Women's job quality across family life stages: an analysis of female employees across 27 European countries

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Abstract There is little empirical evidence on how working conditions affect women's employment and fertility choices, despite a number of studies on the impact of individual-level and institutional factors. The article addresses this gap by examining how family life stages are related to particular aspects of job quality among employed women in 27 European countries. The central argument of the analysis is that high-quality jobs are conducive to both transitions to motherhood and employment after childbirth as women select into these roles. Accordingly, mothers of young children, if employed, are expected to have relatively better quality jobs. Four dimensions of job quality are considered: job security, career progression, working time and intrinsic job quality. The results indicate that mothers with young children are more likely to hold high-quality jobs than women at other life stages with respect to working time quality and job security, but with some variation across countries for job security. The findings highlight the importance of high-quality jobs for women's fertility decisions and labour market attachment after childbirth, with implications for European employment policy.

Keywords Job quality; Gender; Maternal employment; Life course analysis; International comparisons.

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1 Introduction

Across Europe, female employment rates continue to be below those of men at all ages, even though in many countries women outperform men in higher education graduation rates (OECD, 2015). The gender gap in employment rates further widens when women become mothers, calling for a proper understanding of the determinants of mothers' labour market attachment if both fertility levels and female employment participation are to be increased (European Commission, 2005, 2015). Previous studies have found that women's employment decisions after childbirth are shaped by individual-level factors, such as the need to contribute to the household's income (Edwards, 2005), personal preferences and attitudes (Crompton and Harris, 1998; Marks and Houston, 2002; Rahim, 2014), as well as by institutional factors, such as the availability of childcare (Kreyenfeld and Hank, 2000; Thévenon, 2013; Ulker and Guven, 2011), or parental leave provisions (Ondrich et al., 1996; Pronzato, 2009).

However, the role of job quality – i.e. the quality of work and employment conditions – for women's labour market attachment across life stages is not yet well understood. While previous research has provided a better understanding of the work arrangements that are potentially more compatible with childrearing (see reviews in Byron, 2005; Michel et al., 2011), far less is known about women's quality of working life over the life-course, and its relationship to partnerships and motherhood. The central aim of the present study is thus to investigate associations between particular types of job quality and life stages related to family formation. We argue that job quality may affect women's decisions to become mothers, and also that good-quality jobs are likely to offer better options for combining family obligations and paid work; that they will, in other words, increase the likelihood of a return to work after childbirth.

The contribution of our study lies in demonstrating the importance of various dimensions of job quality across family formation life stages; in focussing on this aspect, the article extends the literature in several ways. While a plethora of studies focus on gender inequality, differences specifically related to life-course stages have been more narrowly analysed in terms of wages, employment participation and working hours (Anxo et al., 2007; Stier et al., 2001; Vlasblom and

Schippers, 2006). This study expands earlier research on employment conditions and the life course (e.g. Anxo et al., 2012; Begall and Mills, 2011) by incorporating a broad range of job quality dimensions: job security, career progression, working time quality and intrinsic job quality. In addition, with respect to methodology, the current study improves on prior work on job quality (Smith et al., 2013) in that it disentangles the effects of structural and compositional factors, thus unpacking the effects of generational and socio-economic differences, as well as cross-national differences associated with different family policy models and institutions.

Overall, we expect to find that mothers of young children are employed in higher-quality jobs, compared to female employees without children, due to selection into motherhood and selective return to employment. Using data from the European Working Conditions Survey (EWCS) and employing multilevel regression models, we further explore whether there is any variation in job quality differences associated with motherhood across 27 EU countries. We expect to find cross-national differences because women make their fertility and employment decisions in the context of gender norms and national family policies which support maternal employment to varying degrees (Castles, 2003; Gauthier, 2007).

2 The role of job quality for women's employment and fertility decisions

Job quality is expected to play a role in women's employment and fertility decisions in several ways. First, women who are employed in better-quality jobs might be more likely to decide to have children compared to those employed in poor-quality jobs as the characteristics of their jobs allow them a better reconciliation of motherhood and employment. Moreover, better-quality jobs might increase the likelihood of a return to work after childbirth, by making such a return, in the first place, possible, but also easier for new mothers.

In the following, we discuss each of the four dimensions of job quality which are included in our empirical analysis – job security, career progression, working time quality and intrinsic job quality – and their potential associations with fertility intentions and labour market attachment after

childbirth. We focus on non-wage aspects of job quality, not least because far less is known about their differences across life stages compared to the vast research on the motherhood wage penalty, but also because of a high non-response rate to income questions in the EWCS. Finally, we consider whether the relationship between job quality and female employment across life stages can be expected to differ across countries.

2.1 Dimensions of job quality

Job security

A stable and secure job with an adequate income and career path provides a sense of economic security that reinforces the feeling of being able to afford to have children. Nonstandard work arrangements, including temporary contracts, are often taken as a measure of poor job quality (Green and Mostafa, 2012; Kalleberg et al., 2000), as they are associated with lower job security, job autonomy, career possibilities and lower quality on other job characteristics (Kauhanen and Nätti, 2015). Such contracts have been associated with delayed motherhood in Spain (De La Rica and Iza, 2005), while a German study found a positive association between perceived job security and fertility, but only among highly educated women (Kreyenfeld, 2010). Casual and fixed-term contracts may come to an end while a mother is on maternity leave, thus contributing to the postponement of motherhood or exit from employment. A study of employment patterns in the Netherlands (Begall and Grunow, 2015) found that eligibility for parental leave, which is often associated with permanent contracts and subject to minimum tenure requirements, reduced the probability of exiting the labour market after first childbirth. On the other hand, casual or fixed-term contracts are more likely to be offered for part-time jobs than full-time jobs (Charlesworth et al., 2011), thus disproportionally affecting mothers who, in many countries, tend to work reduced hours.

We expect to find that mothers – especially those with young children – enjoy, on average, higher levels of job security than women without children because of the incompatibility between insecure employment and the labour market participation of mothers. The explanation for such an

observation may be twofold: first, job insecurity might contribute to a postponement of motherhood, and, second, temporary contracts offering little job security might limit the options for a return to work after childbirth.

Career progression

Childbirth has often been identified as a great impediment to career progression, especially for women with young children (McIntosh et al., 2012), due to biases against employed mothers (King, 2008), the loss of human capital when mothers are not working (Budig and Hodges, 2010), or mothers' desire to slow down their professional advancement (Brown, 2010). Moreover, women's non-linear career paths, characterised by career breaks and sidewards or even backwards job changes, inflict lifelong employment penalties, such as lower pay (Budig and Hodges, 2010).

While childbirth may indeed hinder career progression for those women who do return to work, it is also possible that women who hold jobs that offer good opportunities for advancement are more likely to return to work as there is a greater incentive for continuing employment and a higher opportunity cost of labour market withdrawal. Overall, however, we expect that mothers report fewer opportunities for career progression than women without children.

Working time quality

The importance of working time quality after childbirth is perhaps the most apparent and also the most thoroughly documented. The number of working hours and flexibility in scheduling these hours directly affect the extent to which parents are in a position to combine paid work and care (Clark, 2000; Crompton and Lyonette, 2006; Drobnič and Guillén, 2011). A large and growing body of research points to the negative consequences of mothers' nonstandard working hours (i.e. outside the 'traditional' regular weekday hours between 8am to 6pm) for the health and well-being of their families (Davis et al., 2008; Kalil et al., 2014; Presser, 2004, 2005). While some studies discuss the possibility of financial motivation for choosing nonstandard working hours, insofar as they might involve a wage premium (Lanfranchi et al., 2002; Presser, 2005), the evidence is at best inconclusive (Rubery et al., 2005). What is more, inflexible operating hours of childcare and other institutions

make it more difficult to combine work at atypical or variable times with family obligations (Golden, 1996). Thus, the evidence suggests that women tend to work nonstandard schedules not out of personal preference or choice to accommodate family responsibilities but because of the nature of the job (Beers, 2000). It can be thus expected that they would be more likely to leave such jobs once they have children. On the other hand, employee-controlled flexibility in working time, which allows for adjustment of working time in response to family obligations, leads to lower levels of work-family conflict (Byron, 2005; Mills and Täht, 2010). So called flexitime, i.e. flexibility in the starting and ending times of the work day, has been found to help mothers in the UK remain in employment after childbirth (Chung and Van der Horst, forthcoming). Accordingly, we expect that employed mothers have jobs with better working time quality than women without children, as they generally strive to avoid unsocial or irregular work schedules.

Intrinsic job quality

The work-life balance literature puts emphasis on the conflicting demands of work and family life that render the performance of roles in both of these domains difficult (Garhammer, 2007; Van der Lippe and Peters, 2007). It has been shown that work is the more disruptive domain in this balance and working conditions are thus of primary importance for understanding work-life conflicts (Drobnič, 2011). Of particular importance are intrinsic aspects of work as they offer resources that can help workers relieve tensions between multiple life roles (Scherer and Steiber, 2007). Such resources include autonomy, task discretion, opportunities to develop skills, social support at work, and an absence of intense and stressful work (Chung, 2011; Grzywacz and Butler, 2005; Mustosmaki et al., 2011).

Stress and time pressure at work have been associated with decreased fertility intentions (Begall and Mills, 2011). The same study also shows that women who return to work after the birth of a first child are more likely to want to have a second child if they are employed in jobs with high levels of work control. This indicates that women employed in jobs with high intrinsic job quality are more likely to feel that they are at a good point in their working lives to have children and will have more resources enabling a return to work after childbirth. We therefore expect to find that mothers of

young children, on average, display higher levels of intrinsic job quality than women at other family life stages.

2.2 Trade-offs between dimensions of job quality

Overall, the relationship between job quality and the transition to motherhood might be complicated by trade-offs between various aspects of job quality. Studies have repeatedly shown that women are employed in jobs characterised by lower job quality than men (Mühlau, 2011; Stier and Yaish, 2014). These findings may suggest that women, in contrast to men, might trade off autonomy, higher wages and opportunities for advancement with jobs that allow them to fulfil their dual roles of mothers and employees, among other things, by offering working hours more compatible with family obligations. For instance, a study using Belgian data found that women may deliberately choose jobs that are less intrinsically stressful in order to reduce work-family conflict, but their autonomy at work decreases once they become parents (Laurijssen and Glorieux, 2013). However, an earlier study based on a small American sample did not find evidence of such trade-offs and found that, in some cases, job changes were associated with improvements in both compensation and family accommodation (Estes and Glass, 1996). Such a labour supply-side argument does not imply that women's lower job quality compared to men's is a result of their preferences and unconstrained choices. On the contrary, a number of studies point to discrimination and structural barriers on the demand side of labour (Petersen and Saporta, 2004; Stier and Yaish, 2014), which is partly reflected in the persistent gender pay gap and the lack of adequate female representation at the highest leadership levels.

2.3 Cross-national differences

Women's employment decisions are not only influenced by the characteristics of their individual jobs, but also by the national context in which their employment and family lives are situated. National family and employment policies affect fertility and mothers' employment patterns through financial incentives and the availability of support services (Gornick et al., 1997; Jaumotte, 2003), such as

childcare and parental leave provisions (Pettit and Hook, 2005; Uunk et al., 2005). Moreover, work characteristics have been found to impact fertility intentions strongly in cases where the institutional context is less supportive of work-family reconciliation (Begall and Mills, 2011; Bühler and Frątczak, 2007). Therefore, in addition to having a direct impact on the work behaviour of mothers, we expect the effect of job quality on women's employment trajectories to differ across various institutional contexts.

Moreover, family policies and gender-role attitudes are expected to have a substantial impact on the variation of job quality across the life course as they shape the employment behaviour of women of varying socio-economic backgrounds, in particular when they have young children (Anxo et al., 2007). While women with high educational attainment have high employment rates across the life course irrespective of family policies, severe motherhood penalties among low-educated women are found in countries with less institutional support and more traditional family policies (Gornick et al., 1997, 1998; Korpi et al., 2013). We explore whether these mechanisms extend to job quality. We expect that in countries where the majority of new mothers quickly return to their previous employment due to cultural norms, institutional support or economic necessity, there will be little difference between the quality of their jobs and those of female employees without children. In countries where employment rates of mothers are low, return to work is likely to be more selective, with women in low-quality jobs dropping out of the labour force or re-entering employment only if they manage to move to jobs of higher quality. Overall, we expect to find that associations between the four dimensions of job quality (described above) and motherhood vary significantly across 27 European countries.

3 Data and methods

3.1 Data and measures

We use data from the 2010 European Working Conditions Survey (EWCS; Eurofound, 2012). The survey was carried out in 34 countries among persons in employment aged 15 and over. We selected

27 EU member states for the analysis and further restricted the sample to women aged 20-49, thus in their prime working, marriage and fertility ages. The final sample consists of 12,224 female respondents. The number of cases by country ranges from 266-395 women in 20 countries, through 540-695 in Poland, Slovenia, Italy, the UK and Germany, to 1,204 in France and 1,441 in Belgium.

Our analysis focuses on job quality and its measurement largely draws on the job quality index developed by Green and Mostafa (2012). This index contains a number of key job characteristics that meet workers' needs from their work, identified on the basis of workers' self-reports about their working conditions. Four non-wage dimensions of job quality are included in the analysis as dependent variables: (1) job security, (2) career progression, (3) working time quality and (4) intrinsic job quality. Intrinsic job quality consists of four equally weighted sub-dimensions: (4a) skills and discretion, (4b) social environment, (4c) physical environment and (4d) work pressures (inverted). Each dimension of job quality is measured on a 0-100 scale with higher values indicating better quality of work (for details about the computation of the scales, see Green and Mostafa, 2012). A description of the EWCS questions used to compute the indexes is provided in the Appendix (Table A1).

It should be emphasised that the working time quality measure reflects work during unsocial hours, unpredictable hours resulting from changes imposed by the employer, and the scope for flexibility for workers in adjusting their working time. It excludes the number of weekly working hours, not least because their changes across the life course are already well-documented (Connolly and Gregory, 2010; Uunk et al., 2005). More importantly, it is debatable whether part-time work should be taken as a measure of high or rather low job quality, especially in a gender-sensitive analysis of employment (Rubery et al., 2005; Smith et al., 2013). Therefore, we focus on the timing of paid work, autonomy and flexibility in scheduling working time, rather than on the length of a working week.

To investigate employment patterns over the life course, a stylised life course typology is created drawing on previous research that employs cross-sectional data in life course analysis (Anxo

et al., 2012; Pettit and Hook, 2005; Smith et al., 2013). The following six life stages are defined for a sample of women aged 20-49 based on family composition:

I. Single without resident children;
II. Cohabiting couple without resident children;
III. Cohabiting couple with youngest child aged 0-5;
IV. Cohabiting couple with youngest child aged 6-11;
V. Cohabiting couple with youngest child aged 12 or older;
VI. Single parent.

In this typology, respondents who report not living with their own children might include both women who have never had own children and those whose children no longer live with them ('empty nesters'), yet this is not determinable based on the information available in the EWCS. Moreover, unlike previous studies, single mothers are included as a separate category due to their particularly vulnerable situation in the labour market and additional constraints on their employment choices. Their number was too small to be further divided according to the age of the youngest child.

To control for the effect of additional children living in the household, a dummy variable for having two or more own children is included in the analysis. In addition, a series of control variables account for compositional factors, including age (range 20 to 49), educational attainment (an indicator variable for having at least some tertiary education), occupational groups (nine groups based on 1-digit ISCO, excluding armed forces), the sector of economic activity (coded into fourteen groups based on NACE classifications), and the number of weekly working hours. We do not focus on changes in weekly working hours across the life course, as this has been studied extensively elsewhere, but we control for the number of hours of work because of their close relationship to job quality (Gallie, 2007). Working in the public sector is not included as a separate variable due to multicollinearity with sectors based on NACE codes.

The main sample characteristics by life stage are summarised in Table 1. Single women without children are, on average, the youngest group, while cohabiting mothers with school-age children and single mothers are relatively older and less likely to have completed any tertiary education. Cohabiting mothers of children in the youngest age group are the most likely to work as

high-skilled professionals and have part-time jobs. Single mothers are more likely than cohabiting mothers to have only one child and to work in occupations with low skill requirements.

Table 1 Worker characteristics by life stage (women aged 20-49, EU27)

	Single no children	Couple no children	Couple child 0-5	Couple child 6-11	Couple child 12+	Single parent
Age of respondent (Std. dev.)	30 (8)	34 (8)	33 (5)	39 (5)	44 (4)	39 (7)
Living with 2 or more own children	NA	NA	59%	72%	54%	46%
Education (at least some tertiary)	39%	42%	42%	29%	26%	27%
High-skilled white-collar occupations	43%	47%	49%	45%	38%	35%
Weekly usual working hours	35	37	32	33	35	33
Part-time work (<35h/week)	31%	26%	48%	44%	35%	41%
Income (net monthly earnings in Euro, adjusted for PPP)	1,040	1,183	1,101	1,089	1,030	1,037
N (unweighted)	2,549	1,957	2,028	1,718	2,323	1,649

Source: EWCS 2010, weighted data, own calculations.

In order to explore cross-national variation in job quality across life stages, we include seven country-level measures in the analysis, which account for differences in family policies, institutions and support for employment. The first of these macro-level measures assesses the employment gap for mothers in 2010, which is calculated as the difference in employment rates between women without children and mothers whose youngest child is younger than 6 years old (for women aged 20-49). The second measure is the activity rate of women aged 25-49 in 2010, reflecting the proportion of economically active adults in a population of the same age. As a proxy for a country's family policies, we include national spending on family and children social benefits as a percentage of GDP in 2010 (including support for the costs of pregnancy, childbirth, childbearing and caring for other family members, except healthcare). Institutional support for female employment is proxied by two measures of children's enrolment in formal childcare: 1. the share of children aged 0-2 in formal childcare and 2. the share of children aged 3 years to the minimum compulsory school age in formal childcare. These two measures of childcare enrolment may reflect the availability of childcare, governmental subsidies for formal care as well as demand from women due to norms about mothers' employment. These five indicators are available from Eurostat. We further include the maximum length of

maternity leave[1] measured in weeks, after which women can return to their pre-pregnancy employment (data for 2012-2014 from Schulze and Gergoric, 2015), as previous research has shown that employment after child birth is affected by the duration of available maternity or parental leave (Ondrich et al., 1996; Pronzato, 2009). Lastly, we include an economic participation index, a sub-dimension of the Global Gender Gap Index in 2010 (Hausmann et al, 2010). This index captures country-specific gender gaps in labour force participation, remuneration and advancement (ratio of women to men in senior and professional positions).

The 27 EU countries included in our analysis differ widely on these seven measures (Table 2). The employment gap between women without children and mothers of young children is widest in Czechia (-45.2 percentage points), Hungary (-41.5 percentage points) and Slovakia (-40.9 percentage points). Countries with small or even positive employment gaps are typically also among the countries with the highest activities rates; for example, Denmark (+5.1 percentage points), Slovenia (+4 percentage points), and Sweden (+1 percentage point), all have positive employment gaps, indicating that women with young children are slightly more likely to be employed than women without children. These countries also have high activity rates in the 25-49 age group (Denmark = 85.3%, Slovenia = 90.2%, Sweden = 86.7%), compared to countries like Malta (54.7%) or Italy (65.8%). Malta and Italy also have the lowest economic participation index, followed by Austria.

Table 2 Country-level measures reflecting family policies and employment regimes

	Employment gap for mothers (p. points)	*Activity rate (%)*	*Family policy (% GDP)*	*Childcare 0-2 (%)*	*Childcare 3-school (%)*	*Maternity leave (weeks)*	*Economic participation index*
Austria	-18.8	83.4	3.1	9	83	16	0.595
Belgium	-6.9	82.6	2.2	35	99	15	0.71
Bulgaria	-24.6	80.7	1.9	7	54	58.6	0.684
Cyprus	-9.6	83	1.9	23	81	18	0.63
Czechia	-45.2	78.2	2	3	71	28	0.621

[1] A number of countries have implemented parental leave policies which can be taken by either parent and which thus allow for a longer overall leave period than the maternity leave periods indicated in table 2. Data for paid *parental* leave periods are available from the OECD but not for all 27 EU countries included in our analysis. We repeated our analysis using the OECD measure of parental leave for the countries for which it was available; using this measure instead of the maternity leave measure employed here did not change our results. The coefficients of both measures were not significant in our regressions and we therefore decided to keep the measures of maternity leave which was available for all countries.

Denmark	5.1	85.3	4	77	90	18	0.744
Estonia	-25.7	84	2.2	21	92	20	0.719
Finland	-17.1	83.8	3.2	28	77	17.5	0.757
France	-10.7	84.2	2.5	42	94	16	0.661
Germany	-29.3	81.4	3.1	20	92	14	0.714
Greece	-7.5	75.4	1	8	69	17	0.621
Hungary	-41.5	74.3	2.9	9	79	24	0.689
Ireland	-22.5	72.4	3.2	29	90	42	0.741
Italy	-12.8	65.8	1.1	22	87	20	0.589
Latvia	-9.5	86.9	1.5	16	64	16	0.752
Lithuania	-1.3	88.5	2.2	13	67	18	0.756
Luxembourg	-12.4	78.6	4	36	79	16	0.751
Malta	-35.2	54.7	1.2	11	74	18	0.543
Netherlands	-6.1	83.6	1.2	50	91	16	0.723
Poland	-13.8	80.3	1.3	2	42	52	0.653
Portugal	-5.7	86.7	1.3	37	79	21	0.672
Romania	-8.2	73.5	1.7	8	66	18	0.708
Slovakia	-40.9	80.5	1.7	3	72	34	0.637
Slovenia	4	90.2	2.1	36	91	15	0.723
Spain	-12.5	80.8	1.5	38	95	16	0.624
Sweden	1	86.7	2.9	51	94	14	0.77
United Kingdom	-23.4	78.6	3.2	35	90	52	0.721

Notes: Employment gap for mothers: difference in employment rates between women without children and mothers whose youngest child is below 6 years old, women aged 20-49, 2010. Activity rate: women aged 25-49, 2010. Family policy: spending on family/children social benefits, including support (except healthcare) for the costs of pregnancy, childbirth, childbearing and caring for other family members, as % of GDP, 2010. Childcare 0-2: share of children aged 0-2 in formal childcare. Childcare 3-school: share of children aged from 3 years to minimum compulsory school age. Maternity leave in weeks, data for 2012-2014. Economic participation index: measures differences between men and women in participation, remuneration and advancement in the labour market. *Source:* Eurostat; maternity leave: Schulze and Gergoric (2015); economic participation index: Hausmann *et al* (2010).

The use of formal childcare is generally high for children aged 3 and above as many countries provide free or subsidised care for that age group, which facilitates mothers' employment (enrolment is low in Poland, 42%, and Bulgaria, 54%, which may indicate lack of availability, high costs or the use of informal care, e.g. provided by relatives). However, the use of formal childcare differs considerably for the 0-2 years age group, and may depend on the length of paid parental leave, social norms about mothers' employment and government subsidies for childcare. The uptake of formal childcare for that age group is highest in the Nordic countries of Denmark (77%) and Sweden (51%) and lowest in the Eastern European countries of Poland (2%), Czechia (3%) and Slovakia (3%).

3.2 Analytical strategy

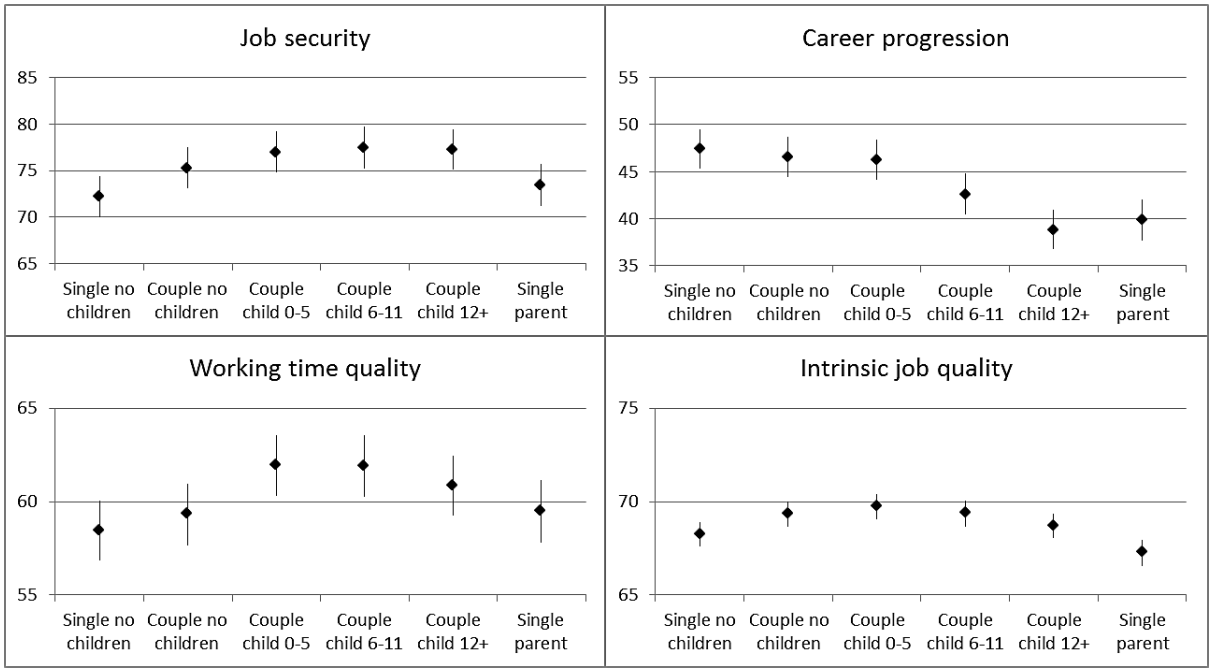
The analysis is based on multivariate multilevel regression models with employees nested in countries (Raudenbush and Bryk, 2002). Workers' employment and fertility decisions partly depend on the policy and cultural context in which they live, and observations within one country are thus not truly independent from each other. Multilevel modelling accounts for such correlated error terms and respondents from the same country are allowed to be more similar to each other than to respondents from other countries.

Multilevel regressions were run in Stata 14 with separate models estimated for each dimension of job quality as the dependent variable. We first employed random intercept, fixed slopes models, and then entered the slopes for the life stage 'Cohabiting couple with youngest child aged 0-5' as random in subsequent models. We employed Hausman tests to assess whether entering slopes as random improves model fit, which would imply significant variation in the job quality premium for mothers of young children across countries. In the final step, country-level variables were introduced to explain variation across countries.

4 Results

In the first step, differences in average job quality across life stages are explored, controlling only for country fixed effects (Figure 1). The particular focus is hereby on comparisons between cohabiting mothers of young children (0-5 years old) and women at other life stages, because it is during the early childrearing phases that the most substantial changes in women's labour market behaviour are observed (Gornick et al., 1998).

Fig. 1 Differences in job quality across life stages (women aged 20-49, EU27)



Notes: Predicted values are derived from regressions which only account for country fixed effects (no further control variables are included). Bars represent 90% confidence intervals. The means of the four dimensions of job quality are different in the sample and not directly comparable.

Cohabiting mothers of young children (0-5) reported significantly more secure jobs and better-quality working time than women without children. Differences in intrinsic job quality across life stages are less pronounced, but cohabiting mothers of young children (0-5) reported significantly higher intrinsic job quality than single women without children and cohabiting mothers of older children (12 years or more). In contrast, chances for career progression are significantly less favourable among cohabiting mothers with children aged 6 or older, but there is no significant difference between cohabiting mothers of young children (0-5) and women without children. Finally, single mothers reported jobs of lower quality on all four dimensions compared to mothers of young children living in a couple.

4.1 Individual characteristics

To assess whether these effects persist after accounting for compositional differences, in addition to cross-county differences, a set of control variables was included in multilevel random intercept models (Table 3). With respect to job security and working time quality, the advantage of cohabiting mothers with young children (0-5) compared to women at other life stages is most apparent. Their

advantage is similar to that for cohabiting mothers whose youngest child is 6-11 years old. The working time quality premium increases even further for mothers with two or more dependent children, while the number of children does not seem to be associated with holding a more secure job. Single women with or without children are particularly disadvantaged in terms of reported job security. It should be emphasised that the measurement of working time quality does not include the number of weekly working hours (this is a separate control variable) and thus higher rates of part-time work among mothers do not drive these results. Thus, the findings add support to the view that an employee-oriented scheduling of working hours is of paramount importance for the compatibility of employment with family responsibilities.

Differences in perceptions about career progression across the life course might be partly linked to age-related declining career expectations and generational differences between women at various life stages. In our model, they are entirely explained by age, educational attainment and occupational rank, but a deterioration in perceptions about career progression continues to be significantly associated with having two or more children. This dimension of job quality thus resembles more the life course penalty found in previous studies for income, and might to some extent reflect trade-offs in women's employment trajectories between career jobs and jobs that offer security and working times more compatible with family obligations.

Table 3 Job quality across life stages; women aged 20-49, EU27, 2010. Multi-level models (random intercept, fixed slopes)

	Job security		**Career progression**		**Working time quality**		**Intrinsic job quality**	
Life stages								
Single no children	-4.760	***	-1.304		-1.773	**	-0.887	*
Couple no children	-2.518	**	-0.521		-1.299	*	0.256	
Couple child 0-5	ref		ref		ref		ref	
Couple child 6-11	-1.044		-0.507		-0.275		-0.067	
Couple child 12+	-2.911	***	-1.443		-1.617	**	-0.472	
Single parent	-4.717	***	-1.623		-1.659	**	-1.200	***
Living with 2+ own children	0.119		-1.802	**	1.023	*	0.625	*
Age of respondent (in years)	0.317	***	-0.416	***	0.148	***	0.046	**
Education (tertiary)	0.744		3.880	***	2.073	***	1.489	***
Weekly working hours	0.196	***	0.209	***	-0.205	***	-0.046	***
Occupation (ISCO)								
Managers	5.374	***	16.817	***	13.587	***	8.051	***
Professionals	5.839	***	12.711	***	3.955	***	6.180	***
Technicians, assoc. prof.	6.052	***	7.728	***	6.354	***	5.627	***

Clerks	4.507	***	5.200	***	5.629	***	4.283	***
Service and sales	ref		ref		ref		ref	
Skilled agricultural	5.469		-11.234	***	11.217	***	-0.813	
Craft and related trades	0.634		-4.914	**	0.258		-5.351	***
Operators	0.702		-8.483	***	-2.806	*	-7.356	***
Elementary occupations	-3.620	***	-10.380	***	3.268	***	-3.391	***
Sector (NACE)								
Agriculture	-1.799		-0.204		5.850	***	1.084	
Manufacturing	-1.502		-0.270		3.100	***	-1.100	**
Construction	-3.433		2.606		8.990	***	2.767	***
Wholesale, retail	ref		ref		ref		ref	
Transport	1.056		3.539	*	-2.994	**	-2.249	***
Accommodation and food	-3.992	***	-4.299	***	-8.448	***	-4.431	***
Information and communication	-3.536		5.778	*	6.755	***	0.006	
Financial services	1.295		8.126	***	5.767	***	0.494	
Professional, scientific, technical	-1.071		5.466	***	8.385	***	1.164	*
Administrative, support services	-4.360	***	0.832		1.682		-1.166	*
Public administration	2.885	**	3.597	**	4.463	***	0.936	*
Education	2.956	**	-2.029		-3.523	***	1.886	***
Health	2.958	***	1.742		-5.318	***	-2.161	***
Other services	0.038		3.509	***	7.317	***	1.931	***
Constant	56.038	***	46.646	***	58.211	***	66.358	***
Log-likelihood	-52746.8		-54086.5		-50695.5		-42934.8	
Variance country level	37.404		26.916		17.874		3.130	
Variance individual level	514.028		751.609		316.348		104.564	
N	11,608		11,427		11,787		11,459	

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$.

Finally, cohabiting mothers with children aged 0-5 reported significantly better intrinsic job quality compared to single women without children and single parents, but the differences are narrower than for other dimensions of job quality. Moreover, significantly higher intrinsic job quality is found for mothers with at least two dependent children.

4.2 Cross-national differences

In the final step of the analysis, we examine the cross-national variation in the job quality premium for cohabiting mothers of young children (age 0-5) as this is the life stage in which women are most likely to make decisions about lasting employment changes. To this end, we allow for the effect of this life stage to differ across countries in a random slopes model, while retaining the full set of previous control variables. To model life stages, we therefore only include an indicator variable for

the ‘cohabiting mothers of young children (age 0-5)’ life stage and the other life stages form the omitted category. We employ Hausman tests to assess whether entering the slope for the life stage as random provides a better fit to the data than models in which this slope is fixed. The analysis indicates that only differences in job security vary significantly across countries (*LR* statistic=4.7, *p-value*= 0.0302), and we therefore only report the results for this dimension of job quality (Table 4, models 1 and 2). For career progression, working time quality and intrinsic job quality the results point to a considerable consistency in job quality patterns associated with life stages across the European countries included in the analysis.

We continue with the model in which the intercept and the slope for life stage are entered as random, and then further examine the cross-country variability found for job security among cohabiting mothers of young children (0-5 years old) by including one of seven country-level predictors in each subsequent model (Table 4, models 3-9). Before we turn to the regressions that include these macro-level measures, we first look at differences in job security between cohabiting mothers with children aged 0-5 and women at other life stages separately in each of the 27 EU countries that are included in the analysis.

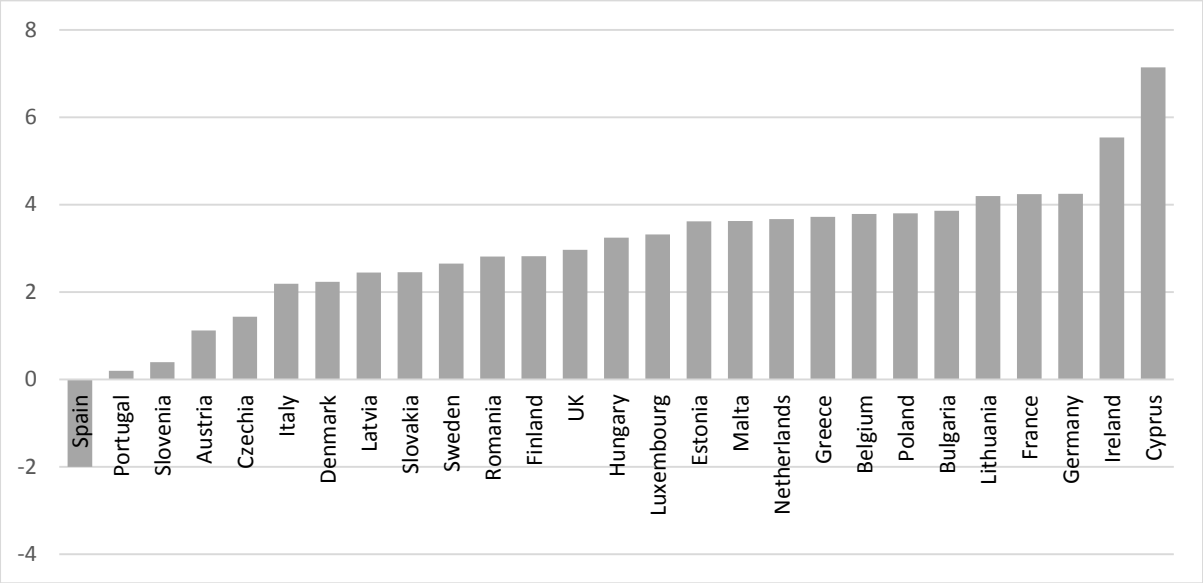
Table 4 Job security across life stages; women aged 20-49, EU27, 2010. Multi-level models.

	Random intercept, fixed slope	*Random intercept and random slope for life stage*							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Couple child 0-5	3.123***	2.951***	2.950***	2.950***	2.948***	2.941***	2.951***	2.951***	2.948***
Living with 2+ own children	0.825	0.816	0.816	0.815	0.815	0.809	0.815	0.816	0.818
Control variables (individual level)	yes	yes	yes	yes	yes	yes	yes	yes	yes
Control variables (country level)									
Employment gap for mothers			0.047						
Activity rate				0.171					
Family policy					3.650**				
Childcare 0-2						0.135*			
Childcare 3-school							0.129		
Maternity leave								-0.065	
Economic participation index									30.338
Constant	52.004***	52.011***	52.768***	38.317**	43.880***	62.134***	54.554***	53.528***	31.234*
Random part									
Variance country level	39.12	39.80	41.04	39.80	30.76	35.39	38.13	40.76	37.97
Variance slope		7.33	7.37	7.42	7.05	7.46	7.40	7.40	7.24
Variance individual level	516.57	515.69	515.68	515.68	515.71	515.68	515.68	515.68	515.69
% of random slope variance explained			-0.6%	-1.3%	3.7%	-1.7%	-1.0%	-1.0%	1.2%
Log likelihood	-52746.1	-52743.7	-52745.1	-52744.1	-52738.9	-52743.6	-52744.2	-52744.9	-52738.7

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

The premium in job security for mothers of young children varies considerably between countries (Figure 2). In Spain, the difference is negative, suggesting that women at other life stages reported holding more secure jobs compared to cohabiting mothers with children in the youngest age group. There is little difference in job security across life stages in Portugal, Slovenia, Austria and Czechia, while the biggest premium is found in Cyprus and Ireland.

Figure 2 Cross-country variation in job security premium for cohabiting mothers with children 0-5 years old



There is no single explanation for the differences in job security premium found across countries. The random slope model (Table 4, model 2) assumes that the random intercept and random slopes are uncorrelated. Testing whether the job quality premium for cohabiting mother with young children (0-5) is related to the levels of job quality in each country did not yield significant results. Among the country-level indicators relevant for mothers' employment, only two explain some of the variation found in the job security premium for cohabiting mothers with young children (Table 4, models 3-9). Spending on family policies as a percentage of GDP explains 3.7%, while the economic participation index explains 1.2% of the variance in job security. However, in both cases the explanatory power is weak and does not point to a clear relationship between the country-level measures and the job

security premium. In fact, the coefficient for the economic participation index is not significant (Table 4, model 9).

Nevertheless, our analysis reveals that some combinations of institutions shape women's labour supply and differences in job security between life stages. For instance, in Denmark, Sweden and Finland, the high activity rate of women, their low propensity to exit paid work after childbirth and generous family policies suggest that selection into motherhood and return to work is relatively marginal and not related to job security. This is reflected in small differences in job security across life stages. This pattern is largely replicated in Slovenia, but less generous family-related social benefits there might place constraints on exiting employment for new mothers in more precarious jobs and thus reduce differences in job quality between women at various life stages.

In Slovakia and Czechia, considerable withdrawal from employment among new mothers could suggest a strong selection effect and thus large differences in job security related to motherhood. However, long paid maternity leave coupled with very low provision of formal childcare and traditional social norms concerning motherhood all contribute to a universal pattern of exit from employment following childbirth, irrespective of women's job quality. On the other hand, family policy spending in Germany is higher and to a greater extent directed towards formal childcare provision (see Table 2). Thus, women in more secure jobs, which are often also better paid, are more likely to be able to afford childcare and face greater opportunity costs when withdrawing from paid employment.

5 Conclusions

The current study contributes to the ongoing discussion about the determinants of mothers' labour force attachment by focusing on various dimensions of job quality – a topic that had previously been under-researched. We incorporated several aspects of the multidimensional concept of job quality in our analysis: job security, career progression, working time and intrinsic job quality. We expected to find that *employed mothers with young children report, on average, higher job quality than women at other life stages* as job quality plays an important role in determining women's ability and willingness

to participate in the labour market and women therefore select both into motherhood and post-childbirth employment. In particular, we hypothesised that mothers of young children would, on average, report higher levels of job security, better working time quality, higher levels of intrinsic job quality, but fewer opportunities for career progression than women at other family life stages. Our empirical analysis of a sample of women aged 20-49 from the 2010 EWCS data for 27 European countries confirmed some of these hypotheses. While we did not find any differences in perceived career progression between life stages and hardly any differences for intrinsic job quality, the analysis revealed that mothers with young children enjoy better job security and working time quality. This may suggest that cohabiting mothers of young children trade career prospects and intrinsic job quality for secure jobs with regular hours and autonomy in time scheduling. Additionally, we found working time and intrinsic job quality premiums for mothers with two or more dependent children. However, the association between having two or more children and career progression was negative. Single mothers fared particularly badly with respect to job quality, except for opportunities for career progressions. Unlike their partnered counterparts, they are probably less likely to have the option to withdraw from the labour force if they are employed in low-quality jobs. Of course, cohabiting mothers may also be trapped in low-quality jobs because of economic constraints, but our findings suggest that, on average, mothers of young children enjoy higher job quality which suggests that at least some of the mothers who were previously employed in low-quality jobs opted out of employment following childbirth.

We further assumed that *the association between job quality and family life stage would vary significantly between countries* as previous research has shown that women's fertility and employment choices are linked to particular opportunity structures associated with family policy models and institutional support. We found cross-country variation in the results for job security, but the results obtained for working time quality, career progression and intrinsic job quality were largely consistent across the 27 countries.

The much lower employment rates of mothers of young children across Europe despite the generally better quality of their jobs compared to women without children suggest strong selection

effects. One plausible explanation for such differences is that women whose jobs are of low quality postpone motherhood, thus negatively affecting already low fertility rates. A job with little security, little autonomy in organising and scheduling work, poor working conditions, or unpredictable hours, offers poor prospects for a successful combination of paid work and care responsibilities. In addition, jobs that rank low on non-wage quality dimensions also tend to be poorly paid (Green and Mostafa, 2012), a fact that in turn negatively affects the timing of family formation. For similar reasons, a return to poor-quality jobs after maternity leave might not be feasible or desirable, thus contributing to the lower employment rates found among mothers.

Overall, the findings provide support for the positive role of job quality in female labour market participation after childbirth. With longitudinal data one could discriminate between two possible explanations for this – that holding a better quality job increases the likelihood of transitioning to motherhood, or that job quality rather increases the chances of a return to work after childbirth. Moreover, following individuals over time would reveal whether the quality of a particular job was affected by childbirth (for instance, decreased availability for overtime might negatively affect prospects for career progression within the company). However, longitudinal data that contain detailed information about the quality of women's jobs, as can be found in the European Working Conditions Survey which we employ here, are currently absent.

Policy measures devised to increase women's labour market participation often address the structural incompatibility between paid work and family obligations, for instance by focusing on childcare provision or the length of maternity leave. However, our findings indicate that job quality is yet another important factor and that it thus deserves closer attention from policymakers. Demands for an increased flexibilisation of the labour market, including a further deregulation of employment contracts and the proliferation of involuntary nonstandard work (Piasna and Myant, 2017) are likely to have detrimental effects on both fertility levels and female employment rates after childbirth. Policies aimed at boosting competitiveness by lowering labour protection and standards of employment – thus undermining job quality – potentially diminish the positive effects of work-life balance policies on the labour market participation of mothers. Improving the quality of women's jobs

will reduce incompatibilities between paid employment and family formation, thereby possibly leading to both higher female employment rates and higher fertility.

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Appendix

Table A1 Job quality measurement

Dimensions	*Detailed content*
Job security	Might lose job in the next 6 months; Type of employment contract (best type = indefinite contract).
Career progression	Job offers good prospects for career advancement.
Working time quality	Unsocial hours: night, evening, weekends; Changes in work schedules: initiative and notice given; Short-term flexibility.
Intrinsic job quality	*Skills and autonomy* Decision latitude, influence over immediate work tasks; Training, cognitive dimension; Skill level. *Social environment* Social and managerial support; Absence of abuse. *Physical environment (inverted)* Exposure to work hazards: vibrations, noise, high/low temperatures, smoke, vapours, chemical products, infectious materials; Ergonomic issues: tiring or painful positions, lifting people/heavy loads, standing, repetitive movements. *Work pressures (inverted)* Pace of work: high speed, tight deadlines; Factors constraining pace of work: colleagues, customer demands, production / performance targets, machine speed, boss; Not enough time to get the job done; Tasks in conflict with personal values, job requires hiding feelings, handling angry clients.

Source: Own elaboration based on Green and Mostafa (2012).