.206 (0.050)***
Private	-0.200 (0.027)***	-0.240 (0.133)*	-0.188 (0.028)***
Absenteeism	-0.007 (0.003)**	-0.015 (0.008)*	-0.005 (0.003)
Duties			
Intermediate	-0.116 (0.043)***	0.274 (0.235)	-0.120 (0.044)***
Non-supervisory	-0.171 (0.038)***	0.201 (0.226)	-0.173 (0.038)***
Contract			
Fix/short term	-0.274 (0.033)***	-0.274 (0.068)***	-0.276 (0.038)***
Casual work	-0.412 (0.029)***	-0.484 (0.065)***	-0.347 (0.034)***
Other	0.041 (0.082)	-0.151 (0.180)	0.124 (0.089)
Human Capital			
Training	0.096 (0.019)***	0.232 (0.059)***	0.076 (0.019)***
Overqualified	-0.157 (0.017)***	-0.177 (0.041)***	-0.154 (0.018)***
Third level	0.085 (0.033)**	0.015 (0.088)	0.096 (0.036)***
2 nd secondary	0.078 (0.026)***	0.049 (0.055)	0.081 (0.028)***
Health			
Good	-0.154 (0.020)***	-0.064 (0.049)	-0.168 (0.021)***
Fair	-0.089 (0.042)**	-0.013 (0.091)	-0.101 (0.046)**

Bad/Very Bad	-0.057 (0.102)	-0.120 (0.230)	-0.038 (0.112)
Status last year			
Self-employed	-0.068 (0.072)	-0.122 (0.157)	-0.062 (0.082)
Unemployed	-0.070 (0.037)*	-0.008 (0.060)	-0.111 (0.049)**
Inactive	0.069 (0.042)*	0.127 (0.066)*	0.003 (0.055)
Region			
Northern GR	-0.079 (0.023)***	-0.108 (0.063)*	-0.065 (0.025)***
Central GR	-0.077 (0.026)***	-0.063 (0.067)	-0.081 (0.028)***
Aegean islands	-0.003 (0.031)	0.009 (0.072)	-0.001 (0.034)
Constant	-2.985 (0.288)***	-2.800 (0.662)***	-3.065 (0.331)***
Observations	15206	2433	12773
Wald test(d.f)	4324.43(54)***	651.00(53)***	2079.14(53)***
Log-likelihood	-22502.52	-7274.33	-19421.28
lambda		0.09	-0.08

Notes: Standard errors in parentheses: robust to arbitrary heteroscedasticity and the repeat sampling of individuals over time; * significant at 10%; ** significant at 5%; *** significant at 1%; The ordinal dependent variable overall job satisfaction has been transformed to a continuous z-score variable; All regressions include controls for occupation (9), industry (10) and time (7); Column 1 includes Heckman estimates, where the selection is a probit regression of the treatment lowpay dummy as in Table A1. Column 2 includes Heckman ML estimates of the job satisfaction of low-paid workers. Column 3 includes Heckman ML estimates of the job satisfaction of high-paid workers; Reference groups: duties: supervisory; contract: permanent; education: below second stage; health: very good; status last year: employed; region: Attica; F test statistic for the joint significance of the identifying restrictions in an overall job satisfaction regression: $F(6, 4044) = 1.53$;

TABLE A3 Estimates of effect of low pay status on facets of job satisfaction in Greece, 1995-2001

	(1)Pay	(2)Security	(3)Type work	(4)Hours	(5)Conditions	(5)Times	(6)Commuting
Lowpay	-0.188 (0.094)**	-0.011 -0.053	-0.113 (0.058)**	-0.042 -0.058	-0.046 0.096	-0.034 -0.075	0.178 (0.093)*
Observations	15213	15213	15213	15213	15213	15213	15213
Wald test (54)	3015.77***	9639.1***	3683.91***	2486.37***	2152.64***	2111.51***	715.76***
Log-likelihood	-23017.7	-20605.33	-22829.87	-23531.61	-23704.82	-23911.2	-24667.64

Notes: Standard errors in parentheses: robust to arbitrary heteroscedasticity and the repeat sampling of individuals over time; * significant at 10%; ** significant at 5%; *** significant at 1%; Results for the remaining explanatory variables are available from the authors upon request; All columns include Heckman ML estimates, where the first step is a probit regression of the treatment lowpay dummy on the regressors of the underlying regression model and the chosen selection variables; The 'Times' and 'Conditions' regressions have been estimated using only rooms pp as selection variables, whereas the rest use the good household features dummies as well; F-test statistics for the joint significance of the selection variables in each job satisfaction regression: Pay - F(6, 4044) = 0.90; Security - F(6, 4044) = 1.62; Type Work - F(6, 4044) = 1.61; Hours - F(6, 4044) = 1.56; Times - F(6, 4044) = 0.39; Conditions - F(2, 4044) = 1.64; Commuting - F(6, 4044) = 0.32.

**TABLE A4 Oaxaca Decomposition of Job Satisfaction Difference
between High and Low-paid Workers in Greece**

Raw differential (mean JShigh - mean JSlow)	0.727
Due to Endowments	0.601
Due to Coefficients	0.076
Due to Interaction	0.05
<i>Decomposition of explained difference</i>	
Ln timer	0.336
Age	-0.055
Agesq	0.045
Tenure	0.022
Private	0.074
Training	0.017
Fixed contract	0.015
Casual work	0.100
Tertiary education	0.023
Notes: Estimation using Oaxaca decomposition method.	
Source: own calculation using ECHP UDB (1994-2001).	

TABLE A5 Description of variables

Variable	Description
<i>Job Satisfaction scores (1 = 'not satisfied', 6 = 'fully satisfied')</i>	
Overall Job Satisfaction	respondent satisfaction rating with work or main activity
Job Satisfaction: facets	respondent satisfaction rating of facet <i>i</i> of present job (<i>i</i> = earnings, job security, type of work, number of working hours, working times, work conditions/environment, distance to work/commuting)
<i>Identifying variables</i>	
1 room pp	1, if individual lives in household with 1 room per person (not counting kitchen, bathroom and toilets), 0 otherwise
2 rooms pp	1, if individual lives in household with 2 rooms per person (not counting kitchen, bathroom and toilets), 0 otherwise
3 rooms pp	1, if individual lives in household with more than 3 rooms per person (not counting kitchen, bathroom and toilets), 0 otherwise
< 2 good features	1, if accommodation individual lives in has less than two good features, 0 otherwise
3 good features	1, if accommodation individual lives in has 3 good features, 0 otherwise
4 good features	1, if accommodation individual lives in has 4 good features, 0 otherwise
5 good features	1, if accommodation individual lives in has 5 good features, 0 otherwise
6 good features	1, if accommodation individual lives in has 6 good features, 0 otherwise (omitted)
<i>Job and Personal Characteristics</i>	
Lowpay	1, if individual is low-paid, 0 otherwise
Ln _{pay}	natural log of gross hourly wage of main job (including overtime)
Age	age of respondent at date of interview
Agesq	age squared
Tenure	job tenure at date of interview
Married	1, if individual is married, 0 otherwise
Male	1, if gender is male, 0 otherwise
Hours	Total number of hours worked per week (in main plus additional jobs, including paid overtime)
Child < 12yrs	1, if household has 1 or more children under 12, 0 otherwise
Unemployed 5yrs	1, if individual has been unemployed during 5 years before joining the survey, 0 otherwise
Full-time	1, if main job is full-time, 0 otherwise
Private	1, if current job is in the private sector, 0 otherwise
Absenteeism	Days absent from work cause of illness or other reason during last 4 working weeks, not counting holiday weeks
<i>Human Capital</i>	
Training	1, if individual had formal training or education that gave skills needed for present type of work, 0 otherwise
Overqualified	1, if individual feels has skills or qualifications to do more demanding job than the one has now, 0 otherwise
Below second stage secondary	1, if highest level of general or higher education completed is less than second stage of secondary education, 0 otherwise (omitted)
Second stage secondary	1, if highest level of general or higher education completed is second stage of secondary education, 0 otherwise
Third level	1, if highest level of general or higher education completed recognised third level education, 0 otherwise
<i>Duties</i>	
Supervisory	1, if job status in current job is supervisory (omitted), 0 otherwise
Intermediate	1, if job status in current job is intermediate, 0 otherwise

Non-supervisory	1, if job status in current job is non-supervisory, 0 otherwise
Contract	
Permanent	1, if employment contract in main job is permanent, 0 otherwise (omitted)
Fixed/short term	1, if employment contract in main job is fixed term or short-term, 0 otherwise
Casual work	1, if employment contract in main job is casual work with no contract, 0 otherwise
Health	
Health: very good	1, if health in general is very good, 0 otherwise (omitted)
Health: good	1, if health in general is good, 0 otherwise
Health: fair	1, if health in general is fair, 0 otherwise
Health: poor	1, if health in general is poor, 0 otherwise
Health: very poor	1, if health in general is very poor, 0 otherwise
Status last year	
Employed	1, if most frequent activity last year was employment, 0 otherwise (omitted)
Self-employed	1, if most frequent activity last year was self-employment, 0 otherwise
Unemployed	1, if most frequent activity last year was unemployment, 0 otherwise
Inactivity	1, if most frequent activity last year was inactivity, 0 otherwise
Region	
Attica	1, if region in which the household is situated is Attica, 0 otherwise (omitted)
Northern GR	1, if region in which the household is situated is Northern Greece, 0 otherwise
Central GR	1, if region in which the household is situated is Central Greece, 0 otherwise
Aegean Islands, Crete	1, if region in which the household is situated are the Aegean Islands or Crete, 0 otherwise
<hr/>	
Other controls	
Industry	a set of 10 dummies for one-digit industry, taking the value 1 if the respondent's job belongs to the corresponding industry classification, 0 otherwise. The one-digit industries include: Agriculture; Mining and Manufacturing; Construction; Retail and Trade; Hotels and Restaurants; Transport and Communication; Financial Services; Public Administration; Education; Health, social services and other (omitted: Agriculture)
Occupation	a set of nine dummies for one-digit occupation, taking the value 1 if the respondent's job belongs to the corresponding occupational classification, 0 otherwise. The one-digit occupations include: Legislators, Senior officials and managers; Professionals; Technicians and associate professionals; Clerks; Service and Shop and market sales workers; Skilled agricultural and fishery workers; Craft and related trades workers; Plant and machine operators and assemblers; Elementary occupations (omitted: Elementary occupations)
Year	a set of seven dummies taking the value 1 for observations that belong to the corresponding wave of the ECHP, 0 otherwise. Years of sample include: 1995, 1996, 1997, 1998, 1999, 2001 and 2001 (omitted category: 1995)
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BoG lowpay paper