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**JEL Codes: J28, J3, J81**

**Keywords: Job quality, job satisfaction, ISSP.**



# Twenty Years of Job Quality in OECD Countries: More Good News?\*

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## Abstract

The distribution of job quality across workers and the change in job quality over time can be reflected in various measures of job outcomes, or single-item job-satisfaction scores. This paper takes both approaches to establish the evolution of job quality over a period from the mid-1990s to the mid-2010s in 13 OECD countries, using data from the three latest ISSP Work Orientation modules. The rise in job satisfaction from 1997 to 2005 has continued through 2015, despite the 2008 Great Recession. This improvement is also found in most of the job-outcome domains, despite some evidence of harder and more stressful work. Workers reported that job security was the most-important job aspect every year, and the percentage of workers with secure jobs rose over time. There has been a small rise in the dispersion of job satisfaction, but the good news regarding better job quality over a 20-year period does not seem to be dampened by large changes in its inequality.

**Keywords:** Job quality, job satisfaction, ISSP.

**JEL Classification Codes:** J28, J3, J81.

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## 1. Introduction

There is ongoing interest in job quality in many countries. In order to understand the distribution of this job quality across workers, and how this quality has changed over time, we need to measure it. There are broadly two approaches to this measurement, both of which respect that there are many aspects of a job that workers will find important. The first is to consider a number of different job characteristics, often combined into an index, that can be thought to reflect the effort and reward components of jobs. This is the approach taken in Boar and Lashkari (2022), for example, using US General Social Survey data to create a first principal component of seven non-wage job aspects,<sup>1</sup> by Cazes *et al.* (2015), who consider earnings quality, labour-market security and the quality of the working environment, and by Hovhannisyán *et al.* (2022), who combine income, benefits, stability and working conditions to produce a job-quality index for developing countries. A useful overview of the different elements of job quality that are considered to be central by different institutions (the ILO, the UNECE, Eurofound and the OECD) in this respect appears in Table 5.1 of OECD (2013).

The second approach is to on the contrary appeal to a single-item measure, often overall job satisfaction, that captures the worker's perception of their job, which is argued to partly reflect a variety of different job outcomes. This second approach has the advantage of recognising that individuals may put different weights on the various aspects of their jobs that they think are important (as in Locke, 1976), and avoids the need to directly measure both all of these aspects and the weights that are put on them at the individual level (as underlined by Green, 2006).

We will below consider both job outcomes and job satisfaction. Job satisfaction is first of interest as a significant part of individual overall well-being, and thus societal well-being.

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<sup>1</sup> These are respect at the workplace, heavy lifting, hand movement, continuous learning, the opportunity to develop new abilities, the variety of tasks, and the need to work fast.

There is also a substantial literature underlining the central role of well-being scores in predicting future outcomes. In the labour market measures of worker well-being have been shown to predict both quitting (for example, Böckerman and Ilmakunnas, 2009, and Clark, 2001) and productivity (Bellet *et al.*, 2024, and Oswald *et al.*, 2015). Kaiser and Oswald (2022) underline the role of subjective well-being in predicting a variety of individual outcomes.

Job outcomes are one of the components of overall job satisfaction, with their weight depending on the worker's preferences over the different domains. Reported job satisfaction will then reflect job outcomes and worker preferences, but may well in addition depend on other psychological factors such as the worker's expectations and comparisons to others, their coping strategies, and other unobserved individual characteristics. A very useful discussion along these lines appears in Brown *et al.* (2012).

Our main aim in the current analysis is to establish how both job satisfaction and various job outcomes changed over time from the mid-1990s to the mid-2010s in OECD countries. There is a very-large literature on the cross-section distribution of job quality across types of individuals and jobs at a point in time, which we will not attempt to survey. However, there is in general less work on the topic of our analysis here, the evolution of job quality over time.

There has first been a substantial amount of work focusing on trends in specific aspects of jobs over time. One such aspect is job insecurity. Manning and Mazeine (2014) find little evidence of rising insecurity in data from the Germany, the UK and the US, and there is no trend in job insecurity in Canada over a thirty-year period (1977-2006) in Brochu and Zhou (2009). Last, the analysis of long-run panel data from Australia and Germany in Clark (2024) reveals that job insecurity has been falling since 2012 in the former and since 2005 in the latter.

Howell and Kalleberg (2019) mostly concentrate on wages and benefits in the US labour market, underlining worsening real wages and non-wage benefits, together with rising wage inequality. Dur and van Lent (2019) consider how one aspect of job quality (or rather its

absence), the perceived societal uselessness of jobs, has changed over time. Using survey data from the four ISSP Work Orientations waves (1989-2015), they found that approximately 8% of workers perceive their jobs as useless and 17% have doubts about the usefulness of their work. There was, however, no clear time trend in these figures.

Turning to multiple measures of job quality, research using data from the 1990s painted a rather bleak picture. Green (2006) underlines that jobs requiring hard work, high speed, and tension became more frequent over the 1990s in Great Britain, with similar trends being found in Europe (see also Askenazy, 2004). Handel (2005) analyses 1989-1998 US data and underlines a decline in job security, interesting work, and some increase in exhaustion after work; on the contrary there was an improvement in relations between workers and employers and among co-workers.

More-recent data has produced more-nuanced results regarding job-quality trends into the 2000s. Syk (2022) analyses Swedish data from 1968-2010, and concludes that an overall index of job quality rose for both men and women over this 42-year period. Olsen *et al.* (2010) analysed changes in five job-quality aspects in two coordinated market economies (Germany and Norway) and two liberal market economies (the UK and the US) using data from the 1989, 1997 and 2005 ISSP Work Orientations modules. Job insecurity and work intensity rose in all four countries in at least one of the time periods, which the authors attribute to downsizing, outsourcing and other forms of organisational restructuring. Job security and work intensity converged between countries, which Olsen *et al.* (2010) argue reflects globalisation pressures that have forced organisations to respond in similar ways and produced similar negative job-quality outcomes. There were no clear trends in different intrinsic job facets, and job satisfaction was overall stable.

Clark (2010) considers most of the indicators of job quality that we will analyse below, using the same ISSP waves from 1989, 1997 and 2005 as in Olsen *et al.* (2010), but with

information on all of the available OECD-member countries. While many of these indicators deteriorated between the first and second ISSP waves, there was something of a recovery in job quality by 2005: in particular, there were positive movements in OECD countries between 1997 and 2005 for the measures of considering one's income as high, promotion opportunities, and relations at work.

A considerable amount of work on job quality has been carried out using European Working Conditions Survey (EWCS) data. Greenan *et al.* (2014) consider 1995-2005 EWCS data for EU15 countries and find a rise in indices of physical strain and work intensity, and a fall in complexity. Green *et al.* (2013) extend the EWCS analysis to 2010, and consider four complex non-wage job-quality indices of work quality or skill use, work intensity, good physical environment, and working-time quality. They find little movement over time in most of these, but a steady rise in the working-time quality index, consistent with optimistic theories of the changing nature of work in response to increasing worker demands for work-life balance. The improvement in working-time quality also appears in Eurofound (2012), which notes in addition that the 1995-2005 rise in work intensity noted in Greenan *et al.* (2014) reversed in 2005-2010 (accounting for Green *et al.*'s conclusion of no change in intensity between 1995 and 2010).

Changes from the mid- to the late 2000s were also assessed by Leschke and Watt (2014), who use EWCS and Labour Force Survey (LFS) data to construct a synthetic job-quality indicator for all EU-27 countries. They found a small overall decline in job quality between 2005 and 2010, which was slightly more pronounced among women (see also Erhel *et al.*, 2022). This decline was primarily driven by worsening job quality in terms of wages and involuntary non-standard employment, with smaller declines in skills and career development and collective-interest representation. On the contrary, working conditions, working time and work-life balance improved markedly over the same period. While there was no obvious pattern

of either convergence or divergence among countries, the greatest job-quality improvement took place in Poland, Belgium and Denmark and the greatest deterioration in Ireland and France. The most-recent comparable EWCS data comes from 2015.<sup>2</sup> Using this data, both Rigo *et al.* (2021) and Eurofound (2021) underline a rise in work intensity, although this seems to be more prevalent at the beginning rather than the end of the 1995-2015 period.<sup>3</sup>

Mirroring the work above that found worsening job quality over the 1990s, workers' evaluations of overall job satisfaction were often found to have trended downwards over this period (see Green, 2006, for the US, Germany and the UK). In Clark (2005*b*), using the seven OECD countries that were observed in both the 1989 and 1997 ISSP waves, job-satisfaction regressions with demographic control variables indicated no change over time. When controlling for income and hours of work, job satisfaction was estimated to be lower in 1997 than in 1989 (so that the joint contribution of changes in income and hours over time was to increase job satisfaction in these countries).

However, data from beyond the Millennium have suggested a possible break in this negative trend. In UK BHPS data, job satisfaction fell from 1992 up to 1999, but then exhibited something of a recovery up to 2007 (Clark, 2011). Clark (2010) extended the analysis in Clark (2005*b*) to include data from the third ISSP Work Orientations module from 2005. Only five OECD countries appear in all of 1989, 1997 and 2005 waves. For these countries, regression analysis suggests lower job satisfaction in 1997 than in 1989, but higher job satisfaction in 2005. Considering the larger sample of 15 countries that appeared in both the 1997 and 2005 waves, job satisfaction was again estimated to have risen over the period. There is then no

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<sup>2</sup> There was a 2021 telephone wave, but the EWCS website notes that the data from this wave is not comparable to that in previous waves.

<sup>3</sup> Davies and Felstead (2023) provide a recent snapshot of pre- to post-pandemic changes in job quality from 2018 to 2022 in the UK, finding an improvement in non-pecuniary job quality that they assign in part to working from home.



evidence in these countries of a secular fall in job satisfaction over time, with if anything jobs being better-rated in 2005 than in previous ISSP waves.<sup>4</sup>

Our aim in this paper is to contribute to the literatures on both job outcomes and job satisfaction, and in particular that using prior ISSP waves, by adding information from the fourth ISSP Work Orientations module from 2015. We consider a balanced sample of 13 OECD countries (both EU and non-EU) over the 1997-2015 period, with information on both a number of measures of job quality and overall job satisfaction for the same individuals. We first set out the trends in job quality over this (almost) 20-year period, and then that in job satisfaction. We present both the trends in the raw data, as well as those that are estimated in regression analyses that hold a number of worker characteristics constant. These regressions allow us to separate the movements in job outcomes/satisfaction that are due to changing workforce composition (with respect to age, sex, education and so on) from those that are due to changes in the type of job. One of our main questions is to ask whether the rise in job satisfaction that was identified between 1997 and 2005 in previous work continued over the following 10 years, or whether on the contrary it was obliterated by the Great Recession (with its potential effects on job security, earnings, work intensity etc.) or by recent changes in the effort required of workers due to technological change. Our evidence suggests that it is the former, so that the previous good news regarding job quality continues to hold in more-recent years.

The remainder of the paper is organised as follows. Section 2 presents the data and the measures of both job values (what workers want), job quality (what they receive), and their overall evaluations of their jobs in terms of job satisfaction. Section 3 then presents the empirical analysis that will reveal how both job satisfaction and various measures of different job aspects have changed over an 18-year period. Last, Section 4 concludes.

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<sup>4</sup> When controlling for income and hours of work in both of these regressions, job satisfaction in 2005 is estimated to be identical in 1997 and 2005. As such, much of the rise in job satisfaction between these two years reflects higher income and lower hours of work.

## 2. Data on Job Outcomes, Job Values and Job Satisfaction

We here aim to investigate the changes in job quality and job satisfaction over an 18-year period, using standardised repeated cross-section data from three most-recent “Work Orientations” waves of the ISSP in 1997, 2005 and 2015 (see ISSP Research Group, 1999, 2013 and 2017). We concentrate on the 13 OECD countries that appear in all three of these waves: West Germany, Great Britain, USA, Hungary, Norway, Sweden, the Czech Republic, New Zealand, Japan, Spain, France, Denmark and Switzerland. Eight of these countries were European Union members in 2015, and five (Japan, New Zealand, Norway, Switzerland and the USA) were not. The initial 1989 Work Orientations wave included only seven OECD countries (see Clark, 2005*a*, 2005*b* and 2010) and is not analysed here, in order to produce a wider country coverage (only five countries appear in all four of the ISSP Work Orientations waves).<sup>5</sup> These ISSP surveys contain a considerable amount of both objective and subjective cross-country information about job quality.<sup>6</sup> Table 1 shows the number of employees<sup>7</sup> interviewed in these OECD countries in each of the three Work Orientations waves that will be analysed here.<sup>8</sup>

The ISSP Work Orientations modules contain information on all of job outcomes (the characteristics of the job that workers currently occupy), job values (what they think is

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<sup>5</sup> Our key result in Table 5 below is that job satisfaction was higher in 2005 and (especially) 2015 than in 1997 in the 13 OECD countries that we analyse. This pattern continues to be found when we add 1989 data (and thus reduce the balanced sample from 13 to 5 countries), and also reveals the fall in job satisfaction between 1989 and 1997 underlined in Clark (2010).

<sup>6</sup> The ISSP is a very-useful resource, but does contain less-detailed information than the European Working Conditions Survey (for example, on risks at work, working-time arrangements, and skills and training). On the contrary, the EWCS does not include a question on overall job satisfaction.

<sup>7</sup> We will here concentrate on the job quality of employees, as the self-employed are a distinct group with respect to some of the aspects of work that we analyse.

<sup>8</sup> The ISSP samples were mostly stratified, and designed to be representative of adults (aged 18 or over) living in non-institutional accommodation. The mode of administration was most often face-to-face. There are a number of differences between countries in this respect. Details regarding the questionnaire, sampling, and data collection are available in the Study Monitoring Report for each ISSP wave. That for 2015, for example, is available at the following address: <https://access.gesis.org/dbk/62780>. The ISSP is a very-useful resource, but does contain less-detailed information than the European Working Conditions Survey (for example, on risks at work, working-time arrangements, and skills and training).

important) and job satisfaction. We will analyse all three of these, taking the position that the job outcomes are one important constituent of job satisfaction, with the reported job values revealing how much these different aspects of job quality matter. Any change in job values over time will then affect the worker's overall evaluation of their job, even if their job outcomes remain unchanged.

There are eight different job-values questions, all answered on a five-point qualitative scale from “*Not at all important*” to “*Very important*”. The job-values domains are High income, Flexible working hours, Good opportunities for advancement, Job security, Interesting job, Allows to work independently, Allows to help other people, and Useful to society. The answers to these job-values questions will reveal a much-broader picture of the aspects of the job that matter to workers than the many analyses that have concentrated on income, hours and perhaps some indication of job security.

Table 2 lists, separately for men and women, the (weighted) percentage of employees across the 13 OECD countries in Table 1 who describe each job characteristic as “Very important.” Columns 1, 3 and 5 of this table present these figures for the 1997, 2005 and 2015 waves respectively. The asterisks in columns 2 and 4 reveal whether there was a significant change in job values from 1997 to 2005, and from 2005 and 2015. The top panel of Table 2 refers to women and the bottom panel to men.

The job aspects that workers overall report to be the most important are job security and job interest, followed (at a distance) by autonomy: this ranking holds for both sexes and in all years. In terms of changes over time, the rising importance of income between 1997 and 2005 was notably reversed in 2015 for both men and women, while promotion opportunities gradually increased in importance. Also on the rise are the importance of jobs that help other people and are socially useful. These figures for women in 2015 are now practically at the same level as those for the importance of work autonomy, whereas there was a notable gap in this

respect for both in earlier years. For men, the gap between the importance of autonomy and usefulness of 16% points in 1997 had almost halved by 2015. Job security is the most important job aspect in every year, with figures that are stable for men and have risen slightly for women.

In terms of gender differences, it is striking how similar men's and women's reported job values are in 2015. Somewhat more women than men cite job security and helpful and useful jobs as very important, but the differences overall are only small. The correlation coefficient between the job-values figures in 2015 for men and women is 0.97, with a Spearman correlation coefficient of 0.90.

Overall, Table 2 then underlines that there are only minor differences between men and women in terms of what is valued in a job, and that there is broad stability in these values over time (but with something of a rise in the importance of the social aspects of the job). Last, income and hours (although this latter only refers to flexible working) are declared by workers in OECD countries as being among the least-important aspects of work.<sup>9</sup> Turunen (2011) uses three waves of World Values Survey data to track changes in work values in five European countries over the 1990s. From 1995 to 2000, the value put on intrinsic aspects of the job (such as autonomy and interest) rose, as did that on financial aspects (income and job security). From 1997 to 2005, the ISSP data in Table 2 also reveal that the importance of income and intrinsic aspects of the job rose, while that of job security was stable.<sup>10</sup>

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<sup>9</sup> We can use regression analysis to split these values into wave and cohort effects. Some values (income, promotion opportunities, and job interest) are declared to be more important for more-recent birth cohorts. Others exhibit non-monotonic relationships, with for example the jobs that are useful to society being the least important for those born in the 1960s or 1970s.

<sup>10</sup> Some existing work has considered changes in job values in single countries. In Gallie *et al.* (2012), the importance assigned to intrinsic job quality (use of ability, variety etc.), work-life balance and the social aspects of work by UK employees rose from 1992 to 2006, while there was no change in that of extrinsic job characteristics (pay, promotion, job security etc.). Kalleberg and Marsden (2019) analyse 1989-2016 US General Social Survey data, in which workers identified the relative importance of five job characteristics (picking the most important, the second-most important and so on). The relative importance of income and job security rose over this period, as compared to accomplishment, promotion and shorter hours (although the nature of the question does not allow conclusions to be drawn about trends in the absolute importance of these characteristics). Amankwah and Boxall (2022) use the same data as we do here to analyse job values, focussing on New Zealand. Cotofan *et al.* (2023) show that the job preferences of different cohorts are determined by macroeconomic conditions when growing up, with those exposed to recession putting greater weight on job earnings when adults.

We now turn to the changes in job outcomes between 1997 and 2015 in our 13 OECD countries. The questions in the ISSP Work Orientations module allow us to identify six broad classes of job outcomes:<sup>11</sup>

- \* Pay;
- \* Hours of work;
- \* Future prospects (promotion and job security);
- \* How hard or stressful the job is;
- \* Job content: interest, independence, and having a useful and helpful job; and
- \* Interpersonal relationships.

These job outcomes are mostly self-reported by workers, although we do have objective information on monthly gross earnings and weekly hours of work. Appendix A1 sets out the details of how the different indices of job outcomes are constructed. There are two indicators each for hours of work, future prospects, and “hard and stressful” work,<sup>12</sup> for a total of nine job-outcome indicators.

We also have a summary measure of the worker’s appreciation of their job from the overall job satisfaction question: “*How satisfied are you in your (main) job?*”, answered on a scale of one to seven, where one means completely dissatisfied and seven completely satisfied. The Figure in Appendix A2 plots the distribution of job satisfaction over our three ISSP waves; the numbers behind this Figure appear in the table below the figure. In all waves, only very few people give answers of one or two, and around 70% respond 5 or 6 (with around one in eight workers in OECD countries saying that they are completely satisfied at work). There is not a

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<sup>11</sup> These cover four out of the five work features that Green (2006) analyses. The exception is skill (to the extent that this is not reflected in pay).

<sup>12</sup> Stressful work probably reflects the balance between job demands and resources, rather than only being a measure of work intensity.

huge amount of variation in these replies between 1997 and 2015. The median job satisfaction score is always five, which is also the mode. The last line of Appendix Table A2 shows a slight rising trend in average job satisfaction over time: 5.25 (SD = 1.11), 5.27 (SD = 1.15) and 5.29 (SD = 1.18) in 1997, 2005 and 2015 respectively.<sup>13</sup>

The changes over time in the nine ISSP job-outcome indicators above, together with objective information on the logs of earnings and hours of work (which will appear as controls in some of the regressions below), are listed in Table 3. The different domains here are of course not exhaustive, but do reflect a number of job characteristics that very often appear in traditional discussions of job quality (income and hours of work), as well as others upon which information is typically much scarcer. Table 3 also includes, in the last row of each panel of the table, the summary job satisfaction score reflecting all of the characteristics (whether explicitly-measured or not) of the job that the individual occupies: this is presented as the percentage of employees with “high” job satisfaction (a score of 6 or 7 on the 1-7 scale). The numbers in Table 3 are weighted, and are presented in the same format as those for job values in Table 2.

There is a notable movement over time towards reporting that the job’s income is high in Table 3, although the overall incidence of this variable remains fairly low (at one in four women and one in three men in 2015).<sup>14</sup> Equally striking is the trend in desired hours of work: an increasing number of people want to spend more time at work, and fewer people prefer shorter working hours.<sup>15</sup> These two findings are consistent with an upward-sloping labour supply curve, where higher wages induce longer desired hours of work (but also of course with other explanations). Good promotion opportunities and job security are equally on the rise for

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<sup>13</sup> The rise from 1997 to 2005 is not significant, and neither is that from 2005 to 2015. However, the overall rise from 1997 to 2015 (5.25 to 5.29) is significant at around the one per cent level.

<sup>14</sup> OECD data on real earnings for full-time workers (<https://data-explorer.oecd.org/>) reveals that real wages grew in every country of the 13 we analyse here over the 2000-2005 period (the data only start in 2000) except for Spain (minus 4%). Over the longer 2005-2015 period real wages grew in every country except for Japan and Hungary (with falls of 4.5% and 5.5% respectively).

<sup>15</sup> It is important to note, however, that the question on hours preferences explicitly underlines the relationship between hours worked and earnings: longer hours are stated to produce higher earnings, and fewer hours lower earnings (see Appendix A1).

both women and men, although the actual incidence of the former is only around the one-quarter mark. There is thus no evidence in this raw data of greater worries about job security in OECD countries. The incidence of job security is also striking, being reported by over two-thirds of both men and women in the most-recent ISSP wave. Last, there is a mild upward trend in good job content. Counterbalancing this good news for OECD workers, the incidence of stressful work and hard work has increased significantly for men (the figures for women at the top of Table 3 have also risen, but not significantly so).<sup>16</sup> Last, employee reports of good relations at work have remained broadly stable over the period under consideration.

On the face of it then, the job-outcome figures in Table 3 mostly seem to suggest an improvement in job quality between 1997 and 2015, despite the occurrence of the Great Recession in 2008.<sup>17</sup> This impression is confirmed in the job-satisfaction scores in the last row of Table 3. The percentage of workers with high job satisfaction has risen over time: from 42% to 44% for women, and from 40% to 46% for men. Both of these changes are statistically significant at the one percent level.

### **3. Job-Satisfaction and Job-Outcome Regressions**

Table 3 presented the mean job-satisfaction and job-outcome figures in the raw data for each of our three analysis years. These changes over time in various aspects of job quality can either reflect the changing nature of a given type of job or, on the contrary, composition effects

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<sup>16</sup> Kaplan and Schulhofer-Wohl (2018) combine data on a number of measures of individual subjective well-being from the American Time Use Survey with the change in occupational structure. Two of their findings are of a rise in stress (for men) but also a shift towards greater meaning at work (for women).

<sup>17</sup> There is of course selection at work in these numbers. Job values, outcomes and satisfaction are only reported by those who have jobs. The Great Recession may have wiped out a substantial number of poor-quality jobs, so that the 2015 numbers reflect greater selection than those from earlier time periods. However, the employment rates for those aged 15 and older in these 13 OECD countries were 55.8, 56.8 and 56.4 percent in 1997, 2005 and 2015 respectively, suggesting that selection may not be a major issue. The employment data for all countries come from the World Development Indicators database: World Bank (2021), “Employment to population ratio, 15+, total (%) (modeled ILO estimate)”, World Development Indicators (database), <https://data.worldbank.org/indicator/SL.EMP.TOTL.SP.ZS> (accessed on December 16<sup>th</sup> 2021).

from changes in the prevalence of different types of jobs (with the growth of Service-sector jobs) or types of worker (for example, due to the general rise in education: see OECD, 2020) over time. To have a better idea of the changes in job quality for a given type of worker, which is arguably what many people have in mind when considering improving or deteriorating job quality, we carry out regression analyses that control for individual demographic characteristics, as well as country and year dummies. The estimated coefficients on the year dummies in these regressions will then tell us how job quality has evolved over time, holding the structure of the work force constant in terms of sex, age, and education. Since job satisfaction and other job-quality outcomes are ordered categorical variables, all of the regressions are estimated using ordered probit techniques.

Table 4 shows the results for overall job satisfaction. The male dummy attracts a negative estimated coefficient, which is however not significant. Older workers, the married and the educated are more satisfied. The estimated coefficients on the country dummies show that, *ceteris paribus*, workers in Hungary, Japan, and France are relatively miserable; the most satisfied workers are in Switzerland (the omitted category), Denmark, Spain and the United States. In the context of evaluating changes over time, the most important coefficients in Table 4 are those on the 2005 and 2015 dummy variables: these reveal whether the “average” employee was more satisfied in their job in 2005 and 2015 than in 1997. Job satisfaction rose from 1997 to 2005 (as noted in Table 14.5 of Clark, 2010, for the group of 15 countries that appeared in both the 1997 and 2005 ISSP waves), and this rise subsequently continued through to 2015.

The comparison of the first two Work Orientations modules (1989 and 1997) of the ISSP (Clark, 2005*b*) revealed falling job satisfaction in OECD countries across the 1990s, which was suggested to partly reflect an increase in hard work. In Green (2006), greater work intensity and less worker discretion were proposed as explanations of the flat, if not declining,



job satisfaction figures in a number of countries over the same period. However, the addition of the third Work Orientations wave of the ISSP in Clark (2010) produced some evidence of a turning point in this decline, with job satisfaction recovering in 2005; the analysis in Table 4 shows that this improvement has continued through to 2015.

Table 5 carries out the same kind of analysis as in Table 4, but with the dependent variable now being in turn the nine job-outcome measures from Table 3 (described in Appendix A1). Each row refers to a separate regression. Instead of showing all of the estimated coefficients from these nine regressions, the tables list only those on the “2005” and “2015” wave dummies for each dependent variable. The first row of Table 5 reproduces the estimated wave coefficient on job satisfaction from Table 4, for comparison purposes, showing the rise in job satisfaction between 1997 and 2015. The following rows summarise the analogous changes in the other job-outcome measures over the different ISSP waves.

The estimated coefficients in Table 5 reveal significant changes in job quality between 1997 and 2015 in all domains apart from good relations at work. In general, these changes look to be larger between 2005 and 2015 than between 1997 and 2005: changes in job quality then appear to have been speeding up, despite the presence of the Great Recession in the latter period. These job-quality movements in Table 5 are mostly beneficial for workers, although hard work and stressful work are both higher in 2015 than in 1997 or 2005, in line with work intensification (as noted for the UK by Green *et al.*, 2022, in 2001-2017 data from the British Skills and Employment Survey). The hours-preference variables indicate a secular shift towards preferring more hours of work between 1997 and 2015.

Table 6 presents separate job-satisfaction results by country. It should be borne in mind that the sample sizes by country are often only quite small here. The symbols in column 1 indicate whether job quality rose in that country between 1997 and 2005 (*i.e.* between the second and third ISSP Work Orientations waves) and those in column 2 whether it rose between

1997 and 2015 (between the second and fourth waves). The overall 1997-2015 rise in job satisfaction revealed in Table 4 appears in six of the 13 countries: West Germany, Great Britain, Hungary, Norway, the Czech Republic and Switzerland. Job satisfaction is estimated to have fallen significantly over this period in only two countries (Japan and Denmark).<sup>18</sup>

We have so far considered both overall job satisfaction and the individual job-quality characteristics as dependent variables. We now explicitly consider the relationship between the two, running job-satisfaction regressions with the job-outcome measures, as well as objective earnings and hours, now included among the explanatory variables.<sup>19</sup> For this analysis, we unpack the “good job content” variable into its four individual components: an interesting job, independence, a helpful job, and a useful job. All of these 12 job-outcome variables are entered as dummies (as in Table 3), so that the estimated coefficients allow us to establish a ranking of the domains of work.

The results from this exercise appear in the first column of Table 7. Job satisfaction rises with earnings but falls with hours of work, as is commonly-found in the literature. The estimated coefficients on eleven of the twelve job-quality variables are significantly correlated with overall job satisfaction. The first two rows list the estimated coefficients on the year dummies, controlling for the job-quality measures. Both of these coefficients are small and insignificant, as compared to positive and significant in the first column of Table 4. As such, the job-quality measures included in Table 7 entirely explain the 1997-2015 rise in job satisfaction.

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<sup>18</sup> The country pattern here is not related to movements in Employment Protection Legislation or trade-union density over time. It is, however, notable that real GDP per capita growth over the 1997-2015 period was 26% in the group for which job quality fell, 41% in the two countries with no change, but 57% in the countries where job quality rose (Source: Penn World Tables version 10.01). We have however not explored these relationships in more detail. Some previous multi-level analyses have suggested that it is the composition of individuals in the labour force that explain lion's share of country differences in job satisfaction, leaving relatively little room for structural or institutional factors at the country-level (Pichler and Wallace, 2009).

<sup>19</sup> The number of observations in this analysis is a little smaller, as hours of work information is entirely missing in New Zealand. Excluding New Zealand from the analysis in Table 4 makes little difference to the results there.

The estimated coefficients in Table 7 provide a ranking of the different aspects of job quality, in terms of their relationship with overall job satisfaction. The two most-important aspects are good relations at work and having an interesting job, followed by stress at work, promotion opportunities, and preferring fewer hours of work.<sup>20</sup> The smallest correlations are with hard physical work and preferences for longer work hours.<sup>21</sup> The “good relations at work” dummy is composed first of relations between management and employees and second of those between workmates/colleagues. When introduced as separate dummy variables (coded as one for “Very Good” or “Quite Good”), both are significantly positively correlated with job satisfaction but with the estimated coefficient on relations with management being twice that on relations with colleagues. This underlines (as in Artz *et al.*, 2017) the key role that bosses play in worker well-being.

We can use the estimated coefficients in a job satisfaction regression in conjunction with the changes in job outcomes to decompose the 1997-2015 change in job satisfaction (a rise of 0.04, from Appendix A2). We use the OLS version of column 1 of Table 7 for this exercise. The predicted change in job satisfaction using the job outcome changes is 0.06. The movements in interesting and stressful jobs produced the largest falls in job satisfaction (but only of 0.01 or less), while job security, high income and promotion opportunities were associated with the highest rises (of 0.02 points each).

The second column of Table 7 returns to the idea that job values reflect the weight that individuals put on different job aspects when evaluating their overall job satisfaction. Merging the job-values information in Table 2 with the job-quality dummies in the first column of Table 7, there are seven domains for which we have information on both the job outcome and the value that the worker assigns to that outcome: income, promotion, job security, an interesting

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<sup>20</sup> The importance of good relations at work for job quality is emphasised in De Neve *et al.* (2019).

<sup>21</sup> Separate regressions for each ISSP wave show that this ranking of job domains is stable over time. These results are available on request.

job, working independently, a helpful job and a useful job. We therefore introduce interactions between considering an aspect as very important and reporting having the aspect in question (we also control for the main effects of the different job values). The estimated interaction terms appear towards the bottom of the table. Strikingly, six out the seven are positive, and five out of these six are significant: having good promotion opportunities (for example) has a stronger correlation with job satisfaction for those who say that good opportunities for advancement are a very important in a job. These interaction coefficients are both significant and fairly large in size. The correlation between promotion opportunities and job satisfaction is 42% larger for those who say that promotion is important; the analogous figures for job security, an interesting job and working independently are 56%, 62% and 99%, and that for a helpful job is over 200%.

We last ask whether there is any evidence of greater dispersion in job satisfaction over time. There has been only little work on this question. Green *et al.* (2013) analyse the Gini coefficient for their four separate indices of job quality, and conclude that there was overall only little change in dispersion over the 1995-2010 period. Antón *et al.* (2023) consider regional-level convergence in six different areas of non-pecuniary job quality using 1995-2015 EWCS data: they find convergence between the 207 regions for all of the six areas. We first consider inequality in overall job satisfaction. As this is measured on an ordinal scale, we do not calculate Gini coefficients but normed ordinal dispersion. The results in Appendix Table A3 indicate a small rise in the dispersion of job satisfaction when pooling data from all 13 countries between 1997 and 2015. This movement is however far from being concerted. Dispersion rose in four countries, fell in three, and was broadly unchanged in the other six.<sup>22</sup> As such, the broad increase in mean job quality underlined above does not seem to have been counterbalanced by large changes in its inequality. There are small rises of the same magnitude

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<sup>22</sup> There is no obvious relationship here between the country-level changes in inequality and either GDP growth or country groupings (EU vs. non-EU or the Varieties of Capitalism classification). At the institutional level, countries with rising inequality do have larger falls in the OECD Employment Protection Legislation index and Trade Union density.

for inequality for the separate job-outcome variables, apart from job content, for which there was no change, and a fall in inequality for job security.

#### **4. Conclusions**

We have analysed the changes in job quality in OECD countries over an 18-year period, where job quality is measured both via indices of a number of specific job characteristics and an overall job satisfaction score. There are four broad conclusions.

First, there are only minor differences between men and women in terms of what is valued in a job, and there has been broad stability in these values over time. The job aspects that both men and women consider as the most important in all years are job security and job interest, followed by autonomy; income and hours are among the least-important aspects of work.

Second, the analyses of all main job characteristics that appear in discussions on job quality and of overall job satisfaction seem to suggest an improvement in job quality between 1997 and 2015. The percentage of workers reporting their income as high rose, as did the percentage reporting good promotion opportunities, job security, and good job content. In addition, a rising percentage of employees want to spend more time at work. Counterbalancing this good news, both stressful work and hard work increased. Workers' overall evaluations of their jobs have also improved, with the percentage of workers with high job satisfaction rising over this 18-year period.

Third, these results continue to hold in regression analyses with a variety of control variables, so that the job-quality movements do not seem to reflect either the changing structure of the workforce in terms of sex, age, and education, or lower hours of work and higher earnings. The regression analysis also shows that the 1997-2015 rise in job satisfaction is entirely explained by the eight job-quality measures that we analyse. The estimated coefficients

in this regression underline the importance of good relations at work (especially with respect to management), as well as job content, stressful work, promotion opportunities and income.

Last, the benefits of higher average job satisfaction may be dampened by greater inequality in its distribution (especially if this implies the increasing prevalence of very poor-quality jobs). This does not seem to have been the general case across the 13 OECD countries that we analysed here, with there being only small movements in inequality over the period analysed.

There will always be causes for concern about the quantity and quality of jobs in the labour market, as a result of recessions, immigration and job automation for example. We find no evidence here of any systematic deterioration in job quality over a fairly long time period, but on the contrary a number of findings suggest improvements. Better job quality is good news for workers but arguably also for firms, given the well-known relationships between worker job satisfaction and their quitting and productivity.

## Appendix A1. ISSP Variable Definitions

### 1) *Pay*

Objective measure: Respondent's monthly gross earnings, converted to U.S. Dollars using Purchasing Power Parities for private consumption from the OECD ([http://stats.oecd.org/Index.aspx?datasetcode=SNA\\_TABLE4#](http://stats.oecd.org/Index.aspx?datasetcode=SNA_TABLE4#)). All figures are expressed in real 1997 values by deflating for OECD Consumer Price Index (CPI) inflation (<https://data.oecd.org/price/inflation-cpi.htm>). The following countries have their net earnings converted to gross:

- 1997— Germany, Hungary, Czech Republic, Spain
- 2005—Germany, Hungary, Czech Republic, Spain
- 2015—Germany, Hungary, Czech Republic, France

These conversions are carried out using the OECD tax database. As data in the database only starts from the year 2000, the 2000 tax rates were used to convert the 1997 ISSP data from net to gross as necessary ([http://stats.oecd.org/index.aspx?DataSetCode=TABLE\\_I6](http://stats.oecd.org/index.aspx?DataSetCode=TABLE_I6)).

Subjective measure: *Income is high* dummy variable: “My income is high” —strongly agree or agree.

### 2) *Hours of work*

Objective measure: Weekly hours of work.

Subjective measure: *Would like to spend less or more time in job*. “Think of the number of hours you work, and the money you earn in your main job, including any regular overtime. If you had only one of these three choices, which of the following would you prefer?”

– Prefer to spend less time in their job dummy variable: Work fewer hours and earn less money

– Prefer to spend more time in their job dummy variable: Work longer hours and earn more money

– Prefer to spend the same hours in their job dummy variable (reference category):  
Work the same number of hours and earn the same money

In the regression analysis, these variables appear as dummy variables, with the omitted category being preferring to spend the same hours in the job.

### ***3) Future prospects—promotion and job security***

*Opportunities for advancement are high* dummy variable: “My opportunities for advancement are high - strongly agree or agree.”

*Job secure* dummy variable: “My job is secure - strongly agree or agree.”

### ***4) How difficult is the job—hard physical work and stressful work***

*Hard Work*: “How often do you: have to do hard physical work?”

*Stressful Work*: “How often do you: find your work stressful?”

Both coded as:

1. Always
2. Often
3. Sometimes
4. Hardly ever
5. Never

Dummy variables were created for these two variables, with 1 representing Always, Often or Sometimes, and 0 Hardly ever or Never.



### **5) Job content: interest, prestige and independence**

*Good job content.* Based on answers to the following four questions.

- My job is interesting
- In my job I can help other people
- My job is useful to society
- I can work independently

All of these are coded as:

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

The Cronbach's alpha figure over these four elements is 0.69. Dichotomous variables were created, with 1 representing Strongly Agree or Agree. The sum of these four variables is a measure of good job content. A dummy variable was created for workers reporting positive job content on all four aspects.

### **6) *Interpersonal relationships***

*Good Relations at Work.* Based on answers to the following two questions:

- Relations at the respondent's workplace: Between management and employees
- Relations at the respondent's workplace: Between workmates / colleagues

Both of these are coded as:

1. Very good
2. Quite good

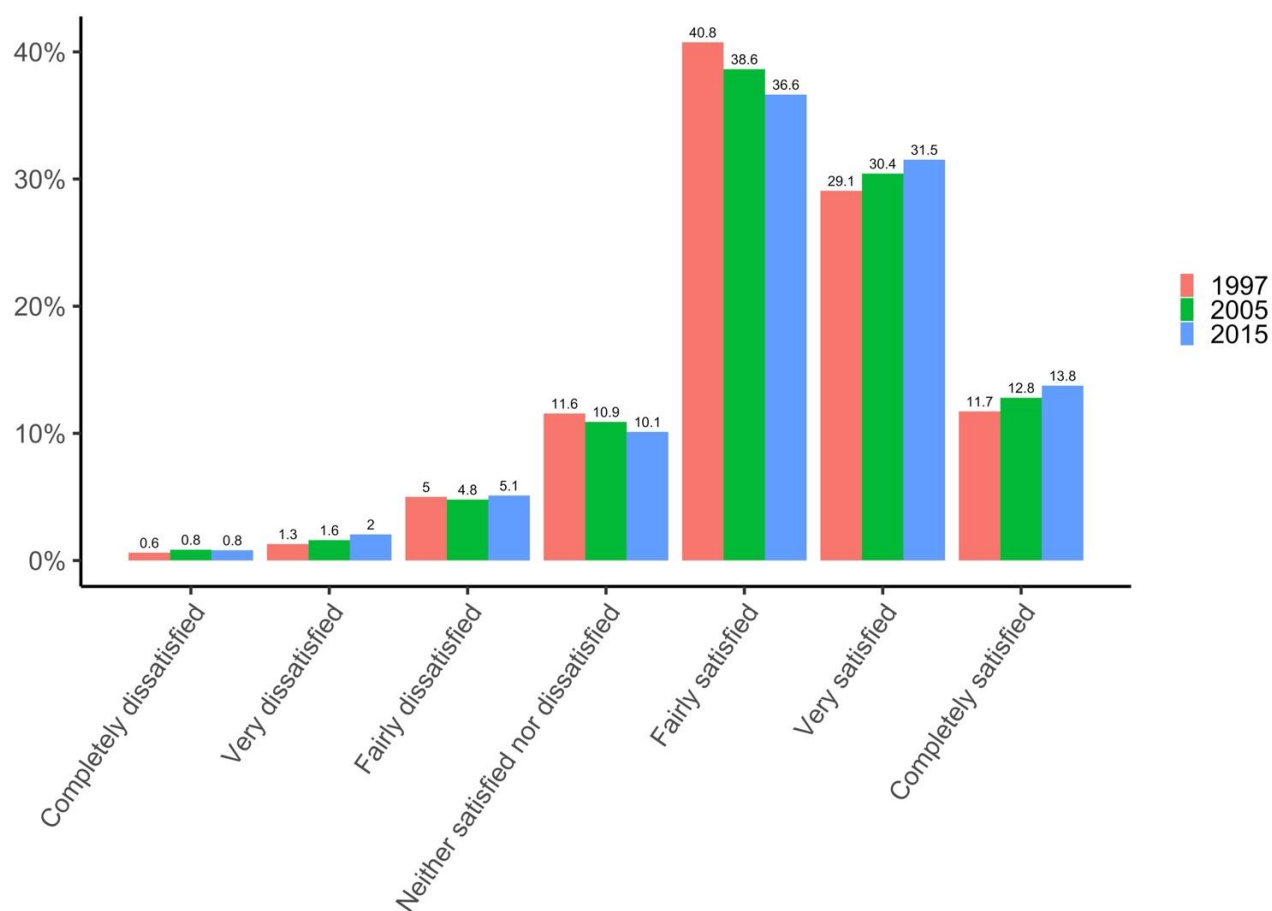
3. Neither good nor bad

4. Quite bad

5. Very bad

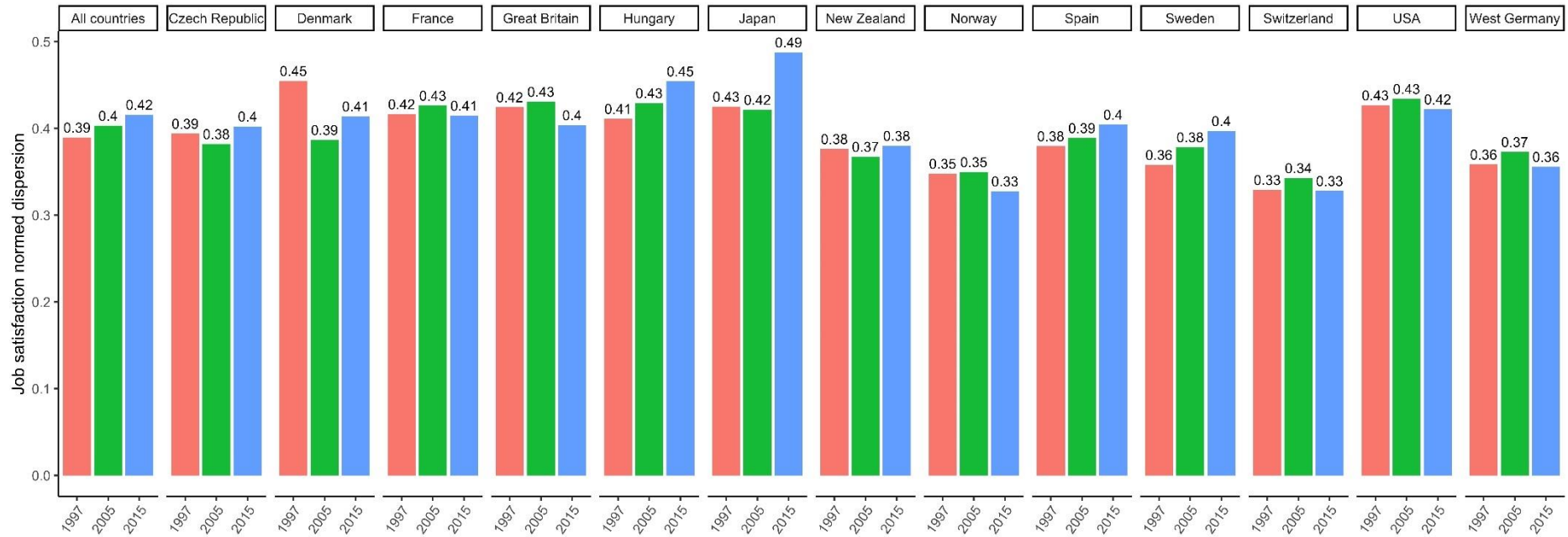
The Cronbach's alpha figure over these two elements is 0.66. A dummy variable was created for those reporting Very Good or Quite Good relations with both management and with colleagues.

## Appendix A2. The Distribution of Job Satisfaction in the ISSP in 1997, 2005 and 2015



Job Satisfaction	ISSP Wave		
	1997	2005	2015
1	0.6	0.9	0.8
2	1.3	1.6	2.1
3	5.0	4.8	5.1
4	11.6	10.9	10.1
5	40.8	38.6	36.6
6	29.1	30.4	31.5
7	11.7	12.8	13.8
Mean	5.25	5.27	5.29
SD	1.11	1.15	1.18

### Appendix A3. ISSP Job Satisfaction Inequality in 1997, 2005 and 2015



Notes: Inequality is measured by normed ordinal dispersion, as in Blair and Lacy (2000): 0 indicates the minimum and 1 the maximum dispersion.

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**Table 1. Number of employees interviewed in OECD countries:  
ISSP Module on Work Orientations. 1997, 2005 and 2015.**

	<b>1997</b>	<b>2005</b>	<b>2015</b>
West Germany	648	531	659
Great Britain	545	469	893
USA	800	961	842
Hungary	626	437	579
Norway	1,366	846	1,007
Sweden	793	866	688
Czech Republic	526	667	759
New Zealand	695	812	493
Japan	607	428	798
Spain	387	556	857
France	700	1084	658
Denmark	600	1092	645
Switzerland	1727	662	742
<b>Total</b>	<b>10020</b>	<b>9411</b>	<b>9620</b>

**Table 2. Job Values**

<b>ISSP 1997, 2005 and 2015</b>					
<b>Job Values: Percentage Saying 'Very Important'</b>					
<b>WOMEN</b>					
	<b>1997</b>		<b>2005</b>		<b>2015</b>
High Income	16.9	**	21.5	**	17.0
Flexible Working Hours	18.3	**	21.2		19.8
Good Opportunities for Advancement	15.9	**	18.9	**	21.4
Job Security	56.5		57.6	**	60.9
Interesting Job	51.6	*	54.5	**	51.0
Allows to Work Independently	31.9		32.4	**	29.5
Allows to Help Other People	25.0	**	29.4		29.4
Useful to Society	21.6	**	26.8	**	29.3

<b>MEN</b>					
	<b>1997</b>		<b>2005</b>		<b>2015</b>
High Income	19.0	**	24.8	**	18.8
Flexible Working Hours	14.7	**	19.2	**	15.9
Good Opportunities for Advancement	16.1	**	20.5		21.1
Job Security	53.6		52.2		54.2
Interesting Job	49.3		51.0	**	47.0
Allows to Work Independently	32.0	*	34.0	**	29.0
Allows to Help Other People	15.9	**	20.8		20.1
Useful to Society	17.2	**	21.3	*	23.2

*Notes:* Weighted Data; \*\* (\*) = significant difference between the two adjacent years at the one (five) per cent level.

**Table 3. Job Outcomes**

ISSP 1997, 2005 and 2015					
Job Outcomes: Percentage Reporting the Characteristic in Question					
WOMEN					
	1997		2005		2015
Income is high	15.7	**	19.2	**	23.0
Prefer to spend less time in their job	13.2	**	10.4	**	8.3
Prefer to spend more time in their job	18.4	**	21.5	**	24.8
Opportunities for advancement are high	16.5	**	20.4	**	23.5
Job is secure	63.8	**	67.1	**	70.8
Hard work	41.3		43.4		44.3
Stressful work	81.5		82.0		82.4
Good job content	43.8	**	46.7		48.4
Good relations at work	67.9	**	65.1		65.7
Earnings (log)	7.17		7.17	**	7.26
Work hours (log)	3.52		3.53		3.52
High job satisfaction	41.6		42.5		44.3
MEN					
	1997		2005		2015
Income is high	24.4	**	30.0	*	32.3
Prefer to spend less time in their job	11.2	**	9.2	*	7.8
Prefer to spend more time in their job	23.1	*	25.2	**	29.6
Opportunities for advancement are high	20.9	**	25.5	**	29.3
Job is secure	61.2	*	63.3	**	68.0
Hard work	49.3	*	51.8	**	54.8
Stressful work	81.7		80.5	*	82.6
Good job content	40.0		40.9		42.3
Good relations at work	65.7		65.5	*	68.1
Earnings (log)	7.66	**	7.58	**	7.63
Work hours (log)	3.78	**	3.75		3.74
High job satisfaction	40.3	**	43.8		45.7

Notes: Weighted Data; \*\* (\*) = significant difference between the two adjacent years at the one (five) per cent level; see Appendix A1 for the definition of the ISSP job-outcome variables. USA is missing data on stressful work in 1997 and hard physical work in 2015, and the US data are excluded entirely from the analyses of these outcomes.

**Table 4. Overall Job Satisfaction Regressions. ISSP 1997, 2005 and 2015.**

	<i>1997-2015</i>
2005	0.038* (0.016)
2015	0.086** (0.016)
Male	-0.012 (0.013)
30 to 44	0.025 (0.019)
45 to 65	0.105** (0.020)
Married	0.105** (0.014)
Years of Education	0.009** (0.002)
West Germany	-0.280** (0.032)
Great Britain	-0.361** (0.032)
USA	-0.189** (0.029)
Hungary	-0.573** (0.033)
Norway	-0.336** (0.027)
Sweden	-0.416** (0.030)
Czech Republic	-0.449** (0.031)
New Zealand	-0.386** (0.032)
Japan	-0.929** (0.032)
Spain	-0.205** (0.032)
France	-0.566** (0.030)
Denmark	-0.063*

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	(0.030)
Observations	27250
Log-Likelihood	-39723.5
Log-Likelihood at zero	-40410.8

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**Table 5. Estimated Changes over Time in Various Job Outcomes: Standard Specification.  
ISSP 1997-2015.**

	Estimated Coefficients on '2005' and '2015'	
	<i>1997-2015</i>	
	<i>2005</i>	<i>2015</i>
Job satisfaction	0.038* (0.016)	0.086** (0.016)
Income is High	0.059** (0.016)	0.147** (0.016)
Prefers to work fewer hours	-0.157** (0.026)	-0.283** (0.028)
Prefers to work more hours	0.058** (0.022)	0.193** (0.023)
Opportunities for advancement are high	0.089** (0.016)	0.209** (0.017)
Job is secure	0.037* (0.016)	0.173** (0.017)
Hard physical work	0.078** (0.016)	0.282** (0.017)
Stressful work	-0.026 (0.017)	0.049** (0.017)
Good job content	0.016 (0.017)	0.075** (0.017)
Good relations at work	0.007 (0.019)	0.023 (0.020)

*Notes:* These are ordered probit regressions; standard errors in parentheses; \* significant at 5%; \*\* significant at 1%. USA is missing data on stressful work in 1997 and hard physical work in 2015, and these cross-sections are excluded from the analysis. All regressions include country dummies and the same control variables as in Table 4.

**Table 6. Change in Overall Job Satisfaction by Country. ISSP 1997-2005-2015.**

<b>Country</b>	<b>1997-2005</b>	<b>1997-2015</b>
West Germany	+	+
Great Britain	+	+
USA	0	0
Hungary	+	+
Norway	0	+
Sweden	0	0
Czech Republic	0	+
New Zealand	0	0
Japan	0	-
Spain	-	0
France	-	0
Denmark	-	-
Switzerland	+	+

*Notes:* This table summarises the results from single-country estimation of the regression reported in Table 4; significant rises in job satisfaction are indicated by a '+' and falls in job satisfaction by a '-'.

**Table 7. Overall Job Satisfaction, Job Quality Components (as dummies), and job values (as dummies)**

(ISSP 1997, 2005 and 2015)

	<i>Job outcomes</i>	<i>Job outcomes × Job values</i>
2005	0.006 (0.021)	0.010 (0.021)
2015	0.006 (0.021)	0.001 (0.021)
Earnings (log)	0.038* (0.017)	0.039* (0.017)
Hours per week (log)	-0.076** (0.029)	-0.092** (0.029)
Income is high	0.264** (0.021)	0.270** (0.022)
Prefers to work fewer hours	-0.349** (0.026)	-0.350** (0.027)
Prefers to work longer hours	-0.059** (0.021)	-0.061** (0.021)
Opportunities for advancement are high	0.324** (0.021)	0.292** (0.024)
Job is secure	0.237** (0.018)	0.175** (0.025)
Hard physical work	-0.018 (0.017)	-0.026 (0.017)
Stressful work	-0.389** (0.022)	-0.396** (0.022)
Interesting job	0.905** (0.023)	0.717** (0.027)
Allows to work independently	0.225** (0.022)	0.182** (0.024)
Allows to help other people	0.104** (0.020)	0.065** (0.021)
Useful to society	0.130** (0.020)	0.097** (0.021)
Good relations at work	0.778** (0.019)	0.782** (0.019)
Values high income		-0.107** (0.027)
Values promotion opportunities		-0.101** (0.030)
Values job security		0.065* (0.029)
Values interesting job		-0.282**



		(0.036)
Values to work independently		-0.123**
		(0.048)
Values to help other people		-0.061
		(0.055)
Values to be useful to society		-0.000
		(0.056)
Income is high × Values high income		-0.008
		(0.049)
Opportunities for advancement are high × Values promotion opportunities		0.123**
		(0.047)
Job is secure × Values job security		0.100**
		(0.034)
Interesting job × Values interesting job		0.430**
		(0.040)
Allows to work independently × Values to work independently		0.183**
		(0.050)
Allows to help other people × Values to help other people		0.177**
		(0.058)
Useful to society × Values to be useful to society		0.092
		(0.058)
Observations	18,308	18,308
Log-Likelihood	-22667.8	-22484.0
Log-Likelihood at zero	-26810.8	-26810.8

*Notes:* These are ordered probit regressions; standard errors in parentheses. \* significant at 5%; \*\* significant at 1%. All of the job-quality domain variables are dummies (see Appendix A1), to facilitate the comparison of the effect sizes. The USA is missing data on stressful work in 1997 and hard physical work in 2015, and these cross-sections are excluded from the analysis. All of the job-values variables are dummies (1 = Saying 'Very Important'). The regressions include country dummies together with the same control variables as in Table 4.