Mark Smith, Brendan Burchell, Colette Fagan and Catherine O'Brien

ABSTRACT

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Promoting job quality and gender equality are objectives of the European Employment Strategy (EES) in spite of a downgrading of the attention given to both in the revised employment guidelines and the re-launch of the Lisbon Process. However, advances on both of these objectives may be important complements to the employment rate targets of the EES, as access to good quality jobs for both sexes is likely to help sustain higher employment rates. While the European Commission has a broad view of the concept of job quality in practice, it relies on a selection of labour market type indicators that say little about the quality of the actual jobs people do. Using data from the 2005 European Working Conditions survey, we analyse job quality along three dimensions: job content, autonomy and working conditions. We conclude that gender and occupational status, along with other job characteristics such as working time and sector, have more influence on an individual's job quality than the country or 'national model' they are situated in. Our results also demonstrate the value of developing indicators of job quality that are both gender sensitive and derived at the level of the job rather than the labour market in order to advance EU policy and academic debate on this topic.

INTRODUCTION

Job quality is a central component of the stated aims of the European Employment Strategy (EES), but over recent years, the actual emphasis on quality has fallen away (Dieckhoff and Gallie, 2007). Since the relaunch of the EES, the emphasis on quantity of jobs has taken precedence, with quality and social exclusion aims being seen increasingly as by-products of growth and employment (CEC, 2001a). At the same time, flexicurity has gained prominence in the EES, and is advocated as a means to reduce segmentation in the labour market, which indirectly addresses job quality but with a narrower scope. The increased emphasis on numerical targets and revisions to the employment guidelines have also weakened the position of equal opportunities for women and men in the Lisbon process (Fagan *et al.*, 2006; Rubery *et al.*, 2003; 2004), even though women have a central role to play in achieving the overall employment rate target.

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However, advances on both the job quality and gender equality objectives may be important complements for achieving the employment rate targets of the EES. Women's jobs are of poorer quality on average than those of men according to standard indicators of job quality (pay, contractual status, access to training, etc.), and access to good quality jobs for both sexes is likely to make an important contribution to the goal of retaining and attracting workers on to the labour market so that headline employment rate targets of the strategy can be met. Furthermore, low-quality employment may hamper progress towards the EU's goal of social inclusion through increased economic activity, as poor job quality is often associated with labour market instability. A final consideration is that the Commission's concept of flexicurity and proposed 'pathways' introduce some more specific aspects of job quality into the debate; for example, autonomy and job enlargement associated with the use of functional flexibility at the firm level (CEC, 2007a; 2007b). The gender differences in these more specific aspects of job quality need to be brought into the debate (Burchell *et al.*, 2007).

The way that job quality has been addressed in the European Employment Strategy is reviewed in the next section, followed by a section that evaluates the Commission's definition of this concept and the indicators it has used to assess job quality. The fourth section uses the European Foundation's European Survey on Working Conditions to presents the key gender differences in three important dimensions of job quality: autonomy, job content and exposure to hazardous ambient and ergonomic working conditions. Section five explores the impact of selected demographic and job characteristics, sector and country on job quality outcomes using multivariate logistic regressions. The concluding section highlights that gender and occupational status, along with other job characteristics such as working time and sector, have more influence on an individual's job quality than the country or 'national model' they are situated in. This final section also emphasises the analytic value of developing indicators of job quality that are both gender sensitive and derived at the level of the job rather than the labour market in order to advance European Union (EU) policy and academic debate on this topic.

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QUALITY OF WORK AND THE LISBON PROCESS

Job quality is one half of the equation 'more and better jobs' that has been central to the EES from the outset. Since 2002, job quality and productivity has been part of the overarching objectives of the Lisbon Process and, along with social inclusion, these social objectives are among the defining principles of the EES, complementing that of employment and economic growth. This focus on quality as well as quantity is something that has made the European response to the challenges facing modern labour markets distinctive, for example, from that adopted by the OECD. First pushed under the Belgian presidency, the issue of job quality was cemented in the EES with the European Commission's presentation of its first Communication on Job Quality in 2001 (CEC, 2001a). From 2002, the quality of employment objectives were incorporated into the Employment Guidelines, and, at the time, quality of work was addressed in five of the 18 guidelines. However, quality of work received rather limited attention in the employment policies of Member States and the EU's joint employment reports, even in the first year that it became a priority in the EES (Barbier et al., 2005). This neglect continued following the 2004 relaunch of the strategy in a revised form (Rubery et al. 2004; 2006).

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Goetschy (2002) argues that the original rationale for job quality becoming a priority area in the EES rested on three concerns: structural developments in European economies, fears about a race between Member States competing solely on numbers employed and the application of the 'quality concept' from other policy domains. Concern about the decline in job quality is not unique to Europe (e.g. see Kalleberg, 2003 for the United States), and is associated with the expansion of the service sectors, increase in non-standard contracts and the reorganisation of work over several decades. Goetschy suggests the fear was that the negative effect of these trends on job quality would be exacerbated if the EES became a simple numbers race to meet the employment targets.

While there is a tension between the job quality and job quantity aims of the EES, there is also the potential for synergy between the two, as 'the decision to remain in the labour market depends very much on the quality of work' (Goetschy, 2002: 413). This may be particularly pertinent for raising the employment rate of two target groups, namely, women and older workers. Furthermore, job quality is one way to improve employment stability for those at risk of social exclusion (Dieckhoff and Gallie, 2007) and has been advocated as a way to enhance social inclusion in previous Joint Employment Reports (e.g. CEU, 2005). There is evidence that those in the poorest quality jobs are exposed to more employment insecurity and poor labour market transitions. For example, the Commission's first empirical review of European job quality showed that persons employed in poor quality jobs had a higher risk of falling into unemployment or leaving the labour market altogether (CEC, 2001b), with women, young people and those on non-standard contracts being most at risk. Unfortunately, EU concerns to promote job quality have been rather less evident recently in the context of a reorientation of the EES (Barbier et al., 2008; Rubery et al., 2006).

The EES was re-launched with an increased focus on the quantitative employment rate targets following the recommendations of Wim Kok's Employment Task Force (CEC, 2003a). Charged with finding remedies for the limited progress Member States were making towards the employment rate targets, the Task Force's response was recommendations that focused on the promotion of low-wage employment and atypical contracts to maximise job growth. The increased focus on the full employment objective came at the expense of the objectives on social inclusion (Dieckhoff and Gallie, 2007), job quality (Barbier *et al.*, 2007) and gender equality (Rubery *et al.*, 2004).

Despite the refocusing of the EES on the employment rate and economic growth, the 2005 Spring Summit confirmed:

the longstanding commitment to equal opportunities and the reconciliation of family and working life, including the improvement of childcare provision; the recent focus on the enhancement of job quality [Barbier *et al.*, 2005; 269].

In spite of this rhetorical commitment to job quality, the subordination of this objective to the quantitative targets for employment at the European level was quickly mirrored at the national level. The evaluation reported in the Joint Employment Reports about the limited progress made by Member States has remained similar over recent years; in fact, the paragraph on job quality in the 2008 Joint Employment Report (CEU, 2008) starts with exactly the same words as the five lines attributed to this subject in the 2007—'progress in the quest to increase quality at work again remains mixed' (CEU, 2007: 5)—and similar to the wording in previous reports (CEC).

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2005; 2006). Rubery et al. (2006: 249) confirm the limited national coverage of job quality, stating that the 'theme has effectively disappeared from the employment chapters of the NRPs'. Barbier et al. (2008) draw a similar conclusion about the content of European-level documents. There is some attention paid to job quality in the 2007 Joint Employment Report, which reiterates the role that quality of work can play in fostering employment and productivity growth and the importance of addressing job quality for those at the margins of the labour market (CEU, 2007). Nevertheless, aside from urging Member States to develop these potential synergies and the growing emphasis placed on promoting the flexicurity concept, the job quality objective remains subordinated within the debate.

With the adjusted emphasis of the EES, the line of argument from the Commission also shifted. The achievement of the more 'social' objectives would now be 'byproducts' of the prioritised growth and employment objectives (Dieckhoff and Gallie, 2007: 481). However, this shift in diagnosis is problematic, particularly from a gender angle, because a focus on quantity over quality eomes, will not automatically reduce the marginalisation of women even if progress towards a higher and more gender equal employment rate is observed. This is because women's work already tends to be of a lower quality, and the risk is that this gender inequality is exacerbated through the expansion of low-paid and flexible jobs which are implicitly or explicitly targeted at women (Fagan et al., 2005). Under the EES, the focus on women's employment remains narrowly concerned with raising the female employment rate in order to achieve the overall employment rate target. There continues to be little consideration of gender gaps in relation to job quality in the national reform programmes submitted by Member States (Fagan et al., 2006). For example, part-time work has become promoted as a means of increasing women's integration into employment and meeting the EES targets, yet part-time jobs are often of poor quality and/or excluded from elements of the social protection system and so do little to promote gender equality (e.g. as in Germany; see Maier and Carl, 2003).

Dieckhoff and Gallie (2007: 487–490) argue that the latest development is flexicurity has become the pivot for addressing job quality issues in the EES. This is manifested in the 2007 Joint Employment Report (CEU, 2007: 5), which states that 'flexicurity policies should aim at raising productivity and quality of jobs'. The negative impact of low-quality work on productivity is also recognised as one of the challenges facing so-called European pathways to flexicurity (CEC, 2007c: 11). The flexicurity concept also has an important gender dimension, for, as the 2008 Joint Employment Report acknowledges, it is female workers who are 'still affected by low quality jobs and weaker employment and social security' (CEU, 2008: 13). In the confirmation of the principles on flexibility by the European Council in December 2007 (CEC, 2007a), it is stated that policies should support gender equality by promoting equal access to quality employment. However, the problem with addressing job quality issues via the frame of flexicurity is that it tends to produce a narrow formulation of job quality centred on employment security and the rights of atypical workers. A more elaborated approach to analysing job quality is required; one where the reliance of firms on employees to master new techniques and skills—so-called functional flexibility—can also lead to enhanced job quality (Bredgaard and Larsen, 2006; CEC, 2007b), for example, in the form of autonomy and job enlargement. So far, it is only in Finland and Sweden that the Commission finds evidence of such quality workplaces being developed through 'greater demands and responsibilities on workers with increased autonomy' (CEU, 2008: 13). So, as the flexicurity focus takes

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root in the EES it is important that the definition of job quality is elaborated to capture the wider dimensions of this concept.

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JOB QUALITY

Job quality is a complex concept to measure, as it can include both subjective and objective dimensions (Green, 2005: 9). It is a

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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 [CEC, 2001b: 65].

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The subjective element of these characteristics, based on the experiences and expectations of the worker themselves (Goetschy, 2002), is shaped by their current situation. Furthermore, while some analysts may regard jobs as segmented discretely into either 'good' or 'bad' segments of the market; others conceptualise jobs as clusters of characteristics such that jobs that are of poor quality on some dimensions are not necessarily so on others (Tilly, 1997).

In response to the need to develop criteria and methods for the evaluation of job quality the Commission's first Communication identified ten dimensions of job quality (Box 1) with corresponding key and context indicators (CEC, 2003b). This approach drew on a broad notion of the concept, but also included a strong injection of political compromise, for example, wage levels were initially included and then excluded (Goetschy, 2002). The indicators adopted focused on existing measures and links with established parts of the EES, leading Green (2005: 21) to describe these as a 'repackaging' of existing elements of the Strategy. Thus, the indicators focus on a range of personal and labour market measures rather the specifics of the job itself (see Box 1). For example, while childcare availability may be an important part of work—life balance, it is not usually specific to a particular job, as very few European

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Box 1:

Job Quality Dimensions and Key and Context Indicators in the European Employment Strategy

companies provide such facilities for their employees (Anxo et al., 2007).

1. Intrinsic job quality

- transitions between non-employment and employment and within pay levels (key):
- transitions between non-employment and employment and within contractual statuses (context); and
- satisfaction with type of work in present job (context).

2. Skills, lifelong learning, and career development

- proportion of working age population participating in education and training (key);
- proportion of working age population participating in education and training by gender, age group, working status and educational levels achieved (context);
- proportion of the workforce participating in job-related training by gender, age groups and economic activity (context); and

 share of the workforce using computers at home and/or at the workplace for work purpose with and without job-related computer training (context).

3. Gender equality

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- ratio of women's hourly earnings to men's for paid employees at work 15+ hours (key);
- ratio of women's hourly earnings to men's for paid employees at work 15+ hours, adjusted for sector, occupation and age (context);
- employment rate gap of women compared with men (context);
- unemployment rate gap of women compared with men (context); and
- gender segregation in sectors and occupations (context).

4. Health and safety at work

• the evolution of the incidence rate, defined as the number of accidents at work per 10,000 persons in employment (key).

5. Flexibility and security

employees working voluntary and involuntary part time as a proportion of total number of employees, and employees with voluntary and involuntary fixed-term contracts as per cent of total number of employees (key).

6. Inclusion and access to the labour market

- transitions between employment, unemployment and inactivity (key);
- transition of unemployed people into employment and training (context);
- total employment rate (context);
- employment rate by main age group and educational attainment levels (context);
- total long-term unemployment rate by gender (context);
- percentage of 18–24-year-olds having achieved lower secondary education (ISCED level 2) or less and not attending further education or training, by gender and working status (context); and
- youth unemployment ratio: unemployment aged 15–24 as a percentage of the population aged 15–24 (context).

7. Work organisation and work-life balance

- absolute difference in employment rates with and without the presence of a child aged 0–6, by sex (age group 20–50) (key);
- children cared for (other than by the family) as a proportion of all children in the same age group (context); and
- number of employees who left their last job for family responsibilities or for education purposes, no more than 12 months ago, who return to work but are currently not available for work for the same reason as previously leaving work (context).

8. Social dialogue and worker involvement

 a range or 'menu' of indicators was proposed to reflect the diversity at the national level including union density, coverage of collective agreements, days lost to industrial disputes.

9. Diversity and non-discrimination

- employment rate gap of 55–64-year-olds (key);
- the gap between the employment and unemployment rates for ethnic minorities and immigrants (context); and

• the gap between the employment and unemployment rates for disabled people, taking into account the distinction between low and high level qualifications, as compared with the overall rates (context).

10. Overall work performance

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- Growth in labour productivity, measured by the change in the level of GDP per capita of the employed population and per hour worked per cent (key);
- Total annual output divided by the employed population and of hours worked (context); and
- Percentage of working age population having achieved at least upper secondary education (ISCED level 3) by gender, age group and working status (context).

Source: CEC (2001a; 2003b).

The approach taken by the Commission elevates job quality to effectively encompass all labour market processes by linking job quality to almost every aspect of the labour market (EEO 2004). This is problematic, because it extends the concept of job quality far beyond the specific qualities of the job and the relationship between the job and its holder (Meager and Sinclair, 2004). By contrast, Tilly (1997) adopts a more focused approach using seven measures of job quality: wages, fringe benefits, due process in discipline, hours flexibility, permanence, upward mobility and control over work process. Good jobs are not only about pay, and indeed pay may not be as important as other non-pecuniary factors (Green, 2005; Leontaridi and Sloane, 2003; Meager and Sinclair, 2004). In line with this approach, Gallie (2007) focuses much more on the content and tasks of the job using skills and training, autonomy and teamwork, participation and commitment, security and welfare, and representation to measure job quality. The ETUL is also exploring the creation of a job quality index for monitoring countries focusing on six domains: wages, non-standard employment forms, working time and work-life balance, working conditions and job security, health and safety, skills and career development, and collective interest representation and voice (Leschke et al., 2008).

A problem with some of the subjective indicators, such as job satisfaction, is that such items tend to record rather high positive results in most social surveys (Burchell et al., 2007). This provides little direct information about actual job quality. Satisfaction levels are shaped by the norms and expectations in particular national settings at a particular period in time, and thus, comparisons of trends or between countries need to be contextualised against the potential national and temporal variations in these norms and expectations (Kalleberg, 2003). It is also important to recognise that workers who are very dissatisfied with their working conditions, such as poor work—life balance, try to improve their situation; indeed, job dissatisfaction is a robust predictor of turnover (Green, 2005: 11).

The most recent European Working Conditions Survey (EWCS) provides a rich cross-national resource for analysing dimensions of job quality that are largely ignored in the Commission approach. In this rest of this article, we focus on three—job content, autonomy and working conditions—because they are important in relation to debates about flexicurity (CEC, 2007b), job quality itself (Gallie, 2007; Green, 2005; Tilly, 1997), and whether distinctive gender differences exist on these

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dimensions (Burchell and Fagan, 2002; Burchell *et al.*, 2007). The indicators we focus on also connect to the development of indicators for two of the domains (working conditions, skill/career development) being explored for the construction of a job quality index by the ETUI (Leschke *et al.* 2008).



EUROPEAN JOB QUALITY 2005

The EWCS is carried out by the European Foundation for the Improvement of Living and Working Conditions (European Foundation) every five years. The first EWCS survey was carried out in 1990/91, and the most recent, in 2005. The sample of the EWCS is representative of persons in employment¹ in each Member State. The sampling procedure in each country uses a multistage, stratified and clustered design with a random walk procedure for the selection of respondents (see European Foundation (2006; 2007).² Face-to-face interviews are conducted with respondents in their own household. Here we use the most recent wave of the EWCS from 2005, which collected data from a total of 31 countries including the 27 EU Member States.

The questionnaire was developed by the European Foundation in close cooperation with an expert group, with the questions evolving since the first wave, although some have remained identical. In 2005, a number of new questions were introduced in order to keep up with the evolution of working practices and technological developments, as well as addressing feminised aspects of work ignored in previous waves. For our purposes, there are a range of questions on job content, autonomy and working conditions which shed light on job quality in Europe and potential differences across national settings.

Job content

Aspects of job content can help shape the intrinsic quality of the jobs that women and men do and might be regarded as a more effective measure of intrinsic quality than the indicators adopted by the Commission in this area (Box 1). Here we consider the dimensions of problem solving and learning, the monotony or complexity of tasks, and the intellectual and emotional demands of jobs.

Tasks that involve problem solving and learning may be regarded as indicative of good job quality. These are more often a feature of men's jobs than women's (Table 1), and this gender gap means that women may have fewer opportunities for personal development and/or progression. Further investigation shows that the gender gap seems to be caused more by the lower rate of opportunities for learning among part-timers (Burchell *et al.*, 2007). The incidence of jobs that involve both learning and problem solving are slightly higher for men than women reinforcing these gaps in development opportunities. Perhaps surprisingly, there were no gender differences in the proportion who found their job intellectually demanding.

By contrast, monotonous working may be considered a more negative characteristic, providing limited opportunities for personal development. A higher proportion

¹ Based on the Eurostat definition of both employees and self-employed (European Foundation, 2006). ² The EWCS has a net sample of 29,680, including 25,572 for the 27 Member States. The nationally representative samples range between 1,000 and 1,059 cases for all Member States, with the exception of Estonia and Cyprus. The response rates was 0.48 with most countries, recording rates close to this average, although eight countries—Belgium, Finland, Luxembourg, the Netherlands, Poland, Slovenia, Switzerland and the UK—recorded rates below 0.4 (Parent-Thirion *et al.*, 2007: 95–96).

Table 1: Job content measures by gender, EU27

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(Percentages: always or often)	Men	Women	All	
Solving unforeseen problems on your own	84	77	81	
Learning new things	70	68	69	
Learning and problem solving	63	59	61	
Monotonous tasks	42	44	43	
Complex tasks	64	53	59	
Complex and not monotonous	39	30	35	
Complex and monotonous	25	23	24	
Monotonous and not complex	16	21	19	
Find job intellectually demanding	48	48	48	
Regular interaction with clients and customers	48	59	52	
Find job emotional demanding	34	43	38	
n	12,300	13,002	253,002	

Notes: (i) Valid percentages only, non-responses accounting for between 1-1.5 per cent of total for each variable; (ii) all chi-square test results significant at p < 0.01.

Source: EWCS (2005).

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of men have jobs that include some complex tasks, but there is little evidence of a gender gap in the rate of monotonous working. However, women are more likely to hold jobs that involve some monotonous tasks and no complex ones. Women are also more likely to have jobs which involve regular contact with clients or customers, and to find their job emotionally demanding, reflecting the greater concentration of their employment in service jobs.

Autonomy

The autonomy that individual workers have over tasks they carry out has also been shown to be an important dimension of job quality (Gallie, 2007; Tilly, 1997) but one that is absent from the indicators adopted at the EU level (Box 1). The EWCS survey asked respondents a series of questions about their autonomy over various aspects of their work: ordering of their tasks, their methods of work, the speed at which they work and control over taking breaks. The gender differences on each of the different autonomy dimensions are relatively small, with the exception of control over breaks, even when we examine full and part-timers (Burchell *et al.*, 2007). However, when aggregated into an index of autonomy it is clear that men are more likely to have all autonomy items present in their jobs (Table 2). Furthermore, the occupational breakdown reveals significant gender differences within job categories. The highest levels of autonomy occur in white collar occupations, and among these workers, men have notably higher levels of autonomy. On the other hand, women in blue-collar work report slightly higher levels of autonomy than their male counterparts.

Ambient and ergonomic working conditions

A third aspect of job quality that is not adequately captured by the EU indicators are the standard health and safety risks. The EU indicators use the number of recorded

All

	White collar managerial jobs	White-collar professional jobs	White-collar clerical and service jobs	Blue-collar craft and related manual	Blue-collar operating and labouring manual	
Work methods						
Men	87	78	63	65	49	
Women	82	76	62	63	54	
Speed of work	_					
Men	84	79	65	68	55	
Women	78	76	66	71	59	
Order in which	n they —					
complete	tasks					
Men	88	78	64	55	43	
Women	78	70	62	64	52	
Can take a bre	eak —					
when you	wish					
Men	72	53	43	43	37	
Women	63	39	40	47	35	
Multiple autor	nomy					
measures						
Men	_					
Low (0-1 m	easures) 9	14	30	31	46	
Some (2–3 r	neasures) 30	45	43	40	35	
High (4 mea	sures) 61	41	27	29	19	
Women	_					
Low (0-1 m	easures) 16	19	31	29	42	
Some (2–3 r	neasures) 34	52	43	35	34	
High (4 mea	sures) 50	29	26	36	24	
n	1,801	7,002	6,476	3,934	5,464	

Notes: (i) Valid percentages only, non responses accounting for between 1–2 per cent of total for each variable; (ii) all chi-square test results significant at p < 0.01.

Source: EWCS (2005).

accidents (Box 1), which, while acting as a measure of overall worker safety, does little to highlight the differences in job quality between groups of workers, and importantly, between women and men. Furthermore, an overall decline in recorded accidents may partly reflect structural shifts in European economies rather than improving conditions per se. Respondents to the EWCS were asked to indicate the proportion of time (from 'all of the time' to 'never') which they were exposed to nine ambient risks³ and five physical risks⁴, and here we focus on the chance of being exposed to a risk for more than half of the time they are at work.

Reflecting the gender segregated pattern of employment, a higher proportion of men are regularly exposed to a negative ambient environment, particularly handling vibrations, breathing risks due to poor air, loud noise and extreme temperatures (Table 3). This is associated with manufacturing and construction work in particular. Dealing with infectious fluids and bodily waste reveal some of the risks more associated with women's work. The gender differences in the regular exposure to ergonomic risks are much smaller than those for ambient risks. More men report they spend

³ The environmental risks included exposure to vibrations from hand tools/machinery, loud noise, high temperatures, low temperatures, breathing in smoke/fumes/powder/dust, breathing in vapours, handling chemical products, radiation, tobacco smoke, infectious fluids and bodily waste.

⁴ The physical risks include tiring or painful positions, repetitive movement, lifting heavy loads and lifting/moving people.

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Table 3: Selected ambient and ergonomic job quality measures, EU27

2 3 4		White-collar managerial jobs	White-collar professional jobs	clerical and	Blue-collar craft and related manual	Blue-collar operating and labouring manual	All
5	Ambient risks						
6 7	Vibrations, hand tools, machines, etc	_					
8	Men	10	10	6	49	35	25
9	Women	8	3	3	23	16	7
10	Loud noise	_	3	3	23	10	,
11	Men	12	13	10	47	37	27
12	Women	10	10	8	26	19	12
13	High temperatures	10	10	o	20	19	12
14	Men	9	8	13	33	29	20
15	Women	9	6	8	33	18	11
16	Low temperatures	9	Ü	0	33	10	11
17	Men	10	6	9	27	23	16
18	Women	8	3	6	20	23 11	7
19	Breathing smoke, fumes,	0	3	O	20	11	/
20		_					
20	powder, dust	8	8	8	38	24	19
22	Men		3	3	38 17	10	5
23	Women	6	3	3	1 /	10	3
24	Handling or skin contact	_					
	with chemical products						
25	or substances	2		4	1.6	10	0
26	Men	3	6	4	16	10	9
27	Women	8	6	5	11	16	8
28	Tobacco smoke		0	16	21	17	1.5
29	Men	12	8 5	16	21	17	15
30	Women	14	5	11	9	10	9
31	Infectious fluids,	_					
32	bodily waste	2	-	2	_	-	
33	Men	2	5	3	5	5	4
34	Women	4	13	3	6	8	8
35	Ergonomic risks						
36	Tiring or painful positions		10	22	52	41	22
37	Men	20	19	22	53	41	33
38	Women	26	20	25	59	43	29
39	Lifting or moving people	_	2	4	4	4	2
40	Men	1	3	4	4	4	3
41	Women	2	12	5	3	9	8
42	Carrying or moving	_					
43	heavy loads		_			• • •	
44	Men	15	7	14	46	39	26
45	Women	13	7	13	28	23	14
46	Standing or walking	_		#O	0.5		
47	Men	51	42	58	86	66	62
48	Women	57	52	51	76	80	59
49	Repetitive hand or arm	_					
50	movements	2.5	2.5	40			
51	Men	36	35	42	67	65	51
52	Women	45	38	53	79	71	52
53 54	n	1,820	7,090	6.590	4.032	5,605	25,127

Notes: (i) Valid percentages only, non responses accounting for less than 1 per cent of total for each variable; (ii) All chi-square test results significant at p < 0.01.

Source: EWCS (2005).

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more than half of their work time carrying and moving loads. A smaller proportion of persons have jobs where a large component is lifting or moving people, but this is more common for women than men. There are only small gender differences in the proportion of jobs which involve tiring or painful working positions, long periods of

standing and walking or repetitive hand movements. These gender differences in risky exposures are only slightly reduced when we compare male and female full- and part-timers separately (Burchell et al., 2007). The occupational dimension is more salient, because the level of risk and gender gaps in risks vary across occupational groups. Men in blue-collar craft work and manual work are particularly exposed to many of the ambient and ergonomic hazards, but the proportion of women in these blue-collar jobs who are exposed to such risks is higher than the rate for men in white-collar jobs on most of the indicators. Among men and women employed in some of our occupational groups, we find that the gender gaps close or almost completely disappear, for example, there are few gender differences among white collar workers in exposure to the ambient risks or the physical strain of moving heavy loads. It is also by taking occupational status into account that we expose where the differences are most pronounced: thus, women's exposure to the risks of dealing with infectious fluids and bodily waste and lifting or moving people is particularly high in professional occupations, associated with their employment in nursing and other health and care professions. Another example is prolonged periods of standing and walking, where the overall gender difference is small but is more common for women among white collar workers, while among blue-collar workers, it is more common for men. These patterns within occupations and for specific ergonomic risks demonstrate the importance of going beyond that overall accident rates or simple proportions of women and men subject to risks of ergonomic hazards.

MULTIVARIATE ANALYSIS OF JOB QUALITY

Table 4 explores the impact of selected demographic and job characteristics, sector and country on job quality outcomes using multivariate logistic regressions.⁵ The analysis focuses on three of the indicators of job content described above (monotonous working, complex tasks, problem solving and learning), task autonomy, and exposure to the hazards of poor ergonomic or ambient conditions. These analyses confirm that occupation and gender have a significant impact on job quality outcomes when the influence of the other variables is controlled for. Working hours also have a significant influence.

The probability of working in a job with complex (but not monotonous) tasks or problem solving and learning is significantly higher for men and women if they are employed in white collar jobs, and particularly professional ones. Women employed in blue-collar operating or labouring occupations are the most disadvantaged on these dimensions of job quality, even more than the men at this occupational level. Gender and occupation also interact to influence the probability of having a high level of task autonomy. Compared with men in blue-collar labouring occupations, task autonomy is significantly higher for men in any white-collar occupation, but for women, the difference is only significant for managerial levels. Men in blue-collar jobs have a significantly higher probability of poor ergonomic or poor ambient working

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⁵ See notes to Table 4.

Table 4: Logistic regression results on detailed job quality measures

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	Complex tasks	Problem solving and learning	High level of task autonomy	Exposure to poor ergonomic conditions	Exposure to poor ambient conditions
Working in the public sector (ref = private)	1.23**	1.48**	0.74**	0.94	1.03
Gender and Occupation					
Male white-collar managerial jobs	2.27**	2.00**	2.43**	0.36**	0.55**
Male white-collar professional jobs	3.02**	3.95**	1.72**	0.25**	0.48**
Male white-collar clerical and service jobs	1.57**	1.58**	1.43**	0.62**	0.42**
Male blue-collar craft and related manual	2.03**	1.76**	1.59**	1.24**	1.53**
Male blue-collar op, and labouring manual (ref)	_	_	_	_	_
Female white-collar managerial jobs	1.89**	1.88**	1.76**	0.62**	0.25**
Female white-collar professional jobs	2.46**	4.00**	1.10	0.49**	0.29**
Female white-collar clerical and service jobs	1.10	1.57**	1.12	0.90	0.22**
Female blue-collar craft and related manual	1.02	0.93	1.24*	1.25*	0.51**
Female blue-collar op and labouring manual	0.54**	0.61**	1.22*	2.37**	0.31**
Exposure to ergonomic conditions	0.95**	0.97**	0.96**		1.17**
Experience interruptions (ref = no)	1.42**	1.80**	1.38**	1.06	1.03
Exposure to ambient conditions	1.01*	1.01**	0.99**	1.12**	
Working unsocial hours					
Never (ref)		_	_	_	_
1-5 times/month'	1.48**	1.59**	1.03	0.92	1.15*
6 times or more/month	1.19**	1.31**	0.77**	1.22**	1.30**
Working to tight deadlines (ref = no)	1.24**	1.30**	0.93	0.99	1.27**
Working at speed (ref = no)	1.08*	1.20**	0.76**	1.84**	1.26**
Age	1.01**	0.99**	1.01**	0.99**	1.00
Number of drivers for pace of work	1.02	1.25**	0.89**	1.05**	1.22**
Working time autonomy (ref = no)	1.31**	1.33**	3.63**	0.68**	0.82**
Task autonomy (ref = no)	1.22**	1.45**		0.91**	0.93**
Worker is an employee	1.49**	1.19**	0.42**	0.50**	0.89
(ref = self-employed) Hours of work					
1–20 hours (ref)	_	_	_	_	_
20-34 hours	1.37**	1.36**	1.07	1.06	1.01
35–39 hours	1.50**	1.56**	1.28**	0.94	1.14
40–47 hours	1.55**	1.63**	1.28**	0.82*	1.29**
48+ hours	1.33**	1.51**	1.20*	1.03	1.32**
Sector of activity					
a to b-agriculture, hunting, forestry		_	_	1.91**	0.63**
and fishing					
c to f—industry (ref)	_	_	_	_	_
g to k-services (excluding public	_	_	_	1.18**	0.46**
administration)					
l—public administration and	_	_	_	0.78*	0.64**
defence; compulsory social sec					
m to q-other services	_	_	_	1.77**	0.61**
Austria	4.80**	_	0.66**	_	_
Belgium	_	_	_	_	_
Cyprus	_	0.52**	_	_	_
Czech Republic	_	_	0.47**	0.48**	_
Germany	2.34**	0.63**	0.48**	0.57**	_
Denmark	_	1.89**	_	_	_
Estonia	0.46**	_	_	_	1.65**
Spain	0.28**	0.65**	0.64**	_	_
Finland				1.96**	1.33**

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Table 4: Continued

	Complex tasks	Problem solving and learning	High level of task autonomy	Exposure to poor ergonomic conditions	Exposure to poor ambient conditions
Enomos (rof)					
France (ref) Greece	_	0.46**	_	1.68**	1.52**
Hungary	3.14**	0.50**	_	1.00	1.60**
Ireland	0.58**	0.30	_	_	1.00
	0.38	0.73**	0.62**	_	0.65**
Italy Lithuania	_	0.73**	0.62**	_	0.65**
	_	0.43**	_	_	_
Luxembourg	_		1 20**	_	1 50**
Latvia	1 5744	0.60**	1.38**		1.50**
Netherlands	1.57**	1.83**	_	0.38**	_
Malta	_	_	_	_	_
Poland	_	_	_	_	_
Portugal	_	_	_	_	_
Sweden	1.97**	2.05**	_	1.36**	_
Slovenia	_	_	_	_	_
Slovakia	1.42**	_	0.66**	0.73**	_
UK	0.42**	0.66**	_	_	_
Bulgaria	_	0.52**	0.45**	_	_
Romania	2.01**	0.65**	_	0.64**	_
Constant	0.29**	0.09**	0.03**	0.00**	32.73**
n	23.654	23,777	24.058	23.867	23.867
-2 log likelihood	26,618.62	25,136.26	25,007.98	21,987.07	20,697.4
Nagelkerke R ²	0.23	0.30	0.28	0.40	0.45
Classification	0.708	0.736	0.754	0.779	0.802

Notes: (i) All independent variables except the country dummies were entered in one block; the individual country dummies were then entered and only retained if they were significant at the 0.01 level; (ii) reference category indicated by '(ref)'; (iii) exposure to ambient and ergonomic conditions, age and number of drivers for pace of work are continuous variables; and (iv) sector only included in models for exposure to poor ambient and ergonomic conditions.

Source: EWCS (2005).

conditions than men and women in white collar jobs. Women in blue-collar operating and labouring occupations are more likely than their male counterparts to experience poor ergonomic conditions, but are significantly less likely to face poor ambient working conditions.

Working time also has a significant impact on job quality, even when occupational level, gender and other variables are controlled in the analysis. Persons with short part-time working hours (less than 20 per week) are significantly less likely to have jobs with complex tasks, problem solving and learning. Task autonomy is only significantly more likely for persons working between 35–47 hours a week compared with those with short part-time jobs, while working at least 40 hours per week is associated with an increased risk of poor ambient conditions. The risk of poor ergonomic conditions is similar for part-time and full-time working. There are also interesting effects of other aspects of working time on the probability that the job involves the indicators of job quality under investigation. For example, if the job offers some autonomy to the worker in how he/she organises their working time, this is significantly associated with a higher probability that their job involves complex tasks, task autonomy or problem solving, and a significantly lower likelihood that they are exposed to poor ergonomic or ambient conditions.

The sector of employment also impacts on job quality. For example, working in the public sector increases the probability that the job involves complex tasks and

© 2008 The Author(s) Journal compilation © Blackwell Publishing Ltd. 2008 problem solving, but reduces the probability of high task autonomy. Exposure to poor ambient working conditions is significantly lower for persons employed outside of industry, while workers in services and agriculture have a greater risk of poor ergonomic conditions than industrial workers.

Finally, these analyses also highlight some country differences, although they are less clear-cut than the effects of occupation, gender, working-time or sector. Compared with France, which is the reference country, no country has a positive significant result on all three items of good job quality (complexity, task autonomy and problem solving). However, Sweden, Denmark and the Netherlands do score significantly better on problem solving and learning. In several countries, workers are significantly less likely than their French counterparts to experience these dimensions of good job quality, notably Spain, where there is a significant negative score on all three items. Italy, the UK and Bulgaria have significant negative scores for two of the three items. Ergonomic conditions are significantly worse for workers in Finland, Sweden and Greece compared with the situation in France, as are ambient conditions in Estonia, Finland, Greece, Hungary and Latvia. Conversely, ergonomic conditions are significantly better for workers in five countries (Ireland, the Czech Republic, Germany, the Netherlands, Romania) and ambient in one (Ireland) compared with the situation in France.

CONCLUSIONS

Job quality still matters for many of the goals of the EES even though the productivity and job quality objectives have taken a back seat with the increased focus on the numerical targets (Dieckhoff and Gallie, 2007). Yet in order to achieve sustainable higher levels of employment, good quality jobs are required if the EES is to retain and attract workers to the labour market without increasing segmentation, for example along gender lines. An increase in low-paid and precarious employment carries the risk that labour market segmentation and inequalities will be exacerbated (Fagan *et al.*, 2005; 2006), which are precisely the problems the flexicurity policy aims to redress. A focus on full employment at the expense of job quality does not just carry risk for vulnerable labour market groups; it may also undermine macroeconomic objectives such as productivity growth (Rubery *et al.*, 2006).

Not only did job quality receive relatively little attention from Member States when it first became a priority area, but the overall approach to measuring job quality has also been unsatisfactory. The European Commission's concept of job quality extended to most areas of the labour market to the extent that the notion was diluted, and indicators covered labour market themes from the wider EES rather than measures that relate specifically to the quality of jobs and their job holders.

By using measures from the ESWC_k we demonstrate the scope and potential for measures of job quality that relate more closely to the quality of jobs people do. However, we also show the important and enduring role that gender and occupational segregation play in shaping job content, task autonomy, and the ergonomic and ambient risks faced by workers. Working time and sector are also significant factors. The largely negative consequences of part-time working are clear when we control for other variables, and underline the risks for the job quality of women, in particular, those associated with the promotion of part-time work in the EES.

The impact of country is less consistent. In line with Gallie (2007), we suggest there is no clear link between country models and job quality. So, for example, while we find

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some evidence of higher quality work in Scandinavian countries (Gallie, 2003), and some others, like the Netherlands, we also find evidence of increased ergonomic and ambient risks in some parts of the 'Scandinavian model', such as in Finland. However, at least within the National Reform Programmes, there is evidence of job quality initiatives in these countries that are not found in other member states (CEU, 2008; Rubery *et al.*, 2006).

New types of employment relationship—including part-time work, where underdeveloped—present risks and are associated with unfavourable working conditions outcomes (CEC, 2001b), particularly for women (Fagan et al., 2006), yet these are strongly associated with the promotion of flexicurity policies. Thus, to avoid increased risks to those at the margins of the labour market, job quality needs to be put back at centre stage of the EES. Indeed, the ETUC has called for a rebalancing of the flexicurity agenda with job quality at the centre (Barbier et al., 2008; ETUC, 2007). Furthermore, after their first joint analysis of the challenges for European labour markets, the European social partners—ETUC, BUSINESSEUROPE, CEEP and UEAPME—recognised the need for adaptability and also stated that flexicurity 'needs to be accompanied by the provision of good working conditions and quality of jobs' (CEC, 2007d), including ensuring career and employment security, maintaining and promoting the health and well-being of workers, developing skills and competencies, and reconciling working and non-working life. However, as Auer (2006) points out, quality jobs require a strong institutional framework as well, and this is perhaps beyond the scope of European Social Partners and the responsibility that has been left to them for job quality.

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