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## **ABSTRACT**

### **Gender Segregation in Employment Contracts\***

This Paper presents evidence on gender segregation in employment contracts in 15 EU countries, using micro data from the ECHPS. Women are over-represented in part-time jobs in all countries considered, but while in northern Europe such allocation roughly reflects women's preferences and their need to combine work with childcare, in southern Europe part-time jobs are often involuntary and provide significantly lower job satisfaction than full-time ones. Women are also over-represented in fixed-term contracts in southern Europe, and again this job allocation cannot be explained by preferences or productivity differentials between the two genders. There is thus a largely unexplained residual in the gender job allocation, which may be consistent with some degree of discrimination in a few of the labour markets considered, especially in southern Europe.

JEL Classification: J22, J28 and J71

Keywords: gender segregation, part-time work and temporary work

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## 1. Introduction

Alongside clear successes in the recent labor market experiences of women like employment gains and narrowing wage differentials (Blau and Kahn 2003), there is evidence of some occupational, sectoral and job segregation still remaining, potentially resulting into an underutilization of women's skills and gender discrimination (OECD 2002, chapter 2). While occupational segregation has already received some attention in the economic literature,<sup>1</sup> less is known on systematic differences in the types of employment contracts held by the two genders across occupations and sectors of the economy.

The recent empirical literature has often emphasized the spectacular growth of “non-standard” or “atypical” jobs during the past few decades both in Europe and in the US, typically including part-time jobs and temporary/casual jobs (see OECD 1999, chapter 1, and the June 2002 Issue of the *Economic Journal* on Temporary Work for an overview). A key factor to understand recent labor market developments lies therefore in the study of the incidence and the characteristics of non-standard forms of work. At its best, part-time work may provide an opportunity for flexible hours of work, and for combining wage work with family commitments, especially for women. However, some cases of part-time work might as well be considered as a form of underemployment, paying lower wages and providing inferior fringe benefits than full-time work (see OECD 1999, chapter 1). Similarly, temporary contracts may provide firms with a useful mean of worker screening, and therefore

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<sup>1</sup>The main findings in Dolado et al. (2002) international study on gender occupational segregation are: (i) higher occupational segregation in the EU than the US, mainly due to a lower share of women in managerial and professional jobs; (ii) strong positive correlation between occupational segregation and the share of part-time jobs; and (iii) a weaker positive correlation the unexplained part of the gender pay gap and the share of women across occupations. See also references therein.

represent stepping-stones towards permanent employment. Alternatively, they may simply end up being used as a cheaper option to adjust firm-level employment, with lower wages and severance payments, and poor human capital accumulation (see Booth et al. 2002 and Arulampalan et al. 2003).

As the incidence of non-standard forms of employment may differ across genders, as well as their associated penalty for wages and other job characteristics, systematic features of these contracts may be an important factor of gender discrimination in the labor market. In this paper I examine whether *coeteris paribus* women in Europe are more likely than men to be segregated in atypical jobs, namely part-time or temporary jobs,<sup>2</sup> whether these jobs carry a penalty for job satisfaction, and whether segregation can be interpreted as a source of gender discrimination.

Labour market discrimination is commonly understood as the residual difference in labour market outcomes that cannot be explained by factors such as preferences or human capital endowments of different categories of workers (Altonji and Blank, 1999). Studies on gender discrimination have typically addressed the question of wage discrimination, namely what fraction of the gender wage differential cannot be explained by differences in skills or in their labour market price. Discrimination through job segregation is another form of discrimination, which may also lead to wage gaps, if the jobs to which women are segregated are lower-paying ones.

Of course, job segregation can arise for reasons others than discrimination. First, men and women may differ in their human capital and productivity in non-market activities, potentially leading to differences in comparative advantages across jobs. Second, their preferences for the characteristics of jobs may also differ. The residual from these two

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<sup>2</sup> In what follows, the terms “job” and “contract” will be used interchangeably.

explanations would be consistent with employer discrimination against women, which, if any, may be more severe in some types of jobs rather than others.

A major issue is the source of differences in human capital and job preferences across genders. Investment in women's human capital may be discouraged by the expectation of future labour market discrimination and by pre-labour market discrimination in the quality and quantity of schooling (Thomas 1990). Also, women's preferences for certain types of jobs – typically part-time jobs – may be driven by social norms (Akerlof and Kranton 2000) or the impossibility to delegate home production. While it would be difficult to quantify these effects, the potential endogeneity of human capital investments and preferences with respect to gender discrimination would imply that the portion of job segregation that cannot be explained by differences in human capital or preferences provides a lower bound for the extent of gender discrimination in the labour market.

Although I do not perform a direct test on gender discrimination, I will argue that there is a largely unexplained residual in the gender job allocation and in the estimated wage differentials by gender and type of job, which may be consistent with some degree of discrimination in some of the labor markets considered, especially in southern Europe. These results on gender differences in working arrangements across Europe compare in an interesting way with those of Pissarides et al. (2003, chapter 5) and of Azmat et al. (2003) on other aspects of the gender gap, namely in wages and unemployment rates respectively. Pissarides et al. estimate that, having controlled for non-random selection of women in the labor force, the gender pay gap in Spain and Greece is as large as in the UK, despite the fact that Mediterranean countries typically have lower overall wage inequality than Anglo-Saxon countries. Azmat et al. find evidence of a significant residual in the gender unemployment gap in southern Europe, which is not explained by observable characteristics or different

attitudes towards job search of the two genders, but which is nevertheless correlated with attitudes on whether men are more deserving of work than women.

The paper is organised as follows. Section 2 describes my data set. Section 3 documents the extent of job segregation in Europe by characterizing those categories of workers who are more likely to hold atypical jobs, with emphasis on gender and family composition effects. Section 4 aims to determine to what extent actual contract arrangements are mainly driven by employer choices as opposed to men and women preferences for more flexible forms of employment, by looking at job satisfaction indexes. Section 5 concludes.

## **2. The data**

I use data from the European Community Household Panel Survey, whose coverage is currently on 15 EU member states, during six annual waves (1994-1999). This is an unbalanced household-based panel survey, containing annual information on a few thousands households per country.<sup>3</sup> The Employment section of the survey contains information on the type of jobs held by members of the selected households, including working hours and type of contract. Several indices of job satisfaction are also reported, either overall satisfaction or satisfaction with specific job attributes, namely the quality of jobs, working hours, job security and earnings.

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<sup>3</sup> The initial sample sizes are as follows. Austria: 3,380; Belgium: 3490; Denmark: 3,482; Finland: 4,139; France: 7,344; Germany: 11,175; Greece: 5,523; Ireland: 4,048; Italy: 7,115; Luxembourg: 1,011; Netherlands: 5,187; Portugal: 4,881; Spain: 7,206; Sweden: 5,891; U.K.: 10,905. These figures are the number of household included in the first wave for each country, which corresponds to 1995 for Austria, 1996 for Finland, 1997 for Sweden, and 1994 for all other countries.

For the purposes of this analysis I select all employees aged 16-64 with non missing information on the type of employment contract held. Table 1 reports some summary statistics on the distribution of atypical employment contracts across genders.

To obtain data on part-time work, I use information on the number of hours (including paid overtime) that individuals work weekly in their main job, and I define as part-timers those working less than 30 hours. As shown in Table 1, the incidence of part-time is much higher among women than among men. Except in Ireland, part-time incidence among men is everywhere below 5%, while for women it goes from about 9% in Portugal and Finland to 45% in the Netherlands. On average, more women work part-time in central and northern Europe than in the south, while no major geographical pattern can be detected for men.

I next present figures on involuntary part time, including all workers who declare to hold a part-time job because they wanted but could not find a full-time one. When one takes into account the reason why men and women work part-time, a negative cross-country correlation between the use of part-time work and the incidence of involuntary part-time can be detected. In particular, in northern and central Europe part-time work is less likely to be perceived as involuntary than in the south, especially by women. Finland makes an exception to this general rule, behaving more closely to southern than northern European countries.

I finally present data on temporary work, defined as work covered by either a fixed-term contract or no contract at all. The incidence of temporary work varies more across countries than across genders. In all countries considered except Spain, Portugal and Greece, on average slightly less than 10% of employed men hold temporary jobs. This proportion however rises to one fifth in Portugal and Greece, and to over one third in Spain. The relevant figures for women are slightly higher, but replicate quite closely this international pattern.



The ECHPS does not provide information on the reason why individuals hold temporary jobs, although it may be argued that most cases of temporary employment are indeed involuntary, as a permanent contract would be at least as good as a temporary contract from a worker perspective. Aggregate data published by Eurostat however provide information on the proportion of temporary employees who wanted but could not find a permanent job.<sup>4</sup> For both men and women, countries like Finland, Belgium, Spain and Greece have about three quarters of involuntary temporary jobs. For the rest of countries this proportion is substantially lower. Germany seems to be the best performing country, with only 17% and 21% of involuntary temporary work among men and women, respectively.

### **3. The incidence of atypical jobs**

I next use multivariate analysis to look at how women perform relatively to men in their employment characteristics by estimating binary choice models for a number of job attributes. I estimate probit models for the probabilities of working part-time, being an involuntary part-time worker, and holding a fixed-term contract, controlling for a number of individual and job characteristics.

All estimated equations include age and education effects, occupation, sector and year dummies, and control for the family composition of workers and previous unemployment spells. The effect of family characteristics is allowed to differ across genders, to pick up the component of employment arrangements that may be explained by the different family commitments of the two genders. The existence of an unemployment spell just prior to the current job is also controlled for, as women may experience more frequent non-employment

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<sup>4</sup> Note that the selection criteria for Eurostat data are slightly different than the one used for the ECHPS sample. In particular, Eurostat data are for 1999 only and refer to employees aged 25-49.

spells than men, and atypical contracts may be used as a first stepping stone from non-employment into regular employment. Existing evidence for the US indeed shows that atypical employment arrangements (including part-time jobs or fixed-term contracts) tend to be held disproportionately more by those who have suffered a job loss or had spells of inactivity, due to the difficulty in finding regular employment (Farber 1999). Related to this, evidence for Europe suggests that the share of temporary contracts is much higher in the inflow of newly-created jobs than in the existing stock (see Blanchard and Landier 2002 for France and Dolado et al. 2002 and Güell and Petrongolo 2003 for Spain).

One way to effectively summarize these estimates consists in using the marginal effects from probit models to compute the difference in the predicted probabilities of alternative working arrangements for women and men belonging to a number of demographic groups. The groups are: single individuals without kids, married individuals without kids, and married individuals with small kids (at least one aged 0-2 and at least one aged 3-5). Clearly such categories do not represent the whole population of employees, but they are chosen to illustrate in a parsimonious way the effect of family ties on the incidence of different forms of work in male and female employment.

The resulting gender differences are reported in Table 2. The interpretation of the figures reported is as follows. For example, the top left number in Table 2 indicates that in the U.K. single women without kids are 5.5% more likely than single men without kids to hold a part-time job, and this difference is statistically different from zero at the 1% significance level. The gender difference rises to 23.5% for those married without kids, and to 50.1% for those married with small kids.

The first set of results presented in Table 2 shows that in all countries considered women are over-represented in part-time jobs. Among single individuals without kids, gender differences range from 1.5% in Finland to 9.1% in the Netherlands. Such gender

differences rise substantially for those married without kids (above 20% in a number of northern European countries, and 45% in the Netherlands) and even more for those married with kids (again the Netherlands are an outlier here, with a gender difference in predicted probabilities of working part-time of nearly 80%). Overall, the cross-country variation of gender differences is relatively small for workers without family ties, and rises substantially when married workers are considered, especially if they have young kids. In other words, the high incidence of part-time jobs among north-European women documented in Table 1 is largely explained by the presence of family ties. Single women without kids work relatively more similar hours across Europe than those married and/or with small kids.

To address this point more specifically, we can take the gender differential in the incidence of part-time work for those married with kids as the total to be explained by (i) gender, (ii) marital status and (iii) presence of kids. The importance of gender alone (i.e. the ratio between the figure reported in the first row and the corresponding one in the third row) is 5% in Luxembourg, around 10% in U.K. and the Netherlands, and in the range 15-30% or so in all other countries down to Ireland. But it rises to 35% in France and Italy, 54% in Spain and 80% in Portugal. While there is no clear international pattern in the explanatory power of marital status, the presence of small kids explains more than 40% of the gender difference in the incidence of part-time work in the U.K., Sweden, the Netherlands, and more than one third in other northern or central European countries, while it drops below 30% in Spain and Greece, to zero in France and Italy, and goes actually negative in Portugal. It should nevertheless be mentioned however that this figure is also particularly small for non-Mediterranean countries such as Denmark, Germany and Belgium.

The use of part-time work for combining paid work and family or other commitments should be associated with a lower incidence of involuntary part-time, due to the lack of full-time jobs available, rather than the need or the desire to work shorter hours. We would

therefore expect that in countries where family ties explain most of part-time incidence among women, women are less likely to consider themselves involuntary part-timers.

The second panel of Table 2 provides estimates of gender differentials in predicted probabilities of being an involuntary part-timer, conditional on working part-time. Among single women, part-time is more likely to be involuntary than among single men in the UK, France, Italy, Portugal and Greece. In particular, while this difference is around 3% in the UK, it increases to 7% in Italy, 13% in Portugal and Greece and nearly 20% in France. The only country in which single women are significantly less likely to be constrained in the number of hours worked than single men is Ireland.

Among married individuals with kids the gender differential in the probability of being an involuntary part-timer goes negative in most countries except Finland, the Netherlands, Italy and Greece, where it is non-significant, and in Portugal, where it is positive and significant.

The picture that emerges from the estimates of the two part-time equations can be summarized by saying that in northern and central Europe, part-time among women is to a large extent explained by family ties (especially the presence of very young kids) and it is unlikely to be perceived as the consequence of a market constraint on the number of working hours. On the contrary, in southern European countries (including France) the explanatory power of family ties in female part-time employment is lower, and single women are more likely to be involuntary part-timers than single men. These facts are much easier to reconcile with discrimination against women in regular, full-time jobs than with gender differences in preferences or comparative advantages.

The last set of results concerns the incidence of temporary work across genders, based on the same specification of the regression equation as for part-time work. Temporary work is more frequent among single women than single men in Sweden, Finland, Belgium, Austria

and southern Europe. The highest differential effect is found for Spain, at 5.5%, being also the country with the highest overall incidence of temporary work. Being married reinforces this tendency, as the presence of extra family income may make women more willing to accept temporary, less secure jobs. The highest gender difference is detected for Ireland, where married women without kids are about 14% more likely than married men to hold a temporary contract, followed by Spain, with a differential effect of 10%. Among workers with kids, significant gender differences are only detected for Belgium and Ireland. This result bears no clear interpretation in terms of family commitments of women, unless part-time jobs are typically covered by temporary contracts.

I therefore explicitly consider the possibility that the use of temporary and part-time contracts be positively correlated across individuals. It can in fact be argued that temporary contracts are used relatively more to cover part-time rather than full-time jobs, and viceversa. Indeed this is what is found in my data set. A simple cross-country probit regression of the probability of holding a temporary contract on a set of country dummies and a part-time dummy reveals that part-time workers are 12% more likely than full-time workers to hold a fixed-term contract and this effect bears a t-statistic of 55.4. Lack of control for such correlation may bias the coefficients of interest as, for instance, one might obtain a significant gender effect in the fixed-term contract equation simply because women are more likely to work shorter hours and part-time jobs are mostly covered by fixed-term contracts. I therefore estimated the part-time and the fixed-term contract equations simultaneously using a bivariate probit model. The estimated covariance between the error terms of the two equations was positive and significant at the 5% level for all countries considered (except Luxembourg, where it was only significant at the 10% level). Nevertheless, the sign and the significance of the gender and family variables remained largely unchanged from the specifications in which such covariance is not acknowledged.

I run a number of other robustness tests on the estimates of my probit equations for employment arrangements. First, I included interactions between gender and education controls, to account for different returns to human capital for the two genders. Second, I removed job controls, possibly endogenous to the choice of contract. Third, considering that female labor force participation widely differs across the set of countries considered, I run ordered probit equations that include non-employment as an alternative to full-time and part-time work, and to permanent and temporary work, respectively. The results reported here were largely robust to these specification checks.

#### **4. Job satisfaction on atypical jobs.**

Section 2 illustrates that, controlling for a number of individual and job characteristics, women tend to take the larger share of part-time jobs in all countries considered, and of temporary jobs in a smaller subset of countries. An unequal allocation of genders across jobs may stem from productivity differentials, preferences, or employer discrimination. The estimates of the previous section control for comparative advantages by conditioning outcomes on human capital and family characteristics, whose effect on employment arrangements is allowed to differ across genders. In this section I address the issue of workers preferences.

If the observed job allocation meets the preferences of the workers affected (and does not negatively affect their productivity) then one should conclude that workers sort themselves efficiently across jobs. However, we have seen in the previous section that some fraction of female part-time work is indeed involuntary, as a full-time job would have been preferred to a part-time one but was not found. And aggregate Eurostat data give an even stronger picture for temporary work (see Table 1).

In this section I use job satisfaction indicators to infer how worker utility is affected when holding an atypical job. The ECHPS contains detailed information on specific dimensions of job satisfaction (overall job satisfaction, satisfaction with earnings, job security, type of job, working hours, etc.). Each aspect of job satisfaction is measured on a scale from 1 to 5, from very dissatisfied to very satisfied, and corresponding ordered probit equations are estimated, including the usual individual and job characteristics on the right-hand side, plus a part-time and a temporary contract control, each interacted with gender. The results are reported in Table 3.

A clear message from the first three panels of Table 3 is that part-time jobs tend to reduce job satisfaction (overall and with earnings) in southern Europe only (and they actually increase it in some northern European countries), while temporary jobs reduce satisfaction (overall, with earnings and with the type of job) everywhere, but more so in the South than in the North. If anything, the negative effect of holding an atypical contract on satisfaction with earnings is mitigated for women in a few cases.

Features which are most closely related to part-time or temporary jobs, like satisfaction with working hours and job security, are studied in panels 4 and 5 respectively. Concerning working hours, female part-timers in northern Europe are typically more satisfied than male part-timers with shorter working hours, while this only happens in a subset of southern European countries, namely Spain and Greece. As expected, holding a temporary job implies lower satisfaction with job security in all countries considered (and again this effect is stronger in southern Europe), and women are in this case even more negatively affected than males.

The results of this section can be very broadly summarized saying that, as far as job satisfaction is concerned, part-time jobs are generally perceived as good as full-time jobs in central and northern Europe, and even better than full-time jobs by women in a few cases. On

the contrary, in southern Europe they tend to be perceived as inferior. Temporary jobs reduce job satisfaction everywhere, if anything more in the south than in the north. This result is interesting in the light of the recent experiments of flexibility at the margin, implemented in a number of European countries through the introduction of temporary contracts.<sup>5</sup> Increased labor market flexibility does not seem to have come without a cost in terms of job satisfaction, especially as far as job security is concerned.

Furthermore, women's job satisfaction is in a few cases less affected by atypical contracts (when it comes to earnings and working hours, and mostly in northern Europe), and in others more affected (typically when it comes to job security). Overall, there is no widespread evidence that women are systematically happier (or less unhappy) than men on atypical jobs, which means that different gender preferences for work arrangements cannot go a long way in explaining women's over-representation in atypical jobs.

## **5. Conclusions**

This paper has provided detailed evidence on gender job segregation in Europe using data from the ECHPS. Two main results have emerged from this analysis. First, so called atypical jobs such as part-time and temporary jobs display systematic features that make them significantly different from typical jobs. In particular, part-time jobs are dominated by full-time ones in terms of job satisfaction in southern Europe, and temporary jobs are dominated

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<sup>5</sup> During the 1990s, temporary employment growth accounted for around a half of total employment growth in Finland, France, Spain and Portugal, and was actually higher than total employment growth in Germany and Italy (see OECD 2002, chapter 3) – all countries with relatively strict employment protection on permanent contracts (see OECD 1999, chapter 2).



virtually everywhere by permanent jobs, but differences are more marked for southern European countries.

Second, given that women are over-represented in such atypical jobs in most countries considered, systematic features of these jobs may be an important factor of gender discrimination. In particular, I argue that the extent of existing job segregation may be consistent with some underlying gender discrimination in southern Europe, as it is not fully explained by different preferences or productivities of the two genders. By contrast, in central and northern Europe, atypical work is either less widespread (as in the case of temporary work), or seems to better mirror women's preferences for shorter working hours (as in the case of part-time work) and thus should not be perceived as a signal of gender discrimination in the labor market.

An interesting related question is how women in southern Europe may achieve the desired flexibility in working hours, in order to combine paid work and home production, as we have seen that on average 15% of female employees hold part-time jobs in Italy, Spain, Portugal and Greece, against an average of 25% in the rest of the countries considered. The easiest answer is that they tend to be non-employed rather than employed part-time: and indeed female employment rates during 1994-99 are on average 41% in southern Europe and 60% in the rest of the sample, while the difference in male employment rate is not as pronounced. But what is probably less known is the use of other forms of employment across Europe, characterized by relatively flexible hours of work. The first of these is self-employment, a category in which fall 18.3% of employed women in southern Europe, and only 7.2% of employed women in the rest of countries. The second one is unpaid work in the family business, which again concerns 7.3% of employed women in southern Europe and only 1% of women in other countries.

## References

- Akerlof, George A. and Rachel E. Kranton (2000), "Economics and Identity", *Quarterly Journal of Economics* 115, pp. 715-753.
- Altonji, Joseph G. and Rebecca M. Blank (1999), "Race and Gender in the Labor Market", edited by Orley Ashenfelter and David Card, *Handbook of Labor Economics*, Amsterdam: Elsevier, Vol. 3C, pp. 3143-3259.
- Arulampalan, Wiji., Alison L. Booth and Mark L. Bryan, "Training in Europe", mimeo, Department of Economics, University of Essex.
- Azmat, Ghazala, Maia Güell and Alan Manning (2003), "Gender Gaps in Unemployment Rates in OECD Countries", mimeo, CEP, London School of Economics.
- Blanchard, Olivier and Augustin Landier (2002), "The Perverse effects of Partial Labour Market Reform: Fixed-term Contracts in France", *Economic Journal* 122: F214-F244.
- Blau, Francine D. and Lawrence M. Kahn (2003), "Understanding International Differences in the Gender Pay Gap", *Journal of Labor Economics* 21, pp. 106-144.
- Booth, Alison L., Marco Francesconi and Jeff Frank (2002), "Temporary Jobs: Stepping Stones or Dead Ends?", *Economic Journal*, 112: pp. F189-F213.
- Dolado, Juan J., Florentino Felgueroso and Juan F. Jimeno (2002), "Recent Trends in Occupational Segregation by Gender: A Look across the Atlantic", CEPR Discussion Paper No 3421.
- Dolado Juan .J., Carlos García-Serrano and Juan F. Jimeno (2002), "Drawing Lessons from the Boom of Temporary Jobs in Spain", *Economic Journal*, 112: pp. F270-F295.
- Farber, Henry S. (1999), "Alternative and Part-Time Employment Arrangements as a Response to Job Loss", *Journal of Labor Economics* 17, pp. S142-169.

Güell, M. and Petrongolo, B (2003), “How Binding Are Legal Limits? Transitions from Temporary to Permanent Work in Spain”, IZA Bonn Discussion Paper No 782.

OECD (1999), *Employment Outlook*, Paris.

OECD (2002), *Employment Outlook*, Paris.

Pissarides, Christopher A., Pietro Garibaldi, Claudia Olivetti, Barbara Petrongolo and Etienne Wasmer (2003), “Women in the Labor Force: How Well is Europe Doing?”, Report prepared for the fifth Annual European Conference of the Fondazione Rodolfo Debenedetti, Milan.

Thomas, Duncan (1990), “Intra-household Resource Allocation: An Inferential Approach”, *Journal of Human Resources* 25, pp. 635-664.

Table 1  
Summary statistics on male and female employment

	UK	SWE	FIN	DEN	GER	NET	BEL	LUX	AUT	IRE	FRA	ITA	SPA	POR	GRE
<u>Males</u>															
Part-time	3.3	3.8	3.8	2.8	1.7	4.8	2.5	1.8	2.1	7.6	4.3	4.5	2.6	1.4	6.0
Involuntary part-time	24.7	n.a.	28.9	20.4	8.9	13.5	40.9	27.3	18.5	66.0	48.3	26.8	44.6	32.8	43.8
On temporary job	7.4	6.2	12.9	12.2	8.3	8.2	7.8	4.6	7.9	13.5	8.8	12.0	34.9	19.6	22.0
Involuntary temporary job	45.4	54.8	74.1	54.3	16.9	41.8	77.3	n.a.	34.8	64.7	n.a.	51.8	74.8	42.3	74.2
<u>Females</u>															
Part-time	30.2	18.1	9.5	17.0	22.8	45.2	26.9	21.0	24.6	29.2	21.6	21.8	15.4	8.7	15.9
Involuntary part-time	7.3	n.a.	32.5	15.5	5.5	7.8	19.3	8.1	9.8	18.4	40.9	21.0	36.0	36.5	43.6
On temporary job	9.6	7.6	18.2	11.9	9.8	14.3	13.7	7.4	10.3	22.7	10.5	14.6	40.7	22.3	23.9
Involuntary temporary job	30.2	64.8	78.6	57.1	21.3	32.8	70.7	n.a.	38.9	49.6	n.a.	46.7	74.7	41.2	74.4

Notes. All figures reported are %. Definition of variables: *part-time*: normally working less than 30 hours in their main job, as a % of the total number of employees; *involuntary part-time*: whose main reason for working part-time is that they wanted but they could not find a full-time job, as a % of part-time employees; *on temporary contract*: holding a fixed-term contract or no contract at all, as a % of the total number of employees; *involuntary temporary job*: whose main reason for holding a temporary contract is that they wanted but could not find a permanent job, as a % of temporary employees. The information on reason for part-time work is not available for Sweden. The information on reason for temporary work is not available for Luxembourg and France. Source and sample: ECHPS, 1994-1999, employees aged 16-64 (rows 1-3 and 5-7) and Eurostat 1999, employees aged 25-49 (rows 4 and 8).

Table 2  
Female versus male employment characteristics: Differential effects

	UK	SWE	FIN	DEN	GER	NET	BEL	LUX	AUT	IRE	FRA	ITA	SPA	POR	GRE
<i>Incidence of part-time work</i>															
Single, no kids	.055***	.061***	.015*	.043***	.042***	.091***	.071***	.022***	.056***	.056***	.059***	.073***	.045***	.032***	.030***
Married, no kids	.235***	.138***	.034***	.152***	.297***	.457***	.213***	.241***	.166***	.204***	.168***	.130***	.093***	.056***	.067***
Married, with kids	.501***	.220***	.077***	.136***	.314***	.794***	.228***	.367***	.252***	.281***	.165***	.135***	.131***	.040***	.095***
<i>Incidence of involuntary part-time work</i>															
Single, no kids	.029**	-	.084	-.009	-.044	.018	.052	-	.013	-.081**	.193***	.067**	.063	.128**	.132**
Married, no kids	-.145***	-	.002	.031	-.044	-.068***	-.185**	-	.032	-.452***	.139**	-.185***	-.213***	-.017	-.111
Married, with kids	-.237***	-	.010	-.127**	-.155***	-.090	-.44***	-	-.110**	-.695***	-.542***	-.068	-.420**	.558**	-.073
<i>Incidence of temporary work</i>															
Single, no kids	.002	.014*	.048**	.020	.001	-.008	.039**	-.002	.017**	.046***	.004	.020**	.055***	.024**	.025***
Married, no kids	.009*	.001	.034**	-.022**	-.003	.055***	.032**	.017	.01	.142***	.044***	.014**	.103***	.044***	.040**
Married, with kids	.027*	.034	.014	.024	-.035	.011	.071**	.025	.021	.102**	.017	-.007	.051	.023	.008

Notes. The figures reported are differences between females' and males' predicted probabilities of working part-time, being an involuntary part-timer and working on a temporary job for the demographic groups listed in the first column. The figures are based on estimates of probit models including: one gender dummy, two dummies for marital or cohabitation status (interacted with gender), the presence of kids aged 0-2, 3-5, 6-10 and 11-15 respectively (interacted with gender), age and its square, 2 education dummies, 9 occupation dummies, 2 industry dummies, one dummy for public sector and year dummies. No results are reported for Sweden and Luxembourg on involuntary part-time, due to missing information and small sample size respectively. Significance at 1%, 5% and 10% is denoted by \*\*\*, \*\* and \* respectively. Source: ECHPS.

Table 3:  
Job satisfaction on part-time and temporary contracts

	UK	FIN	DEN	GER	NET	BEL	LUX	AUT	IRE	FRA	ITA	SPA	POR	GRE
<i>(1) Overall job satisfaction</i>														
Part-time	.154***	-.178*	.191*	-.093	-.065	-.159*	.412	-.058	-.128**	.026	-.114**	-.167***	-.161*	-.204***
Part-time * F	.038	.032	-.094	.111	.123**	.220**	-.388	.144	.045	-.057	.009	.064	-.233**	.136**
Temp.	-.217***	.000	-.147***	-.220***	-.125***	-.099*	-.038	-.217***	-.301***	-.106***	-.449***	-.257***	-.353***	-.715***
Temp * F	.028	.079	.196***	.071	.055	.111	-.039	.014	.140**	.015	.078*	.015	.006	.040
No. Obs.	24013	7819	9092	7561	19491	8734	1770	14095	10017	20781	23785	21208	20621	12030
<i>(2) Satisfaction with earnings</i>														
Part-time	-.054	-.152*	.220**	-.061	-.061	.005	-.399	.017	-.016	-.131***	-.357***	-.369***	-.415***	-.383***
Part-time * F	.234***	-.016	.001	.055	.090*	.044	.439	.006	-.050	.093*	.151***	.253***	.000	.129*
Temp.	-.305***	-.171***	-.232***	-.206***	-.202***	-.145***	-.022	-.109**	-.160***	.007	-.333***	-.213***	-.124***	-.446***
Temp * F	-.007	.064	.206***	.177**	.106**	.083	.036	-.065	.106*	-.149***	.085**	.059*	-.044	.037
No. Obs.	16259	7818	9175	7559	19448	8792	1770	14079	10011	20797	23781	21250	20614	12037
<i>(3) Satisfaction with type of job</i>														
Part-time	.005	-.129	.249**	-.069	-.135***	-.028	-.040	-.003	-.098	.041	-.007	-.053	.065	.078
Part-time * F	.017	-.053	-.167	-.007	.056	.079	.139	.042	-.019	-.034	.017	-.032	-.345***	.039
Temp.	-.181***	-.025	-.129**	-.112**	-.122***	-.032	.031	-.154***	-.321***	.000	-.350***	-.194***	-.250***	-.590***
Temp * F	.028	.016	.177**	.060	.000	.117	.153	-.021	.091	.031	.077*	-.069**	.008	.150***
No. Obs.	26353	7812	9174	7548	19486	8781	1766	14077	9996	20801	23777	21254	20617	12037
<i>(4) Satisfaction with working hours</i>														
Part-time	.040	-.299***	-.057	.026	.069	.082	-.149	.403***	-.100	.150**	.177***	-.095	-.185**	.326***
Part-time * F	.407***	-.040	.529***	.299**	.229***	.307***	.591	-.137	.343***	-.011	.072	.154**	-.107	.124*
Temp.	-.037	.036	-.041	-.143***	-.006	-.001	.113	-.127***	-.226***	-.001	-.336***	-.190***	-.104***	-.537***
Temp * F	-.083*	-.098	-.143*	.145*	-.122**	.010	-.078	-.094	-.081	-.144**	.063	-.032	-.004	.086*
No. Obs.	26354	7818	9166	7550	19486	8773	1766	14077	9972	20801	23741	21240	20617	12037
<i>(5) Satisfaction with job security</i>														
Part-time	.133**	-.139	-.102	-.054	-.109**	-.036	-.08	-.058	-.072	-.037	-.175***	-.305***	-.253***	-.118**
Part-time * F	-.017	.091	.040	.209	.066	.047	.174	-.036	-.029	-.012	.035	.232***	.084	.167**
Temp.	-.845***	-.1033***	-.985***	-.523***	-.1095***	-.730***	-.819***	-.535***	-.1208***	-.1106***	-.1122***	-.1206***	-.934***	-.1337***
Temp * F	-.068	-.326***	-.265***	-.185**	-.127**	-.065	.404*	-.322***	-.155***	-.369***	.069	-.104***	-.136***	-.099**
No. Obs.	26226	7806	9169	7558	19440	8782	1769	14080	9995	20789	23782	21255	20613	12037

Notes. The figures reported are the coefficients obtained from ordered probit regressions for levels of subjective job satisfaction. The estimated equations also include: one gender dummy, two dummies for marital or cohabitation status (interacted with gender), the presence of kids aged 0-2, 3-5, 6-10 and 11-15 respectively (interacted with gender), age and its square, 2 education dummies, 9 occupation dummies, 2 industry dummies, one dummy for public sector and year dummies. No results are reported for Sweden as information on job satisfaction is not available. Significance at 1%, 5% and 10% is denoted by \*\*\*, \*\* and \* respectively. Source: ECHPS.