



Working Paper Series

**Does Part-Time Employment Widen the
Gender Wage Gap? Evidence from Twelve
European Countries**

Eleonora Matteazzi

Ariane Pailhé

Anne Solaz

ECINEQ WP 2013 – 293

Does Part-Time Employment Widen the Gender Wage Gap? Evidence from Twelve European Countries ^{*}

Eleonora Matteazzi[†]

University of Verona

Ariane Pailhé

Anne Solaz

INED

Abstract

One of five workers work part-time in Europe, mainly women. This article examines the extent to which the overrepresentation of women in part-time employment explains the gender hourly earnings gap in twelve European countries. Using the EU-SILC 2009 data, a double decomposition of the gender wage gap is implemented: between men and women employed full-time and between full-time and part-time working women. The high prevalence of part-time employment plays only a minor role. The nature of part-time employment and labor market segregation are much more important factors. A large share of the gender wage gap still remains unexplained, however.

Keywords: labor force participation, working hours, wage gap, decomposition, segregation, part-time

JEL Classification Codes: C31, C49, J21, J22, J24, J31, J71

^{*} We gratefully acknowledge the helpful comments of Dominique Anxo, Francesca Bettio, Dominique Meurs, Ronald L. Oaxaca, Sophie Ponthieux, and participants at the GINDHILA workshop on Economics of Gender (Nice, June 2012). The authors acknowledge financial support from ANR-GINDHILA.

[†] **Contact details:** Eleonora Matteazzi (corresponding author): University of Verona; Via dell'Artigliere 8, 37129 Verona, Italy, email: eleonora.matteazzi@univr.it. Ariane Pailhé: INED; 133 boulevard Davout, 75980 Paris Cedex 20, France, email: ariane.pailhe@ined.fr. Anne Solaz: INED; 133 boulevard Davout, 75980 Paris Cedex 20, France, email: anne.solaz@ined.fr.

I. Introduction

Despite a slight improvement in most European countries (OECD 2012), there is still a substantial gender earnings gap throughout Europe. It is especially large in countries such as Germany, the United Kingdom, Austria, and Finland where women's median gross earnings are about 20% lower than men's. To address this persistent inequality (Blau and Kahn 2000; Meurs and Ponthieux 2006; Plantenga and Remery 2006), the European Employment Strategy has focused on closing the gender pay gap since 1999, and policy efforts have intensified over the years. Increasing female labor market participation is another issue on the European political agenda. In order to reach this objective and combat the decrease in fertility, governments are being encouraged to implement policies facilitating greater reconciliation between work and family life, in particular to enhance part-time employment. However, developing part-time employment and reducing the gender gap are different objectives that may conflict each other.

Part-time employment has become widespread in Europe over recent decades. On average, one in five workers worked part-time in the EU-27 in 2009, compared with 16% ten years before. However, there are wide variations across European countries in the proportion of part-timers, ranging from 2% in Bulgaria to 48% in the Netherlands (Eurostat, 2009), but in all countries most part-timers are women. Hence, on average, women's part-time employment rate (32%) is four times that of men (8%) (Eurostat 2009).

On the macro level, we observe a positive correlation between level of female part-time employment and the gender wage gap (see Figure A1 in Appendix). The gender wage gap tends to be wider in countries where female part-time employment is higher, such as Austria, Germany, and United Kingdom, and narrower in Southern European countries where female part-time employment is low. The difference in working time between men and women, and in particular the increasing proportion of women working part-time, has been identified in some European countries as a key factor explaining the gender hourly pay differential in 2000 (Meurs and Ponthieux 2004, 2006). However, apart from this study, not much attention has been devoted to the role of part-time employment as a cause of the gender wage gap. Generally, analyses dealing with the contribution of part-time employment to wages inequalities concentrate on the part-time wage penalty among female workers (Manning and Petrongolo 2008, Bardasi and Gornick 2008). The central issue addressed in this article is the following: given that part-time jobs are generally lower paid and that women are overrepresented in part-time jobs, is part-time employment a major cause of gender wage gap? Does it outweigh many others causes such as lower female work experience, weaker

returns to women's work and skills, occupational segregation of women's jobs, or discrimination in the workplace ?

This comparative study takes advantage of the varying prevalence of part-time jobs across Europe to measure on the micro level the contribution of part-time employment to the gender wage gap. This analysis focuses on three specific issues: i) since part-time and full-time workers usually have different profiles in terms of characteristics and, also, preferences for work and leisure (Robertson 1989; Sadler and Aungles 1990), this study will analyze the effect of the double selection, first into employment - female labor market participation also differs considerably within Europe - and then, for labor market participants, the selection into part-time employment. ii) Since part-time employment is unevenly distributed across industrial sectors and occupations (Meulders and Plasman 1993; Smith, Fagan, and Rubery 1998; Matteazzi, Pailhé, and Solaz 2012), part-time workers being usually concentrated in less valued occupations, this study will also analyze the role of segregation of part-time employment in explaining the gender wage gap. iii) Since the observed raw pay differential between genders is not entirely explained by differences in human capital or workplace characteristics between men and women (Rice 1999; Blau and Kahn 2000; Rubery, Grimshaw, and Figueiredo 2002; Kabeer 2008), this study will measure the unexplained part of the gender wage gap and look for evidence of any wage premiums or penalties.

This article is structured as follows. Section II outlines the literature on the gender wage gap. Section III describes the EU-SILC data and the econometric methodology adopted. Section IV discusses main findings and section V concludes.

II. Literature Review: Gender Wage Gap and Part-time Employment

Several reasons have been advanced in the literature to explain the observed and persistent gender pay differential, often attributed to the gender bias of responsibilities and obligations resulting from motherhood. First of all, gender differences in pay may be due to differences in individual characteristics such as age, training, education, and experience. For instance, the gender pay gap is much lower for new labor market entrants and tends to widen with age (European Commission 1998; Barry et al. 2001). In terms of education, the choice of subjects studied matters in explaining the gender earnings difference (Machin and Puhani 2003; Chevalier 2007; McDonald and Thornton 2007; Lin 2010). Women tend to invest in subjects, i.e. teaching and humanities, characterized by very low wage returns (Livanos and Pouliakas 2012). Furthermore, women experience many more career breaks over their working life than

men in order to take care of children or elderly parents. Career breaks that reduce labor market experience negatively affect women's wages (Waldfogel 1997; Beblo and Wolf 2002; Meurs, Pailhé, and Ponthieux 2010). In addition, women are more likely to opt for a shorter or flexible working schedule, such as a part-time employment, because of family responsibilities. This choice could also lead to lower wages.

Secondly, an important determinant of the gender wage gap is labor market segregation (Blau 1977; Bielby and Baron 1984; Fields and Wolff 1995; Macpherson and Hirsch 1995; Carrington and Troske 1998; Bayard et al. 2003; Meurs and Ponthieux 2005), i.e. the clustering of women and men into separate occupations and industries. Traditional occupations or sectors where women represent the vast majority of employees are poorly paid. And even within these branches of economic activity women are paid less than their male colleagues (Meyersson et al. 2001).

The extent of the gender wage gap may also depend on the wage structure: a more compressed wage structure is likely to reduce the gender pay gap. Countries with relatively high returns to skills and experience and a relative large wage dispersion will tend to have larger gender pay gaps, all other things being equal (Blau and Kahn 2000). Moreover, the gender pay gap is smaller in the public sector (Skyt Nielsen et al. 2004). This may be related to its typically more compressed wage structure. In addition, the public sector may be more committed to applying equal opportunities policies in recruiting and promoting employees than the private sector (Barry et al. 2001). Centralized systems of wage setting could help to narrow the gender differential in earnings. The same goal could be achieved by introducing a minimum wage or raising the minimum pay level. In general, the male wage distribution lies above that of females and the gender wage gap tends to be higher at the bottom of the wage distribution. Several empirical studies have shown that the existence of a minimum wage tends to compress the bottom of the distribution, diminishing the sticky floor effect (Blau and Kahn 2000; Ganguli and Terrell 2006).

However, in general, the observed raw pay differential is not entirely explained by differences between men and women in human capital or workplace characteristics. There exists an unexplained part of the gender pay differential that may be the result of an incomplete identification of relevant explanatory variables or gender discrimination (Blau and Kahn 1996, 1997, 2000; Rice 1999; Rubery et al. 2002; Kabeer 2008). Gender discrimination may come from pure discrimination (Becker 1957) or stereotypes (Phelps 1972), and occur in various ways: different wages for the same job, barriers to career opportunities and advancements because of gender or because women are seen as potential

mothers (Goldberg Dey and Hill 2007), occupational segregation (Filer 1985), etc. Some researchers refer to differences in occupations between women and men as the selection effect (Petersen and Snartland 2004). The selection effect means not only that women self-select into certain types of occupations (Filer 1985; Skyt Nielsen et al. 2004; Bender et al. 2005), but also that employers favor men by not adapting work conditions to suit both male and female workers.

In spite of the fact women hold the majority of part-time jobs, not much attention has been devoted to studying the role of part-time employment in explaining the gender wage gap. Meurs and Ponthieux (2006) focused on the evolution of the wage gap in France between 1990 and 2002. They found that, regardless of the year in this period, 60% of the explained part of the gender wage gap is due to the length of working hours. In other words, part-time employment is a key factor in explaining the gender wage gap. Indeed, part-time workers are often treated unfairly with respect to colleagues employed full-time in equivalent jobs. More precisely, they may be ineligible for certain social benefits (Houseman and Osawa 1998)¹, their career prospects are more limited (Tilly 1990), and their hourly wages are lower (Gornick and Jacobs 1996; Fagan and O'Reilly 1998; McGinnity and McManus 2007).

The literature gives several possible explanations for the existence of a full-time/part-time pay differential. Firstly, differences in preferences for work and leisure: women with young children, students or semi-retired people are probably more inclined to work part-time (Robertson 1989; Sadler and Aungles 1990). Secondly, differences in skills and human capital: part-time workers are more likely to have less work experience (Blank 1998) and, as a result, may be less productive. Thirdly, part-time workers are less likely to be unionized (Owen 1979; Belous 1989; Riley 1997). Fourthly, part-time workers are more concentrated in poorly paid occupations (Meulders and Plasman 1993; Smith, Fagan, and Rubery 1998). Finally, the full-time/part-time wage gap may be explained by the existence of fixed employment costs (Oi 1962; Montgomery 1988; Hamermesh and Rees 1993; Lindbeck and Snower 2000) that are proportional to the number of workers but independent of the number of hours worked.

Empirical analysis has shown that part-timers usually have lower hourly earnings than full-timers, even after controlling for several individual characteristics. Jepsen, O'Dorchain, Plasman, and Rycx (2005) estimated the wage gap between part-time and full-time work for

¹However, this explanation does not hold in Europe where part-time workers, as well as full-time workers, enjoy the basic social protections such as health and disability insurance, unemployment insurance, pension entitlements, etc.

Belgian women and found evidence of a part-time wage penalty in 1995. Manning and Petrongolo (2008) pointed out a part-time wage penalty for British women in 2001-2003. Fernández-Kranz and Rodríguez-Planas (2009) found that the part-time pay penalty is larger and more persistent for Spanish women with fixed-term contracts in 2006. Bardasi and Gornick (2009), using the Luxembourg Income Study for the mid-1990s, found a part-time wage penalty among women working part-time in the United Kingdom, Germany and Italy. A more recent study of Matteazzi, Pailhé, and Solaz (2012), based on EU-SILC data for the year 2009, showed that labor market segregation and selection play a major role in explaining the hourly wage gap between full-time and part-time working women in Austria, Italy, Poland, and United Kingdom. However, they did not find evidence of a part-time wage penalty after controlling for workplace characteristics.

III. Data and Estimation Methodology

In this section, the data and estimation methodology used to evaluate the contribution of part-time employment to the gender wage gap are described, with special attention to the role of sample selection and labor market segregation.

A. Data

The empirical analysis is based on data provided by the European Union Statistics on Income and Living Conditions (EU-SILC, Eurostat). The EU-SILC collects comparable cross-sectional and longitudinal microdata for all EU-27 Member States. Cross-sectional data for the year 2009 are used. The cross-sectional files contain a larger set of information on working conditions, such as the number of persons working at the local unit, being in a managerial position with supervisory responsibility, and the economic sector of the local unit, crucial information for gains equations which is not available (and not recorded) in the longitudinal files.

The sample comprises prime age women and men aged 25-59 living in Austria, Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Poland, Spain, and the United Kingdom. The selected countries are representative of the considerable European heterogeneity in terms of female labor market participation, incidence of part-time employment, size of the gender wage gap, and labor market structure. Persons who are unemployed, students, retired, self-employed, permanently disabled or/and unfit to work,

women and men in the armed forces, family workers, and observations with missing data are excluded². Because of their limited number, men working part-time (just 3.5% overall) are also excluded. The country sample size ranges from 2,315 observations for Denmark to 11,741 observations for Italy. The sample includes a total of 68,946 European workers.

The available information is very extensive, both at the household and individual level. Regarding the work schedule, the dataset provides information about the number of hours usually worked per week at the time of interview, including also overtime, either paid or unpaid, which the person normally works³. Following the Eurostat guidelines (2010), full-time and part-time employment are defined on the basis of the spontaneous answer given by the respondent rather than the actual number of hours worked.

Earnings are computed on the basis of the gross employee cash or near cash annual income in the main and any secondary or casual jobs, before tax and social contributions are deducted. It includes wages and salaries, usual paid overtime, tips and commission, supplementary payments, profit sharing or bonuses paid in cash, additional payments based on productivity, etc. Gross employee income refers to the income reference period, in general the preceding calendar year. The number of months spent in full-time employment, part-time employment, and inactivity corresponding to the income reference period is also available. Thus, the gross hourly wage is computed as the ratio between gross monthly earnings (obtained by dividing the employee gross cash or near cash annual income and the number of months spent in employment) and the number of hours usually worked per month (recalculated from number of weekly hours)⁴. Note that there might be a lag between the end of the income reference period and the time of the interview for current variables. This time lag could weaken the match between labor income (that refers to a past period) and the number of hours usually worked per week (that refers to the current situation). For these reasons, some observations are dropped when computing the hourly wage: i) workers who

²Student workers employed in an internship or a casual, part-time, or temporary job during their academic studies, and retired workers who can continue to work, mainly on a part-time and temporary basis, to supplement their retirement pension are also excluded from the sample.

³Workers who reported working less than 5 hours per week or more than 60 hours per week are excluded. For workers with missing values for hours worked per week the average weekly working hours are imputed, distinguishing by country, sex and full-time/part-time status. In the selected sample, there are some workers who declared having a full-time job and working less than 30 hours per week. Most of them report being in education and working as professional, technician or associate professional. The hourly wage could be over-estimated in this case. So for full-time workers who report: i) working less than 30 hours per week, ii) being in education and iii) working as a professional, technician or associate professional, reported hours are corrected by imputing the average weekly working hours of full-time workers in the country.

⁴We dropped the top and the bottom 1 percent of the wage distribution in order to limit the influence of extreme values.

have changed job since the previous year⁵ (5.4% of observations); ii) workers who worked some months full-time and some months part-time during the income reference period (3.9%); iii) workers who spent the last 12 months in full-time employment and now are not in a full-time job (4.5%); iv) workers who spent the last 12 months in part-time employment and now are not in a part-time job (4.8%); v) workers who were inactive for the last 12 months and are now working (4.7%); vi) workers who had more than one job during the income reference period (4.5%). The sample thus over-represents workers who are stable in their working status over the year, since the most precarious workers holding temporary or transitory jobs are probably excluded⁶. This could be a limitation, but it allows analyzing the effects of structural part-time jobs on wages, without mixing them with those created by job insecurity. Despite these limits, EU-SILC is the only database that allows us to analyze full-time and part-time European hourly wages in a comparative manner.

B. Estimation Methodology

In order to evaluate the specific contribution of part-time employment to the gender wage gap, the originality of our approach is to decompose the gender wage gap into two components: first, the wage differential between men and women who are in full-time jobs and, second, the wage differential between full-time and part-time working women. We follow Meurs et al.(2010) who applied this double decomposition and used women without career breaks as the intermediate group. In our case, the intermediate group is represented by women employed full-time. Thus the gender wage gap is decomposed into two earnings differentials, a full-time gender wage gap and a female full-time/part-time wage gap, as follows:

$$\bar{y}_m^{FT} - \bar{y}_f = \bar{y}_m^{FT} - [(1 - k)\bar{y}_f^{FT} - k\bar{y}_f^{PT}] = (\bar{y}_m^{FT} - \bar{y}_f^{FT}) + k(\bar{y}_f^{FT} - \bar{y}_f^{PT}), \quad (1)$$

where \bar{y}_m^{FT} , \bar{y}_f^{FT} , \bar{y}_f^{PT} , \bar{y}_f are the predicted mean log hourly wages for men working full-time, women working full-time, women working part-time, and all women, respectively. k denotes the share of women working part-time among all working women. The first pay

⁵ According to Eurostat guidelines, for employees, a change of job means a change of employer, not moving from one set of duties to another with the same employer. Nevertheless, a change of contract with the same employer is considered as a change of job.

⁶To check robustness of our results, for those countries with available information on monthly labor income the hourly wage is also computed as the ratio between gross monthly earnings and the number of hours usually worked per month (recalculated from the number of weekly hours). Decomposition results are presented further.

differential on right-hand side of equation (1) is the full-time gender pay differential. The second one is the female full-time/part-time pay gap weighted by k .

In the empirical analysis, we proceed by steps. In a first step, we consider the sample selection problem. There is reason to believe that, in some countries, the selection of women into employment and, more specifically, into full-time or part-time work is endogenous. In other words, the self-selection of women into employment status depends not only on observed characteristics (such as human capital indicators, workplace characteristics, etc.), but also on unobserved individual characteristics (such as ability, motivation, commitment and effort, values about motherhood, etc.) affecting both the decision to work, either part-time or full-time, and individual earnings. So, we start by modeling the female choice with respect to the status in employment, i.e. inactivity, part-time employment, and full-time employment⁷, as an ordered probit model (see also Ermish and Wright 1993)⁸. What we can observe is a variable z that takes the value 0 if a woman is inactive, 1 if she is employed part-time, and 2 if she is employed full-time. Let us define z^* the latent unobserved variable,

$$z^* = w' \gamma + u \quad (2)$$

where w is a vector of exogenous variables (w does not contain a constant⁹), γ is a parameter vector, and u is the error term assumed to be normally distributed with mean 0 and variance 1. We have

$$z = \begin{cases} 0 & \text{if } z^* \leq \alpha_1 \\ 1 & \text{if } \alpha_1 < z^* \leq \alpha_2 \\ 2 & \text{if } z^* > \alpha_2 \end{cases} \quad (3)$$

where the unknown cut points α_1 and α_2 , with $\alpha_1 < \alpha_2$, are estimated together with parameters vector γ . For inactive women ($z = 0$) we have $u \leq \alpha_1 - w' \gamma$, for women working part-time ($z = 1$) we have $\alpha_1 - w' \gamma < u \leq \alpha_2 - w' \gamma$, and for women employed full-time ($z = 2$) we have $u > \alpha_2 - w' \gamma$. It is straightforward to derive the response probability:

⁷There are broad disparities in terms of women's labor market participation and part-time employment across the selected European countries (see Table A1).

⁸We do not perform the same type of analysis for men because very few men are in part-time employment or inactive.

⁹Suppose that vector w also includes a constant term γ_0 . Then γ_0 and the unknown cut points α_1 and α_2 are not individually identified. What we can identify is the difference $(\alpha_1 - \gamma_0)$ and $(\alpha_2 - \gamma_0)$. The model is usually identified by setting $\gamma_0 = 0$ or $\alpha_1 = 0$. We set $\gamma_0 = 0$.

$$\begin{aligned}
P(z = 1|w) &= P(z^* \leq \alpha_1 | w) = \Phi(\alpha_1 - w'\gamma) \\
P(z = 2|w) &= P(\alpha_1 < z^* \leq \alpha_2 | w) = \Phi(\alpha_2 - w'\gamma) - \Phi(\alpha_1 - w'\gamma) \\
P(z = 3|w) &= P(z^* > \alpha_2 | w) = 1 - \Phi(\alpha_2 - w'\gamma)
\end{aligned} \tag{4}$$

In the second step, log wage equations for $j = m, f$ (male and female, respectively) and $z = PT, FT$ (part-time and full-time employment, respectively),

$$y_j^z = x' \beta_j^z + \sigma_j^z \rho_j^z \lambda_j^z + \varepsilon_j^z = x' \beta_j^z + \delta_j^z \lambda_j^z + \varepsilon_j^z, \tag{5}$$

are estimated by Ordinary Least Squares. The outcome variable y_j^z is the logarithm of the hourly market wage. The vector x includes exogenous independent variables and β_j^z is the parameters vector associated with independent variables for each alternative (j, z) . λ_j^z is the selection-correction term computed from estimates obtained in the first step, more precisely:

$$\lambda_j^z = \begin{cases} \frac{\phi(\hat{\alpha}_1 - w'\hat{\gamma}) - \phi(\hat{\alpha}_2 - w'\hat{\gamma})}{\Phi(\hat{\alpha}_2 - w'\hat{\gamma}) - \Phi(\hat{\alpha}_1 - w'\hat{\gamma})} & \text{if } z = PT \\ \frac{\phi(\hat{\alpha}_2 - w'\hat{\gamma})}{1 - \Phi(\hat{\alpha}_2 - w'\hat{\gamma})} & \text{if } z = FT \end{cases} \tag{6}$$

Where ϕ denotes the normal density function and Φ the normal cumulative distribution function. Clearly, for men $\lambda_m^z = 0$ because we do not account for the sample selection effect. $\delta_j^z = \sigma_j^z \rho_j^z$ is the parameter associated with the selection-correction term, where ρ_j^z is the correlation between the error terms in the selection and in the outcome equations. If the coefficient δ_j^z is significantly different from zero, this means that the selection of employment status is endogenous (i.e., the error terms in the selection and in the wage equations are correlated). This means that unobserved characteristics affecting female participation in paid employment are also correlated with individual market wage. A positive selection effect (i.e., $\delta_j^z \lambda_j^z > 0$) means that unobservable factors which increase the likelihood of full-time or part-time participation tend to be associated with a higher wage. A negative selection effect (i.e., $\delta_j^z \lambda_j^z < 0$) indicates that a higher participation probability in full-time or part-time employment is related to an above average wage. ε_j^z are error terms assumed to be normally distributed with mean 0 and variance $(\sigma_j^z)^2$.

In the third step, we decompose each of the two wage gaps using the Neuman-Oaxaca procedure (2004). The procedure divides each wage differential into three parts: i) an

“explained part” that is the part of the raw wage differential due to different observable characteristics between groups of workers (i.e., men versus women in full-time jobs and women in full-time jobs versus women in part-time jobs); ii) an “unexplained part” that is the part of the raw wage gap due to different returns to identical characteristics, unobserved heterogeneity, or omitted variables; iii) the “selection part” that is the part of the raw pay differential due to self-selection of women into full-time or part-time employment and unobserved heterogeneity. As regards the full-time gender wage gap, the two-fold decomposition, formulated from the viewpoint of women in full-time employment, is expressed as follows:

$$\bar{y}_m^{FT} - \bar{y}_f^{FT} = (\bar{x}_m^{FT} - \bar{x}_f^{FT})\hat{\beta}^* + \bar{x}_m^{FT}(\hat{\beta}_m^{FT} - \hat{\beta}^*) + \bar{x}_f^{FT}(\hat{\beta}^* - \hat{\beta}_f^{FT}) + (-\hat{\lambda}_f^{FT}\hat{\delta}_f^{FT}) \quad (7)$$

As regards the female full-time/part-time wage gap, the two-fold decomposition formulated from the viewpoint of women in part-time employment is:

$$\bar{y}_f^{FT} - \bar{y}_f^{PT} = (\bar{x}_f^{FT} - \bar{x}_f^{PT})\hat{\beta}^* + \bar{x}_f^{FT}(\hat{\beta}_f^{FT} - \hat{\beta}^*) + \bar{x}_f^{PT}(\hat{\beta}^* - \hat{\beta}_f^{PT}) + (\hat{\lambda}_f^{FT}\hat{\delta}_f^{FT} - \hat{\lambda}_f^{PT}\hat{\delta}_f^{PT}). \quad (8)$$

\bar{y}_j^z are the predicted mean log hourly wage, \bar{x}_j^z and $\bar{\lambda}_j^z$ are the mean vectors of workers’ characteristics and selection correction-terms, respectively, $\hat{\beta}_j^z$ and $\hat{\delta}_j^z$ are estimated returns to wage determinants, and $\hat{\beta}^*$ is the nondiscriminatory wage structure obtained from a pooled regression over all groups of workers, i.e. men and women working both full-time and part-time (Neumark 1988)¹⁰. The first term on the right-hand side of equations (7) and (8) is the explained part of the wage differential, the second and third terms represent the unexplained part, whereas the fourth term is the selection effect. Let us consider wage gap decomposition (7). If the second term is positive it means that men enjoy a pay premium because the returns of their characteristics are higher than average returns. On the contrary, a negative value for the second term means that a wage penalty exists for men. Conversely, concerning the third term, a positive value means that full-time women face a wage penalty while a negative value signifies a wage premium. This interpretation of the signs of the two terms in the unexplained part is also valid for wage decomposition (8).

¹⁰ Other authors suggest using as an estimate of non-discriminatory parameters the average coefficients over both groups (Reimers 1983) or a weighted sum of groups coefficients where the weights are given by group sizes (Cotton 1988). Alternatively, we can use the coefficients estimated for a particular type of worker, generally discriminated in the labor market (Oaxaca 1973).

In the empirical analysis we estimate two different specifications of equation (5) and, as a consequence, we perform two different wage gap decomposition analyses (7) and (8). As for the first specification, exogenous variables included in log wage equations are education levels (three categories are defined: lower secondary education at most, upper secondary education at most, and tertiary education, with the first being chosen as the reference category), a second order polynomial of labor market experience¹¹ (information on labor market experience is not well reported for Denmark, Finland, the Netherlands, Norway, and the United Kingdom. For these countries we computed potential experience measured by the formula "age –number of years in education–6"), and individual and household characteristics, such as country of birth (dummy variable equal to 1 if the country of birth is the country where she lives), region of residence¹² (dummy variables), and the degree of urbanization of area of residence¹³ (dummy variable equal to 1 if densely populated or intermediate area). For Denmark, Finland, the Netherlands, Norway, and the United Kingdom only, the number of children by age group (we distinguish between children aged 0-5, children aged 6-11, and children aged 12 and above) is included in log wage regressions because real labor market experience is not available in the dataset and we have reason to believe that computed potential experience is likely to overestimate women's real labor market experience because it does not consider child-related career interruptions. At this stage, our objective is to evaluate the contribution of sample selection to the pay differentials. We expect to find a positive and significant selection effect, mainly for full-time women and in those countries where female labor force participation is low. We are also interested in measuring the part of the wage gap explained by human capital indicators and individual and household characteristics, and whether pay differences, premiums or penalties, remain after controlling for these variables.

In the second specification we add job-related variables such as occupation (six dummies coded under the ISCO-88 (COM) International standard Classification of Occupations with legislators, senior officials, managers and professionals workers as the reference category¹⁴), being in a managerial position with supervisory responsibility (dummy variable equal to 1 if

¹¹Experience is measured by self-reporting real experience on the labor market with no distinction between part-time and full-time work.

¹²Regions are not defined for Denmark, Germany, the Netherlands, Norway, and the United Kingdom.

¹³The information is not available for Norway.

¹⁴ Definition of categories: 1 = legislators, senior officials and managers; professionals. 2 = technicians and associate professionals. 3 = clerks. 4 = service workers and shop and market sales workers. 5 = skilled agricultural and fishery workers; craft and related trades workers; plant and machine operators and assemblers. 6 = elementary occupations.

the worker has supervisory responsibility), type of contract (dummy variable equal to 1 for a permanent contract), economic sector of the local unit (nine dummies coded according the NACE Rev. 2 Statistical Classification of Economic Activities, with agriculture forestry and fishing; mining and quarrying; manufacturing; electricity, etc.; water supply, etc. as the reference category¹⁵), and firm size (dummy variable equal to 1 if the local unit has more than 11 employees)¹⁶. The objective here is to measure the contribution of labor market segregation in explaining the pay gaps. In the decomposition analysis, vertical and horizontal segregation are distinguished. By vertical segregation we mean better career opportunities (for advancement and wages) and higher paid positions for some workers. As proxy of vertical segregation, we include the occupation and being in a managerial position. Horizontal segregation refers to the situation where a certain type of worker is concentrated in certain sectors of economic activity, in certain types of firms, and in a particular type of contract. The firm size, the type of contract, and the economic activity of the firm are used as indicators of horizontal segregation. We expected labor market segregation to decrease penalties for women, and even more for part-timers, given their concentration in low paid sectors and less valued occupations.

To explain participation in employment and not wages we use the following instruments: annual amount of other household incomes (including income from rental of a property or land, interest, dividends, profit from capital investments in unincorporated business, housing allowances, alimonies, and partner's labor income if a partner is present), the number of children by age group¹⁷, and availability of unpaid childcare¹⁸ (dummy variable equal to 1 if unpaid care outside parents is available). The number of children by age group and other

¹⁵ Definition of categories: 1 = agriculture forestry and fishing; mining and quarrying; manufacturing; electricity, etc.; water supply, etc. 2 = construction; transport and storage. 3 = wholesale and retail trade, etc. 4 = accommodation and food services activities. 5 = information and communication; financial and insurance activities. 6 = real estate activities; professionals, etc.; administrative and support service activities. 7 = public administration and defence; compulsory social security. 8 = education; human health and social work activities. 9 = arts, entertainment and recreation; other service activities; activities of households as employers, etc.; activities of extraterritorial organizations and bodies.

¹⁶The non-response rate for the variables firm size, type of contract and being in a managerial position is relatively high for Denmark, the Netherlands, Norway, and the United Kingdom. In order to limit the loss of observations, for these countries only, dummy variables equal to one are added into the log wage equations if information on these variables is missing.

¹⁷ Other household incomes, availability of unpaid childcare, and the number of children by age group are excluded from the wage equations. So they are used to identify the individual decision to participate in employment. However, for Denmark, Finland, the Netherlands, Norway, and the United Kingdom, the number of children by age group is also included in log wage equations because we know potential experience, instead of real labor market experience, and we have reason to believe that potential experience is likely to overestimate the real experience of women because it does not consider child-related career interruptions. Other household incomes correspond to the 12-month income reference period.

¹⁸ The information is not available for Denmark.

sources of household income other than woman's labor income (i.e. partner's earnings and asset income) are the most common instruments in the literature of female participation¹⁹. In addition, we have information about the availability of unpaid care that it is unlikely to explain individual market wage.

IV. Results

In this section, we start by outlining some descriptive statistics and then give the main estimation results for the selection ordered probit equation, log wage regression and the decomposition analysis.

A. Descriptive Statistics

While men's labor market participation is quite homogeneous across the selected European countries, there are broad disparities among women. As shown in Appendix Table A1, three groups of countries can be distinguished according to female participation in paid employment. Northern Europe countries with a female participation rate above 80%, Southern Europe countries with a rate under 65%, and a group formed by all other countries with an intermediate rate. This raises the question of the selection of working women. Countries are even more heterogeneous with respect to part-time employment. Poland and Finland exhibit the lowest part-time rate, below 20%, followed by Italy and Spain. At the other extreme, the Netherlands has the highest rate, with about three women in four working part-time. The incidence of part-time employment is around 40% in the Northern and Central European countries and the United Kingdom. These clear differences across countries in terms of both female participation in the labor market and prevalence of part-time employment highlights the importance of considering selection into employment and into part-time employment when explaining gender pay differentials.

Large cross-country differences are also observed in the level of average hourly wages. The highest wages are found in Northern European countries, and the lowest in Poland, Spain, and Italy (Figure 1). However, it is noteworthy that, on average, men earn more than women in all countries. The relative gender hourly pay gap is much wider in Germany, the United Kingdom, and Northern Europe countries where, on average, men's hourly earnings are around 30% higher than those of women (Figure 2). The gender wage gap is much lower

¹⁹See Killingsworth and Heckman (1986) for a survey on female labor supply.

in Belgium, Southern Europe countries, and Poland where, on average, men earn about 10% more than women.

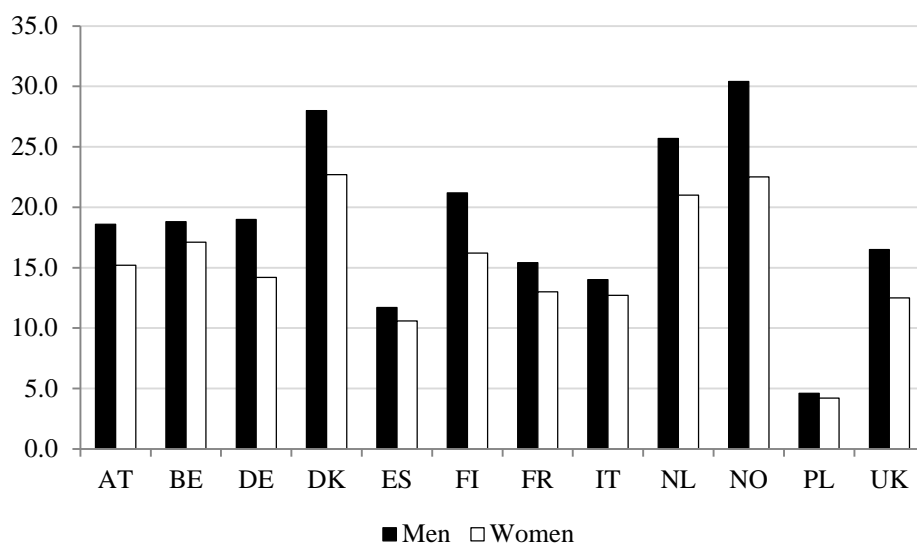


FIG. 1.– Average hourly wages (Euros) by gender

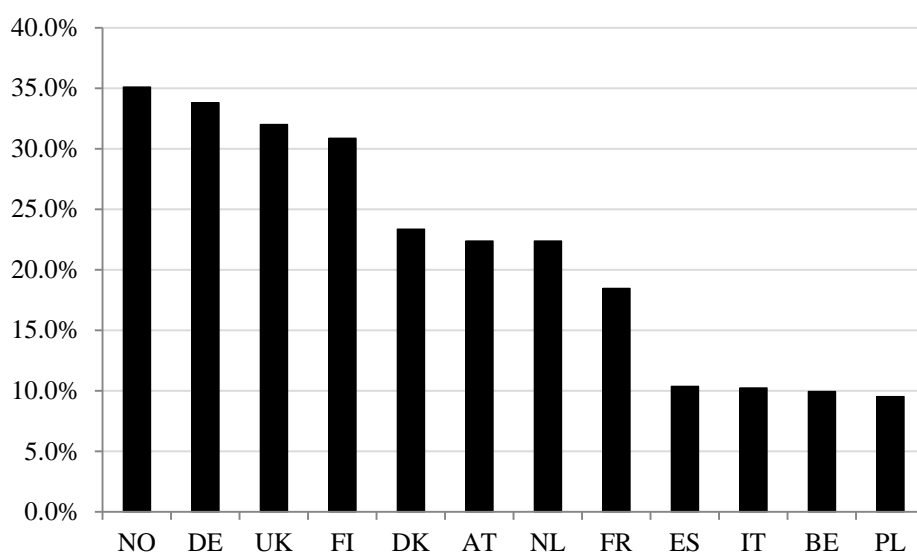


FIG. 2.–Gender hourly wage gap (%) in percentage of women's average hourly wage

To highlight the contribution of part-time employment to the gender wage gap, the latter is decomposed into a full-time gender wage gap and a female full-time/part-time wage gap. The first measures the earnings differences between men and women in full-time employment as a percentage of full-time women's earnings. The second measures the earnings differences between women in full-time employment and women in part-time employment as a

percentage of part-time women's earnings. As shown in Figure 3a, the largest full-time gender pay gap is found in Finland and Norway, where it exceeds 25%, whereas the lowest is found in Southern Europe, where it is slightly above 5%. By contrast, Southern European countries exhibit the highest female full-time/part-time earnings gap (Figure 3b). This means that in those countries where part-time employment is not a widespread working arrangement it is also not well-paid, mainly because it may be concentrated in poorly paid occupations or sectors. It is noteworthy that in Belgium and Denmark the hourly earnings of part-timers are higher, on average, than those of full-timers.

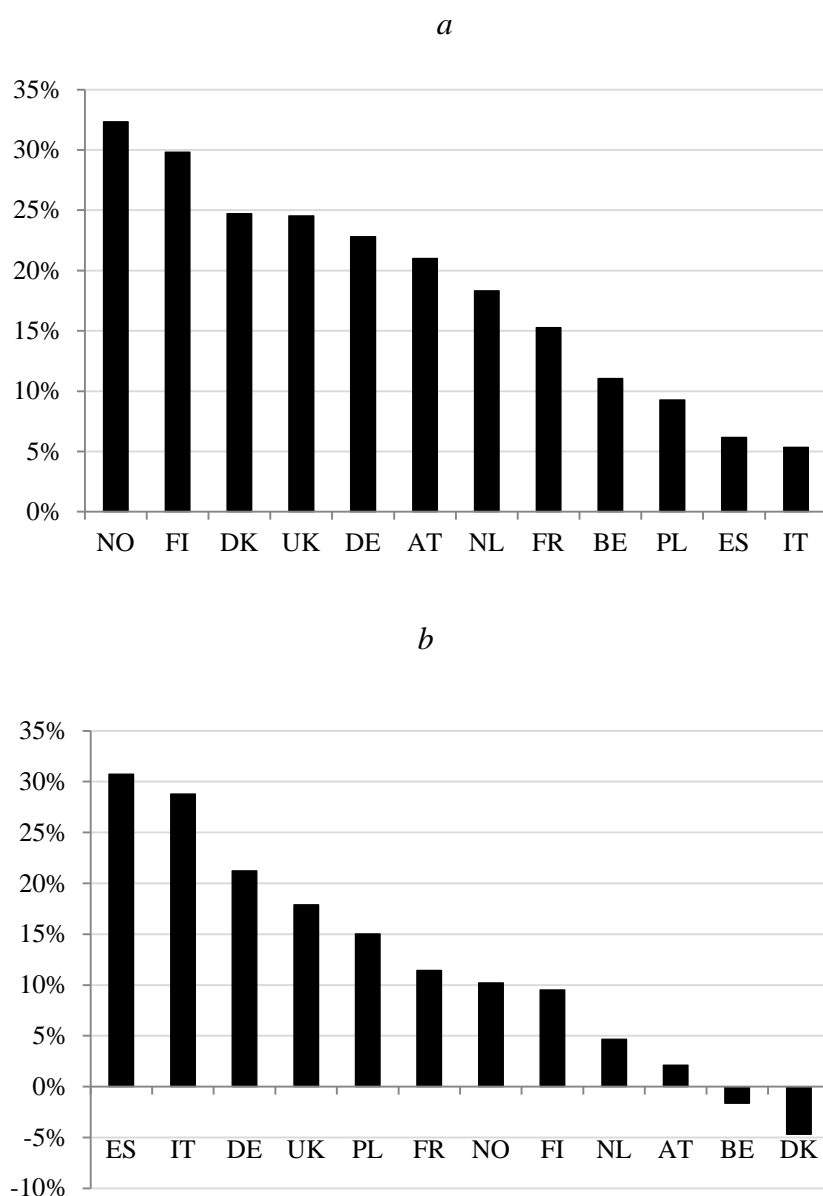


FIG. 3.– *a*, Full-time gender wage gap (%). *b*, Female full-time/part-time wage gap (%).

Figure 4 shows the extent to which the two pay differentials contribute to the general gender wage gap. Note that, in the figure, the female full-time/part-time wage gap is weighted by the percentage of women working part-time among working women. Part-time employment contributes to less than 40% of the total gender wage gap in all countries. However, there are large differences between European countries. In Northern Europe, Belgium, and Austria part-time employment plays a minor role in explaining the gender wage gap, even though it is widespread in these countries. Conversely, in Southern Europe (Spain and Italy), where part-time employment is not very common, the female full-time/part-time wage gap accounts for about 40% of the gender wage gap. Part-time employment also explains a significant share of the gender wage gap in the United Kingdom, the Netherlands, and Germany where this type of work schedule is quite common for women. Thus the diffusion of part-time employment in itself does not seem to be the main factor in explaining the gender wage gap, and the nature of part-time employment –i.e. whether is it primarily a means to maintain the work-family balance, or mainly used as a flexible working arrangement imposed by employers –might be a much more important factor. Indeed, part-time employment is evenly distributed across occupations and branches. It is more concentrated in elementary occupations in countries like Spain, Poland, and France, but more equally distributed in Austria, Germany, Belgium, and Finland (see descriptive statistics in Table A2). This raises the question of the role of segregation of part-time employment across sectors and jobs and the necessity to control for this factor when explaining the wage differentials.

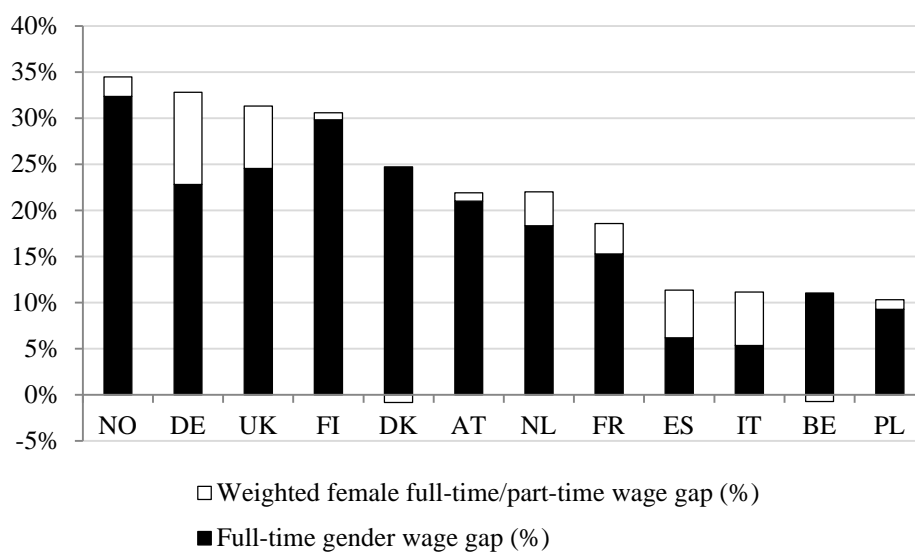


FIG. 4.– Gender, full-time gender, and female full-time/part-time wage gap (%)

B. Ordered Probit

The first stage of the analysis consists in estimating an ordered probit model with the objective of dealing with the sample selection problem related to female participation in paid employment and the selection into the type of job (i.e., full-time or part-time jobs). The three items are not working, working part-time, and working full-time. The marginal effects on the response probabilities (TableA3) are reported in Table A2²⁰. The probability of working, both full-time and part-time, relative to being out of labor force, increases with the level of education and experience in each country. Employment status strongly depends on family situation and opportunities for childcare. Hence, in all countries, having children has a negative and significant effect on the probability of working full-time. The negative effect is higher when women have children aged between 0 and 5 years and diminishes as the children grow older. Having children reduces the probability of working full-time more sharply in the United Kingdom, Germany, and Austria where mothers are more likely to opt for part-time jobs or inactivity when they have young children because public childcare facilities are less developed than elsewhere. In all countries, the availability of unpaid childcare has a positive and significant effect on the probability of working full-time and a negative and significant impact on the probability of having a part-time job. Part-time employment clearly serves as a tool to balance work and family. The availability of other sources of income has a significant effect on the probability of working. As expected, other household incomes negatively affect the probability of working full-time and positively affect the probability of working part-time. These results are in line with other studies on female participation in paid employment (Ashenfelter and Heckman 1974; Heckman and Willis 1977; Apps, Kabátek, Rees, van Soest 2012; Blundell, MaCurdy, and Meghir 2007). As for the instruments used to explain participation in employment and not wages (i.e., other household incomes, availability of unpaid childcare, and the number of children by age group, with the exception of Finland, the

²⁰ The marginal effect of a regressor on the probabilities is not equal to the estimated coefficient. For the three probabilities the marginal effects of a change in the regressor are

$$\begin{aligned}\frac{\partial P(z=1|w)}{\partial w} &= -\phi(\alpha_1 - w'\gamma)\gamma \\ \frac{\partial P(z=2|w)}{\partial w} &= [\phi(\alpha_1 - w'\gamma) - \phi(\alpha_2 - w'\gamma)]\gamma \\ \frac{\partial P(z=3|w)}{\partial w} &= \phi(\alpha_2 - w'\gamma)\gamma\end{aligned}$$

The marginal effect of the regressor w on the probabilities of not working $P(z=1)$ has the opposite sign from the associated estimated coefficient γ . The marginal effect of the regressor w on the probabilities of working full-time $P(z=3)$ has the same sign as the associated estimated coefficient. The sign of the marginal effect of the regressor w on the probability of working part-time $P(z=2)$ is ambiguous.

Netherlands, Norway, and the United Kingdom), their effects play in the same direction, although the magnitude varies across countries. This makes us confident about the relevance and validity of our exclusion restrictions and the identification of the parameter estimates.

C. Wage Regression Results

In the second stage of the analysis log wage equations are estimated separately, for men, (Table A4), women in full-time employment (Table A5), and women in part-time employment (Table A6). Results concerning the second and more complete specification are presented here. Results are standard and, in general, consistent across countries. Human capital indicators positively affect wages. In those countries where the number of children is controlled for, given the unavailability of real labor market experience, children negatively affect women's wages but, when results are significant, positively affect men's wages. With reference to workplace characteristics, whatever the group of workers, being in a managerial position with supervisory responsibility, working in a firm with more than 11 employees, and holding a permanent contract positively affect wages. With respect to legislators, managers or professional workers, being employed in all other occupations has a negative impact on wages. Men employed in branches of activity related to information, communication, finance, and insurance have higher returns. Very heterogeneous effects for the sector of economic activity are found for women. Lastly, there is evidence of a positive and significant selection effect for women employed full-time in Austria, Belgium, Italy, Norway, Poland, Spain, and the United Kingdom. Selection is also significant in Finland and in the United Kingdom for part-timers.

D. Wage Gap Decomposition Results

This section presents wage gap decomposition results for the full-time gender wage gap and the female full-time/part-time wage gap. A robustness test is also conducted in order to check whether decomposition results are robust to different definition of hourly wage.

1. Full-time Gender Wage Gap

The raw wage differential between men and women working full-time is about 20% in Norway, Finland, Germany, Austria, and the United Kingdom. It stands at an intermediate level in Denmark, France, and the Netherlands, but is under 10% in Spain, Italy, Poland, and Belgium. A very small part of this gender wage gap is explained by differences in human capital variables and individual and household characteristics (Table 1, Specification 1).

These socio-demographic characteristics matter in explaining part of the gender wage gap in two countries only, i.e. Germany and Austria, where they explain around 15% of the raw differential. In most countries, on the contrary, the explained part is negative. It means that full-time women have a higher human capital endowment than men and that, in the absence of discrimination or unobserved characteristics significantly affecting the gender wage gap, they should earn more than men. Thus, more than 85% of the full-time gender wage gap is not explained by individual characteristics.

In all countries, there is evidence of a significant male wage premium (Specification 1, unexplained part 1 positive) and a female wage penalty (unexplained part 2 positive), although the latter is not significant in Denmark and the Netherlands. In the other countries, except for France and Germany, the female penalty is always larger than the male premium, meaning that female characteristics have weaker returns on the labor market. The female penalty is particularly high in Norway and the United Kingdom and also in Italy, Spain, Belgium, and Poland, relative to the level of the raw pay differential. In almost all these countries, selection accounts for a sizable fraction of the full-time gender wage gap, women working full-time being positively and statistically significantly selected in the labor market²¹.

Moving to Specification 2, which extends Specification 1 by accounting for workplace characteristics, the results change considerably. The explained part significantly increases in all countries, especially in Norway and Finland, and also in France, Denmark and the United Kingdom. Then job characteristics and labor market segregation contribute substantially to the full-time gender wage gap. However, no more than half of the observed wage gap is still explained by different characteristics of men and women employed full-time. In Italy and Poland the explained part is still negative, so only unobserved factors matter in explaining the full-time gender wage gap in these two countries, and in the absence of unequal treatment women should earn more than men.

Once job characteristics are controlled for, the size of the male wage premium becomes significantly smaller in all countries. The female wage penalty also decreases in all countries, but to a lesser extent than the male premium. This means that men are over-represented in best-paid occupations and branches (rather than full-time women being over-represented in

²¹Recall that the selection part is equal to $-\bar{\lambda}_f^{FT} \bar{\beta}_f^{FT}$. This implies that if women employed full-time are positively selected in the labor market then the selection part will be negative.

low-paid occupations and branches). In countries with a high prevalence of female part-time jobs, women working full-time might be highly positively selected, and might occupy very valued occupations, more than men on average. This interpretation is corroborated by a significant positive selection effect for full-time women that is found in Austria and also in other countries such as Belgium, Italy, Poland, Norway, Spain, and the United Kingdom.

Table 2 displays the separate contributions of human capital indicators, vertical and horizontal segregation, and other individual characteristics to the observed raw full-time gender pay differential. The contribution of education and labor market experience is either negative or not significant in almost all countries. The negative sign in Finland, Italy, Norway, Poland, and the United Kingdom comes from a structural effect: in these countries the percentage of women with tertiary education is higher compared with men. On the other hand, in Austria, Germany, and Spain, the percentage of the pay differential explained by human capital is significantly positive and around 10%. The explanatory power of other individual and household characteristics (the nationality, the degree of urbanization of living area, the region of residence, and the number of children by age group if available) is very limited in all countries.

The largest contribution to the full-time gender difference in earnings comes from labor market segregation which accounts for a sizable part of the observed full-time gender wage gap. Without distinguishing between vertical and horizontal segregation, the contribution of labor market segregation to the raw pay gap ranges from 13% in the Netherlands to more than 50% in Norway, Finland, and France. If we distinguish between vertical and horizontal segregation, we can assert that horizontal segregation is the main driver of the gender wage gap in full-time jobs. Thus, in all countries, women are clustered in less valued sectors of economic activity, and are more likely to be employed with temporary contracts and in small firms with less than 11 employees that pay low wages. With reference to vertical segregation, we cannot draw a conclusion valid for all countries. In effect, in Northern European countries, together with France and the United Kingdom, vertical segregation positively contributes to explaining the full-time gender wage gap. We can assert that in these countries women are concentrated in less valued occupations and might receive less promotion. On the contrary, in Belgium, Italy, the Netherlands, Poland, and Spain the explanatory power of vertical segregation is negative. Indeed, in these countries the percentage of women employed in high valued occupations is higher relative to men. In these countries, except in the Netherlands, the selection effect into employment is also quite large. This could mean that

Table 1
Decomposition Results for the Full-time Gender Wage Gap (men and women in full-time employment)

Country	Log-Wage Difference	Specification 1: Model with human capital indicators, individual and household characteristics, and selection-correction term				Specification 2: Model in Specification 1 + workplace characteristics			
		Explained Part	Unexplained Part 1	Unexplained Part 2	Selection Part	Explained Part	Unexplained Part 1	Unexplained Part 2	Selection Part
Austria	0.19	0.02	0.09	0.12	-0.04(ns)	0.06	0.05	0.14	-0.06
Belgium	0.09	-0.03	0.05	0.15	-0.08	0.02	0.01	0.11	-0.06
Denmark	0.17	-0.00(ns)	0.09	0.24(ns)	-0.16(ns)	0.08	0.03	0.05(ns)	0.01(ns)
Finland	0.22	-0.03	0.12	0.21	-0.08	0.11	0.05	0.10	-0.04(ns)
France	0.15	-0.02	0.09	0.07	0.00(ns)	0.07	0.03	0.01(ns)	0.02(ns)
Germany	0.20	0.03	0.12	0.06	-0.02(ns)	0.09	0.06	0.05	-0.00(ns)
Italy	0.05	-0.05	0.06	0.16	-0.12	-0.04	0.04	0.12	-0.07
The Netherlands	0.11	0.00(ns)	0.08	0.10(ns)	-0.07(ns)	0.04	0.03	0.12(ns)	-0.08(ns)
Norway	0.22	-0.02	0.12	0.54	-0.42	0.12	0.05	0.44	-0.39
Poland	0.08	-0.07	0.07	0.16	-0.07	-0.03	0.04	0.14	-0.06
Spain	0.09	-0.02	0.06	0.18	-0.13	-0.01(ns)	0.04	0.13	-0.07
The United Kingdom	0.19	-0.00(ns)	0.15	0.47	-0.42	0.08	0.07	0.33	-0.28

NOTE.— The Explained Part, the Unexplained Part 1, the Unexplained Part 2, and Selection correspond to the first, second, third, and fourth term, respectively, on the right-hand side of equation (7). Standard errors of the selection part are estimated by bootstrap.(ns) means statistically non significant at 0.1 level.

Table 2
Full-time Gender Wage Gap: Explained Part in Detail

	Human Capital Indicators	Vertical Segregation	Horizontal Segregation	Other Characteristics	Total Explained Part	Log-Wage Difference
Austria	0.02	0.00 (ns)	0.04	-0.00 (ns)	0.06	0.19
Belgium	-0.01	-0.01	0.04	-0.00(ns)	0.02	0.09
Denmark	0.00(ns)	0.02	0.06	0.00 (ns)	0.08	0.17
Finland	-0.02	0.06	0.06	0.01	0.11	0.22
France	0.00 (ns)	0.02	0.05	-0.00	0.07	0.15
Germany	0.02	-0.01 (ns)	0.08	-0.00(ns)	0.09	0.20
Italy	-0.01	-0.03	-0.00 (ns)	-0.00	-0.04	0.05
The Netherlands	0.00 (ns)	-0.01	0.03	0.01	0.03	0.11
Norway	-0.02	0.02	0.12	-0.00	0.12	0.22
Poland	-0.02	-0.03	0.03	-0.00	-0.03	0.08
Spain	0.01	-0.03	0.01(ns)	-0.00 (ns)	-0.01(ns)	0.09
The United Kingdom	-0.01	0.04	0.03	0.01	0.08	0.19

NOTE.—Human Capital Indicators include education level and a second order polynomial of experience or potential experience, according to country. As proxy of Vertical Segregation we use occupation and being in a managerial position. As proxy of Horizontal Segregation we include firm size, type of contract, and economic activity of the firm. Other characteristics include region of residence, degree of urbanization of place of residence, and the number of children by age group (the latter only for some countries). (ns) means statistically not significant at 0.1 level.

women who self-select into the labor market and work full-time are effectively those women that could occupy high valued occupations and earn higher wages.

2. Female Full-time/Part-time Wage Gap

The wage gap between women employed full-time and women working part-time exceeds 20% in Germany, Italy, Spain, and the United Kingdom. It stands at 11% in France and around 5-7% in Austria, Finland, the Netherlands, and Norway. It is not significantly different from zero in Belgium and Denmark²². More than half or about half of this gap is explained by human capital and individual and household characteristics in Austria, Finland, Poland, Spain, France, and Italy (Table 3, Specification 1). These characteristics explain a smaller share of the female full-time/part-time wage gap in the United Kingdom and Germany. They do not explain at all the gap in the Netherlands and Norway. In spite of this heterogeneity across countries in terms of explanatory power of human capital and socio-demographic variables, generally these characteristics explain much more of the female full-

²²Note that it is interesting to decompose raw pay differentials even when they are small because there could be a sum of significant effects that cancel each other out.

time/part-time wage gap than the full-time gender wage gap: they explain around half of the full-time/part-time wage gap against 15% of the full-time gender wage gap. The unexplained part of the female full-time/part-time wage gap is due both to a full-time and a part-time wage penalty. As shown also in Table 1, in all countries, excepted for Denmark and the Netherlands, a female full-time wage penalty is found. As for part-time wage penalty, it is significant in almost all countries, with the exception of Denmark, Norway, and Poland where it is not significant. In Finland, women working part-time even benefit from a wage premium. A positive and significant selection part is found in Southern European countries, the United Kingdom, Austria, Belgium, and Finland. Indeed, in most of these countries the estimation of log-wage equations shows a relevant positive selection of women, mainly in full-time employment.

When workplace characteristics are controlled for, as in Specification 2, the explained part increases considerably in all countries. Nearly the entire female full-time/part-time hourly wage gap is then explained. After controlling for labor market segmentation, there is no hourly wage difference between women working full-time and women working part-time in the majority of European countries. In other words, the part-time wage penalty occurs mainly through segregation of part-time jobs (Matteazzi, Pailhé, and Solaz 2012). The previously observed part-time wage penalty disappears in almost all countries, remaining only in Italy, Germany, and, to a lesser extent, in the Netherlands. The selection effect is no longer significant in Austria.

The relative contributions of explanatory variables to the female full-time/part-time wage gap (Table 4) display three important features. First, unlike what has been observed for the full-time gender wage gap, human capital indicators matter in explaining the female full-time/part-time earnings difference. This is because full-timers have a higher average education level and more labor market experience than part-timers. Second, as for the previous analysis, segregation in the labor market plays the most important role. The percentage of the pay differential explained by segregation, without distinguishing between vertical and horizontal, is much higher in Northern European countries, Austria, and Belgium. However, vertical segregation contributes most to explaining the full-time/part-time wage gap and horizontal segregation to explaining the full-time gender wage gap. The concentration of part-timers in low-paid occupations at the bottom of the employment hierarchy is the main driver of their lower wage relative to women working full-time, while the concentration of female full-timers in low paid sectors and jobs is the main driver of the gender wage gap.

Table 3
Decomposition Results for the Female Full-time/Part-time Wage Gap

Country	Log-Wage Difference	Specification 1: Model with human capital indicators, individual and household characteristics, and selection-correction term				Specification 2: Model in Specification 1 + workplace characteristics			
		Explained Part	Unexplained Part 1	Unexplained Part 2	Selection Part	Explained Part	Unexplained Part 1	Unexplained Part 2	Selection Part
Austria	0.07	0.04	-0.12	0.08	0.06(ns)	0.12	-0.14	0.03(ns)	0.07
Belgium	-0.00(ns)	0.02	-0.15	0.04	0.09	0.07	-0.11	-0.01 (ns)	0.06(ns)
Denmark	-0.04	-0.00 (ns)	-0.24(ns)	-0.28(ns)	0.49(ns)	0.08	-0.05(ns)	-1.79(ns)	1.71 (ns)
Finland	0.05	0.05	-0.21	-1.40	1.61	0.15	-0.10	-1.28	1.28
France	0.12	0.04	-0.07	0.11	0.04 (ns)	0.12	-0.02 (ns)	0.07	-0.05(ns)
Germany	0.21	0.03	-0.06	0.22	0.02 (ns)	0.15	-0.05	0.11	-0.00(ns)
Italy	0.23	0.09	-0.16	0.14	0.17	0.18	-0.12	0.09	0.08
The Netherlands	0.05	-0.01(ns)	-0.10 (ns)	0.08	0.08(ns)	0.06	-0.12(ns)	0.03	0.09 (ns)
Norway	0.08	-0.00 (ns)	-0.54	0.42(ns)	0.20 (ns)	0.10	-0.44	0.33(ns)	0.09(ns)
Poland	0.18	0.10	-0.16	0.09(ns)	0.15 (ns)	0.26	-0.14	-0.03 (ns)	0.08(ns)
Spain	0.26	0.16	-0.18	0.10	0.18	0.27	-0.13	0.02(ns)	0.09
The United Kingdom	0.20	0.04	-0.47	0.09	0.54	0.17	-0.33	-0.02 (ns)	0.37

N

OTE.— The Explained Part, the Unexplained Part 1, the Unexplained Part 2, and Selection correspond to the first, second, third, and fourth term, respectively, on the right-hand side of equation (8). Standard errors of the selection part are estimated by bootstrap.(ns) means statistically non significant at 0.1 level.

Table 4**Female Full-time/Part-time Wage Gap: Explained Part in Detail**

	Human Capital Indicators	Vertical Segregation	Horizontal Segregation	Other Characteristics	Total Explained Part	Log-Wage Difference
Austria	0.03	0.06	0.03	-0.00 (ns)	0.12	0.07
Belgium	-0.00 (ns)	0.06	0.02	0.00 (ns)	0.07	-0.00(ns)
Denmark	-0.01	0.05	0.04	-0.00 (ns)	0.08	-0.04
Finland	0.02	0.08	0.04	0.00 (ns)	0.15	0.05
France	0.01	0.05	0.05	0.01	0.12	0.12
Germany	-0.00(ns)	0.09	0.06	0.00 (ns)	0.15	0.21
Italy	0.04	0.07	0.08	-0.00 (ns)	0.18	0.23
The Netherlands	-0.01 (ns)	0.04	0.04	-0.02 (ns)	0.06	0.05
Norway	0.01 (ns)	0.05	0.05	-0.00(ns)	0.10	0.08
Poland	0.05	0.13	0.08	-0.01	0.26	0.18
Spain	0.06	0.11	0.10	0.00 (ns)	0.27	0.26
The United Kingdom	0.02	0.12	0.04	-0.01	0.17	0.20

NOTE.—Human Capital Indicators include education level and a second order polynomial of experience or potential experience, according to country. As proxy of Vertical Segregation we use occupation and being in a managerial position. As proxy of Horizontal Segregation we include firm size, type of contract, and economic activity of the firm. Other characteristics include region of residence, degree of urbanization of place of residence, and the number of children by age group (the latter only for some countries). (ns) means statistically not significant at 0.1 level.

3. Robustness check

In this subsection a robustness check of decomposition results to different definitions of hourly wage is conducted. The robustness analysis is carried out only for those countries with available information on both annual and monthly gross earnings, i.e. Austria, Italy, Poland, Spain, and the United Kingdom. Results, presented in Tables A7 and A8 in Appendix, show that, in general, mean log-wages computed using the annual definition of income are slightly higher than mean log-wages computed from monthly earnings. This can be plausible given that the definition of annual gross labor earnings includes some payments excluded from the definition of monthly labor income²³.

As for full-time workers, the gross log-wage differences computed from the monthly labor income are remarkably similar across samples A (used up to now) and B which includes

²³According to EU-SILC guidelines (2010), in declaring her gross monthly earnings a person *should* take into account salary supplementary payments (13th or 14th month payments), or payments like holiday pay, profit share, and bonuses in a monthly basis. Differently, the definition of gross annual earnings includes also additional payments based on productivity, allowances for transport to or from work, allowances paid for working in remote locations, and other payments made by the employer to the employee other than 13th or 14th month payments, payments like holiday pay, profit share, and bonuses.

workers previously excluded by precaution because of the time lag between interview time and income reference period . The same considerations hold for the decomposition results. As regards the gross log-wage differences between female full-time and part-time workers, computed from the monthly labor income, small divergences are pointed out across samples A and B for the case of Italy, Poland, and Spain. However, for all countries the explained part and its components and the unexplained parts are almost equal in sign, magnitude, and significance. This evidence makes us confident about the selection of our sample of analysis.

When we compare results obtained using sample A and the two different definitions of hourly wage, for all countries, once more, the explained part and its components are almost equal in sign, magnitude, and significance. Similar conclusions can be drawn for the unexplained and selection parts. This make us confident about the definition of hourly earnings adopted in this study.

E. Cross-Countries Specificities

There are a number of cross-country specificities related both to the spread of part-time employment and female selection in employment (and part-time employment). In Southern European countries, female participation in employment is among the lowest in Europe and part-time does is not a widespread working arrangement. For Italy and Spain, selection accounts for a sizable fraction of the gender wage gap. In other words, women who participate in the labor market have some observed and unobserved characteristics that make them employees with high potential earnings. This could partly explain the low gender wage gap in these countries. However, Italy and Spain exhibit the largest wage premiums for men and among the highest wage penalties for women. This suggests that countries where female participation in employment is low and women are positively selected in the labor market are also those where working women are even more discriminated against, in the sense that the returns of their observable characteristics are much lower than average returns. Part-time employment is also a relevant contributor in explaining the gender wage gap in these two countries that exhibit the highest female full-time/part-time wage gap, mainly because part-time jobs are concentrated in the secondary segment of the labor market. However, the limited diffusion of part-time employment limits its impact on the total gender wage gap. A similar analysis can be developed for Poland. In this country, part-time jobs are confined topoorly paid sectors and occupations, as revealed by the high female full-time/part-time pay gap. However, given the extremely low percentage of women in part-time employment the influence of part-time is negligible in explaining the gender gap in earnings.

Among countries where part-time jobs are widespread, Germany and the United Kingdom both have a high part-time employment rate and the largest gender wage gap. These two countries are characterized also by the highest female full-time/part-time wage gap. Thus, part-time employment plays a major role in explaining the gender wage gap, mainly because many women work in low-paid part-time jobs. Conversely, in the Netherlands, Belgium, Denmark, Norway, and Austria, where part-time employment is also widespread, it contributes little to explaining the gender wage gap because the difference in hourly wage between female full-time and part-time workers is relatively low.

Finland is a special case. In this country, part-time jobs are not common but are, on average, well-paid. In Finland, the entire gender difference in earnings is explained by the full-time gender wage gap. In other words, part-time employment does not contribute to explaining the observed gender wage gap.

In this picture, France differs from all other countries. It is characterized by a moderate gender wage gap, a moderate female full-time/part-time earnings difference, a medium part-time employment rate and, consequently, a relatively small contribution of part-time employment to the gender wage gap.

Conclusion

At the macro level, the gender wage gap is wider in countries where part-time employment is widespread. However, decomposing the gender wage gap into two components, i.e. the gender full-time wage gap and the female full-time/part-time wage gap, our analysis shows that finally part-time employment does not play a major role in explaining the gender wage gap. It explains 20% of the gender pay differential in those countries characterized by high prevalence of part-time employment and a very high gender wage gap, whereas it explains much more, around 40% of the gender wage gap in those countries where part-time employment is less common and the raw gender wage gap is small. This result suggests that more than part-time employment in itself, the nature of part-time employment and labor market segregation matters in explaining the gender wage gap. In countries where part-time is scarce, part-time jobs are more segregated. More precisely, horizontal segregation is a relevant factor explaining the gender wage gap between full-time workers, whereas vertical segregation explains most of the female full-time/part-time wage gap. In other words, differences in sectors of economic activity explain the full-time male/female pay gap, whereas differences in the hierarchical ladder explain the earnings differentials between full-time and part-time working women.

One more important result is that a large share of the gender wage gap still remains unexplained after controlling for a large set of observed characteristics. About half of the observed gender wage gap remains unexplained by selection and differences in observable characteristics. To answer our research question about the role of part-time prevalence in the gender wage gap, our results show that part-time employment does not outweigh others causes of the gender wage gap, and, particularly, occupational segregation of women's jobs and discrimination in the workplace.

Substantial differences between European countries are pointed out in terms of female participation in employment, diffusion of part-time work, and gender wage gap. In Northern European countries, as well as in Belgium and Austria, part-time employment plays a secondary role in explaining the gender wage gap, even though it is widespread. Conversely, in Spain and Italy part-time contributes more to explaining the observed gender earnings difference even though part-time jobs are not very common. Part-time employment explains a larger share of the gender wage gap in the United Kingdom, the Netherlands, and Germany where this type of work schedule is quite common for women. However, it is not the main driver of the gender wage gap, which is mainly explained by horizontal segregation and by discrimination. The evidence of a substantial unexplained gender wage gap in Europe calls for a strengthening of policies against wage discrimination in Europe, that could be achieved by a combination of policy measures: i) equal pay policy, through equal pay legislation and anti-discrimination laws, ii) equal opportunities policy to enable women to have more continuous working careers and to encourage de-segregation of employment by gender; iii) wage policies to reduce wage inequalities by raising wages in low-paid and/or female dominated sectors.

Appendix

Supplementary Statistical Figures and Tables

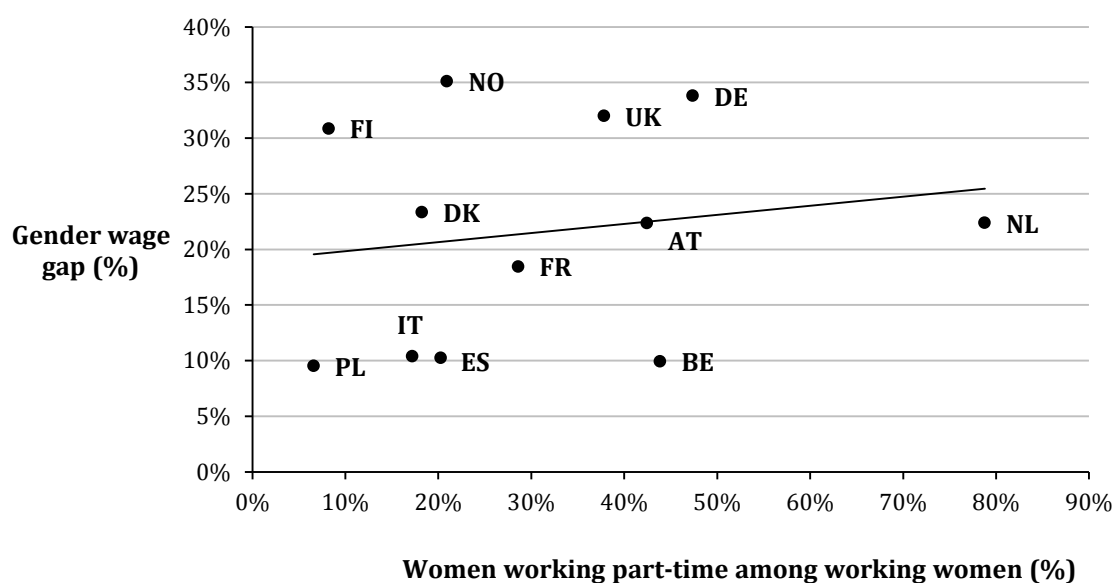


FIG.A1. —Relationship between gender pay gap and female part-time employment rate.

NOTE.— Source: EU-SILC data for year 2009. Gender wage gap measures the earnings differences between men and women as % of women's earnings.

Table A1

Female Participation in Employment

Country	Male Participation rate (%)	Female Participation rate (%)	Female Part-time Employment Rate (%)
AT	88.5	79.5	42.9
BE	85.7	73.8	41.5
DE	86.1	75.4	45.4
DK	86.9	82.5	37.5
ES	77.3	63.8	23.0
FI	84.3	80.5	19.0
FR	87.6	76.6	30.0
IT	84.7	59.1	27.9
NL	92.0	80.7	75.8
NO	88.3	83.5	43.4
PL	83.7	71.6	11.6
UK	85.7	74.7	42.5

NOTE.—Source: Eurostat Labor Force Survey (2009). Participation rate refers to the annual average for men and women aged 25-54 years. Part-time employment rate is defined as part-time workers as a % of total employment.

Table A2**Summary Statistics**

	AT	AT	AT	BE	BE	BE	DE	DE	DE	DK	DK	DK
	Man	Woman	Woman	Man	Woman	Woman	Man	Woman	Woman	Man	Woman	Woman
	FT	FT	PT	FT	FT	PT	FT	FT	PT	FT	FT	PT
Other sources of household income /100	138.1	231.4	339.1	176.6	238.4	315.2	135.2	199.6	365.2	315.1	438.4	515.6
Availability of unpaid childcare(%)	10.9	5.1	16.3	9.8	10.6	11.8	4.9	1.5	7.6	-	-	-
Education(%):												
<i>At most lower secondary education</i>	7.4	11.2	16.7	23.7	15.3	26.3	3.9	4.5	8.6	15.8	14.6	18.8
<i>At most upper secondary education</i>	70.2	66.7	70.1	37.2	26.8	38.5	52.4	55.3	67.1	50.4	40.8	45.6
<i>Tertiary education</i>	22.4	22.1	13.2	39.1	57.9	35.2	43.7	40.2	24.3	33.8	44.6	35.6
Labor market experience (years)	24.0	21.9	20.0	19.9	17.8	21.4	25.0	24.0	27.1	26.0	24.5	27.7
Number of children 0 - 5 years	0.2	0.0	0.1	0.3	0.2	0.2	0.2	0.0	0.1	0.2	0.2	0.2
Number of children 6 - 11 years	0.2	0.1	0.4	0.3	0.2	0.3	0.3	0.1	0.3	0.3	0.3	0.4
Number of children above 12 years	0.5	0.5	0.8	0.5	0.5	0.8	0.5	0.3	0.8	0.5	0.5	0.6
Firm with more than 11 Employees(%)	81.6	74.0	57.4	88.4	88.2	81.4	91.4	85.0	72.5	84.2	85.5	84.7
Permanent Contract(%)	97.3	96.3	96.1	97.1	93.1	93.1	95.9	93.1	93.0	99.5	99.2	100
Managerial Position(%)	57.8	46.2	31.1	36.5	24.3	10.1	36.7	24.3	11.6	27.7	15.8	7.1
Occupation (%):												
<i>Legislators, Managers, and Professionals</i>	16.9	20.5	9.5	30.3	40.2	18.4	28.6	26.1	12.1	28.0	21.4	9.3
<i>Technicians and associate professionals</i>	23.3	20.2	18.3	15.7	15.7	16.5	24.1	39.8	32.3	25.2	35.7	32.1
<i>Clerks</i>	10.7	28.3	27.3	14.9	25.9	27.6	8.9	16.8	21.5	4.5	13.9	14.4
<i>Service, Shop and Market Sales Workers</i>	7.1	16.8	26.0	6.0	6.3	13.6	4.7	9.5	20.7	5.0	18.5	34.4
<i>Skilled workers</i>	31.0	3.4	3.4	26.2	3.9	3.6	30.0	4.7	3.6	30.1	6.4	1.9
<i>Elementary Occupations</i>	11.0	10.9	15.5	7.0	8.0	20.3	3.7	3.1	9.8	7.3	4.1	7.9
Sector of economic activity (%):												
<i>Agriculture forestry and fishing; mining; manufacturing; electricity, etc.; water supply</i>	27.0	11.4	8.8	27.5	11.0	7.3	34.7	14.1	8.4	27.5	13.0	3.7
<i>Construction, Transport and Storage</i>	20.6	6.5	5.9	17.9	3.6	2.7	13.9	3.8	4.8	16.1	3.4	3.3

<i>Wholesale and Retail Trade, etc.</i>	14.2	13.8	22.6	7.5	5.8	11.8	9.5	11.2	19.7	14.9	10.0	9.8
<i>Accommodation and Food Services</i>	1.7	5.4	7.7	1.5	0.9	2.6	0.8	1.9	2.5	0.5	1.5	0.0
<i>Information, Communication, Finance, etc.</i>	7.8	8.7	5.2	10.6	9.0	5.9	9.5	9.9	6.9	10.1	6.5	2.3
<i>Real Estate Activities, etc.</i>	7.3	8.6	11.6	6.2	7.1	9.5	5.8	9.3	8.9	8.8	7.4	9.3
<i>Public Administration and Defense; Compulsory Social Security</i>	10.6	11.0	7.7	12.6	14.5	10.9	14.8	15.9	10.4	5.9	7.5	6.0
<i>Education; Human Health and Social Work Arts, etc.; Activities of Households as Employers; Extraterritorial Bodies</i>	8.5	30.4	26.6	13.3	43.9	41.1	8.9	30.1	30.9	13.1	47.8	60.0
	2.3	4.1	3.9	2.9	4.2	8.2	2.2	3.7	7.5	3.0	2.8	5.6

Table A2 (continued)

Summary Statistics

	ES	ES	ES	FI	FI	FI	FR	FR	FR	IT	IT	IT
	Man	Woman	Woman	Man	Woman	Woman	Man	Woman	Woman	Man	Woman	Woman
	FT	FT	PT	FT	FT	PT	FT	FT	PT	FT	FT	PT
Other sources of household income /100	99.4	159.0	166.1	228.9	363.4	346.7	184.8	259.7	333.0	106.3	215.1	270.6
Availability of unpaid childcare(%)	3.9	4.3	5.2	1.8	1.2	1.1	7.1	7.7	9.2	10.7	12.4	17.2
Education (%):												
<i>At most lower secondary education</i>	38.5	25.0	43.7	11.6	8.5	13.9	17.8	16.9	22.0	38.6	21.9	33.4
<i>At most upper secondary education</i>	23.5	23.1	28.6	47.2	39.6	47.3	50.7	42.6	46.1	49.3	59.9	56.5
<i>Tertiary education</i>	38.0	51.9	27.7	41.2	51.9	38.8	31.5	40.5	31.9	12.1	24.2	10.1
Labor market experience (years)	21.4	17.6	15.3	23.7	24.8	23.9	21.0	19.7	19.3	19.6	17.7	16.3
Number of children 0 - 5 years	0.2	0.2	0.3	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Number of children 6 - 11 years	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.4	0.2	0.2	0.4
Number of children above 12 years	0.6	0.6	0.7	0.5	0.5	0.6	0.6	0.6	0.8	0.6	0.6	0.7
Firm with more than 11 Employees(%)	73.8	71.7	50.4	78.6	74.3	62.0	84.3	80.7	69.5	71.2	70.4	51.6
Permanent Contract(%)	88.7	85.1	74.7	93.3	89.6	74.7	94.9	92.8	85.3	93.6	91.2	84.3
Managerial Position(%)	31.7	22.2	10.0	30.3	16.2	6.2	42.2	31.1	21.1	29.2	19.4	9.7
Occupation (%):												
<i>Legislators, Managers, and Professionals</i>	17.0	26.3	6.9	37.2	28.0	13.1	23.6	20.7	11.1	11.1	15.2	4.7

<i>Technicians and associate professionals</i>	12.6	12.4	8.0	16.1	24.5	16.6	21.5	24.4	19.8	19.6	33.6	20.8
<i>Clerks</i>	10.6	23.9	20.1	3.3	12.4	16.6	6.5	20.7	22.8	12.5	20.4	24.5
<i>Service, Shop and Market Sales Workers</i>	10.9	18.9	29.5	4.8	23.7	37.9	5.5	17.4	17.5	8.7	11.8	24.7
<i>Skilled workers</i>	38.4	5.8	4.4	34.7	4.9	2.8	37.0	6.5	3.7	40.3	10.9	8.8
<i>Elementary Occupations</i>	10.5	12.7	31.1	3.9	6.5	13.1	6.0	10.2	25.1	7.9	8.1	16.4
Sector of economic activity (%):												
<i>Agriculture forestry and fishing; mining; manufacturing; electricity, etc.; water supply</i>	28.8	12.3	8.0	33.0	11.2	4.8	30.3	12.9	6.5	36.8	20.4	15.5
<i>Construction, Transport and Storage</i>	20.7	4.6	3.9	20.8	5.3	6.2	20.8	5.9	3.5	16.8	4.8	3.1
<i>Wholesale and Retail Trade, etc.</i>	10.0	12.3	19.0	11.2	10.1	24.8	13.4	11.7	12.2	10.7	10.3	16.8
<i>Accommodation and Food Services</i>	3.5	6.2	10.1	0.8	3.8	2.8	1.3	2.0	3.0	2.3	2.9	8.8
<i>Information, Communication, Finance, etc.</i>	6.9	7.3	2.0	7.8	7.3	3.4	6.0	6.3	4.1	6.7	6.5	6.1
<i>Real Estate Activities, etc.</i>	5.8	8.2	14.4	9.6	9.6	7.6	4.1	5.7	3.5	5.9	7.4	13.2
<i>Public Administration and Defense; Compulsory Social Security</i>	11.0	12.2	4.3	5.3	7.3	2.1	11.9	16.6	17.6	8.2	9.1	6.4
<i>Education; Human Health and Social Work Arts, etc.; Activities of Households as Employers; Extraterritorial Bodies</i>	9.1	30.0	20.1	8.9	40.7	38.6	8.4	31.1	31.1	8.9	32.4	18.3
	4.1	6.8	18.2	2.6	4.7	9.7	3.7	7.7	18.6	3.7	6.2	11.8

Table A2 (continued)

Summary Statistics

	NL	NL	NL	NO	NO	NO	PL	PL	PL	UK	UK	UK
	Man	Woman	Woman	Man	Woman	Woman	Man	Woman	Woman	Man	Woman	Woman
	FT	FT	PT	FT	FT	PT	FT	FT	PT	FT	FT	PT
Other sources of household income	178.1	257.3	441.6	339.8	578.5	615.1	43.3	70.9	61.4	160.8	221.9	304.0
Availability of unpaid childcare(%)	18.7	6.4	25.0	2.2	2.1	3.0	10.7	12.6	10.7	13.8	8.4	20.0
Education (%):												
<i>At most lower secondary education</i>	17.6	9.5	15.5	12.6	9.8	14.3	7.7	4.2	8.7	9.6	8.1	12.1
<i>At most upper secondary education</i>	44.1	39.5	46.7	48.6	36.8	54.4	74.3	61.4	72.9	53.6	50.2	60.9
<i>Tertiary education</i>	38.3	51.0	37.9	38.7	53.4	31.3	18.0	34.4	18.5	36.8	41.7	27.0

Labor market experience	24.5	21.3	24.7	23.5	22.8	26.7	19.9	18.5	16.7	23.8	23.6	25.6
Number of children 0 - 5 years	0.3	0.1	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.3
Number of children 6 - 11 years	0.3	0.1	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.1	0.4
Number of children above 12 years	0.4	0.2	0.5	0.5	0.5	0.8	0.7	0.9	0.9	0.5	0.5	0.8
Firm with more than 11 Employees(%)	89.3	90.8	84.4	80.8	85.2	77.8	83.2	82.1	60.6	83.3	86.7	78.2
Permanent Contract(%)	94.4	93.5	93.6	97.3	93.8	88.4	83.6	83.4	51.8	21.2	20.7	20.6
Managerial Position(%)	38.6	31.3	17.7	43.8	27.8	11.5	20.2	17.5	5.0	47.3	43.1	19.1
Occupation (%):												
<i>Legislators, Managers, and Professionals</i>	38.5	46.4	29.4	33.6	29.6	12.7	15.4	33.5	14.6	40.8	33.7	14.4
<i>Technicians and associate professionals</i>	21.1	21.1	27.4	22.9	31.9	26.6	10.5	16.1	10.4	13.0	17.9	13.5
<i>Clerks</i>	8.6	18.3	21.8	5.1	10.5	8.2	5.5	12.2	10.0	5.4	24.4	25.8
<i>Service, Shop and Market Sales Workers</i>	5.0	7.9	15.6	8.1	21.1	44.3	6.3	15.7	30.0	6.8	15.7	33.1
<i>Skilled workers</i>	23.8	3.7	1.8	29.2	3.6	1.3	55.3	11.9	5.8	24.9	3.7	1.2
<i>Elementary Occupations</i>	3.1	2.6	3.9	1.2	3.3	7.0	6.9	10.6	29.2	9.0	4.6	12.1
Sector of economic activity (%):												
<i>Agriculture forestry and fishing; mining; manufacturing; electricity, etc.; water supply</i>	24.2	9.0	6.9	23.8	5.6	5.1	42.5	21.6	13.8	25.5	9.3	2.9
<i>Construction, Transport and Storage</i>	17.4	5.6	3.2	19.9	4.8	1.9	25.1	5.2	2.9	17.9	4.5	3.9
<i>Wholesale and Retail Trade, etc.</i>	11.5	6.5	9.4	14.9	8.2	12.0	9.7	14.9	25.4	10.9	9.8	16.9
<i>Accommodation and Food Services</i>	1.2	1.6	1.5	1.0	2.0	2.5	0.5	2.8	4.2	1.6	1.7	4.2
<i>Information, Communication, Finance, etc.</i>	11.1	9.3	5.0	9.9	7.6	1.9	2.6	5.1	2.5	9.7	8.5	6.3
<i>Real Estate Activities, etc.</i>	10.2	12.3	9.1	10.9	10.4	5.7	4.9	5.5	11.7	10.1	10.0	6.9
<i>Public Administration and Defense; Compulsory Social Security</i>	10.8	15.8	7.6	5.3	7.3	5.1	7.0	10.0	4.6	8.4	12.2	7.2
<i>Education; Human Health and Social Work Arts, etc.; Activities of Households as Employers; Extraterritorial Bodies</i>	11.8	37.8	53.9	11.6	49.8	65.2	6.2	32.2	27.9	12.7	40.4	46.8
<i>Employers; Extraterritorial Bodies</i>	1.8	2.1	3.3	2.6	4.3	0.6	1.4	2.6	7.1	3.2	3.6	4.9

Table A3**Ordered Probit Model: Estimated Marginal Effects**

	AT	BE	DE	DK	FI	FR	IT	NL	NO	PL	ES	UK
Full-time employment:												
At most upper secondary education	0.13	0.12	0.18	0.05	0.04	0.12	0.27	0.04	-0.00	0.22	0.19	0.19
Tertiary education	0.39	0.34	0.43	0.06	0.13	0.28	0.40	0.12	0.16	0.38	0.43	0.32
Labor market experience	0.03	0.03	0.02	0.00	0.01	0.02	0.02	0.00	0.01	0.02	0.04	0.00
Labor market experience squared	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
Nationality	-0.08	0.14	0.00	0.11	0.08	0.09	0.06	-0.03	0.10	0.05	-0.04	0.02
Degree of urbanization of local area	0.09	0.05	0.03	0.03	0.01	0.04	0.00	-	0.05	0.02	0.01	0.06
Number of children 0 - 5 years	-0.39	-0.05	-0.38	-0.05	-0.24	-0.13	-0.14	-0.12	-0.12	-0.16	-0.14	-0.40
Number of children 6 - 11 years	-0.18	-0.09	-0.17	-0.08	-0.03	-0.12	-0.13	-0.12	-0.09	-0.00	-0.14	-0.27
Number of children above 12 years	-0.09	-0.09	-0.13	-0.01	-0.00	-0.07	-0.10	-0.05	-0.05	-0.02	-0.09	-0.12
Other sources of household income	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
Availability of unpaid childcare	0.08	0.13	0.08	-	0.04	0.18	0.16	0.01	0.01	0.15	0.18	0.08
Part-time employment:												
At most upper secondary education	-0.07	-0.08	-0.07	-0.03	-0.02	-0.08	-0.07	-0.01	0.00	-0.03	-0.08	-0.09
Tertiary education	-0.25	-0.20	-0.25	-0.04	-0.07	-0.19	-0.14	-0.04	-0.13	-0.07	-0.16	-0.18
Labor market experience	-0.02	-0.02	-0.01	0.00	-0.00	-0.01	-0.01	-0.00	-0.01	-0.00	-0.01	-0.00
Labor market experience squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nationality	0.04	-0.07	-0.00	-0.07	-0.04	-0.05	-0.01	0.01	-0.08	-0.01	0.01	-0.01
Degree of urbanization of local area	-0.05	-0.03	-0.01	-0.02	-0.00	-0.02	-0.00	-	-0.04	-0.00	-0.00	-0.03
Number of children 0 - 5 years	0.19	0.03	0.17	0.03	0.13	0.08	0.03	0.02	0.10	0.03	0.05	0.20
Number of children 6 - 11 years	0.10	0.06	0.08	0.05	0.02	0.08	0.03	0.02	0.07	0.00	0.05	0.13
Number of children above 12 years	0.05	0.05	0.06	0.01	0.00	0.04	0.02	0.01	0.04	0.00	0.03	0.06
Other sources of household income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Availability of unpaid childcare	-0.05	-0.09	-0.05	-	-0.02	-0.13	-0.05	-0.00	-0.01	-0.03	-0.08	-0.04

NOTE.—Reference category: inactive women. Reference education level: at most lower secondary education.

Table A4**Estimation Results for Log-Wage Equations (Specification 2): Men in Full-time Employment (St. Err. in brackets)**

	AT	BE	DE	DK	FI	FR	IT	NL	NO	PL	ES	UK
Nationality	0.10 (0.03)	0.00 (0.02)	-0.00 (0.02)	0.06 (0.04)	0.04 (0.05)	0.05 (0.02)	0.13 (0.02)	0.06 (0.03)	-0.01 (0.05)	-0.06 (0.16)	0.10 (0.02)	0.01 (0.03)
At most upper secondary education	0.06 (0.03)	0.08 (0.02)	0.05 (0.03)	0.06 (0.02)	0.05 (0.03)	0.06 (0.01)	0.09 (0.01)	0.11 (0.02)	0.09 (0.03)	0.10 (0.03)	0.10 (0.01)	0.05 (0.03)
Tertiary education	0.18 (0.04)	0.23 (0.02)	0.22 (0.03)	0.14 (0.03)	0.17 (0.03)	0.17 (0.02)	0.21 (0.02)	0.36 (0.03)	0.23 (0.04)	0.26 (0.04)	0.16 (0.02)	0.24 (0.03)
Labor market experience	0.02 (0.00)	0.03 (0.00)	0.03 (0.00)	0.03 (0.00)	0.02 (0.00)	0.02 (0.00)	0.02 (0.00)	0.04 (0.00)	0.03 (0.01)	0.02 (0.00)	0.02 (0.00)	0.03 (0.00)
Labor market experience squared	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Number of children 0-5 years	-	-	-	0.01 (0.02)	0.03 (0.01)	-	-	0.03 (0.01)	0.01 (0.02)	-	-	0.01 (0.02)
Number of children 6-11 years	-	-	-	0.03 (0.01)	0.01 (0.01)	-	-	0.03 (0.01)	-0.02 (0.02)	-	-	0.04 (0.01)
Number of children above 12	-	-	-	0.01 (0.01)	0.01 (0.01)	-	-	0.03 (0.01)	0.01 (0.01)	-	-	-0.00 (0.01)
Degree of urbanization of local area	0.07 (0.02)	-0.04 (0.03)	0.13 (0.01)	0.05 (0.02)	0.04 (0.02)	0.03 (0.01)	0.01 (0.01)	-	-	0.09 (0.01)	0.03 (0.01)	-0.04 (0.04)
Firm with more than 11 employees	0.08 (0.02)	0.06 (0.02)	0.16 (0.02)	0.07 (0.02)	0.15 (0.02)	0.10 (0.01)	0.14 (0.01)	0.15 (0.02)	0.09 (0.02)	0.15 (0.02)	0.12 (0.01)	0.14 (0.02)
Permanent contract	0.17 (0.05)	0.03 (0.04)	0.22 (0.03)	0.17 (0.27)	0.10 (0.03)	0.12 (0.02)	0.21 (0.02)	0.05 (0.03)	0.21 (0.06)	0.09 (0.02)	0.12 (0.02)	0.12 (0.16)
Managerial position	0.14 (0.02)	0.08 (0.01)	0.07 (0.01)	0.09 (0.02)	0.16 (0.02)	0.09 (0.01)	0.13 (0.01)	0.10 (0.01)	0.13 (0.02)	0.14 (0.02)	0.11 (0.01)	0.10 (0.02)
Technicians and associate professionals	-0.14 (0.03)	-0.12 (0.02)	-0.13 (0.02)	-0.14 (0.02)	-0.24 (0.02)	-0.18 (0.02)	-0.13 (0.02)	-0.05 (0.02)	-0.06 (0.03)	-0.14 (0.03)	-0.19 (0.02)	-0.12 (0.02)
Clerks	-0.22 (0.03)	-0.15 (0.02)	-0.17 (0.02)	-0.29 (0.04)	-0.38 (0.04)	-0.28 (0.02)	-0.20 (0.02)	-0.18 (0.03)	-0.20 (0.05)	-0.27 (0.04)	-0.23 (0.02)	-0.32 (0.04)
Service, shop and market sales workers	-0.25 (0.04)	-0.12 (0.03)	-0.25 (0.03)	-0.27 (0.04)	-0.30 (0.04)	-0.25 (0.03)	-0.23 (0.02)	-0.17 (0.03)	-0.19 (0.04)	-0.35 (0.04)	-0.25 (0.02)	-0.28 (0.04)
Skilled workers	-0.33 (0.03)	-0.19 (0.02)	-0.31 (0.02)	-0.27 (0.03)	-0.29 (0.03)	-0.28 (0.02)	-0.28 (0.02)	-0.24 (0.02)	-0.20 (0.03)	-0.29 (0.03)	-0.32 (0.02)	-0.26 (0.02)
Elementary occupations	-0.42 (0.04)	-0.18 (0.03)	-0.41 (0.03)	-0.33 (0.04)	-0.36 (0.04)	-0.36 (0.03)	-0.34 (0.02)	-0.31 (0.04)	-0.26 (0.10)	-0.52 (0.04)	-0.37 (0.03)	-0.39 (0.03)

Table A4 (continued)**Estimation Results for Log-Wage Equations (Specification 2): Men in Full-time Employment(St. Err. in brackets)**

	AT	BE	DE	DK	FI	FR	IT	NL	NO	PL	ES	UK
Construction, transport and storage	-0.09 (0.02)	-0.12 (0.02)	-0.21 (0.02)	-0.01 (0.02)	-0.03 (0.02)	-0.06 (0.01)	0.02 (0.01)	-0.01 (0.02)	-0.08 (0.03)	-0.05 (0.02)	-0.01 (0.02)	0.05 (0.02)
Wholesale and retail trade, etc.	-0.12 (0.03)	-0.11 (0.03)	-0.19 (0.02)	-0.02 (0.03)	-0.07 (0.03)	-0.12 (0.02)	-0.08 (0.02)	-0.05 (0.02)	-0.13 (0.03)	-0.09 (0.03)	-0.12 (0.02)	-0.05 (0.03)
Accommodation and food services	-0.29 (0.07)	-0.24 (0.05)	-0.53 (0.06)	-0.33 (0.11)	-0.39 (0.08)	-0.25 (0.05)	-0.12 (0.03)	-0.15 (0.06)	-0.34 (0.10)	-0.12 (0.09)	-0.21 (0.03)	-0.24 (0.07)
Information, communication, finance and insurance	0.09 (0.03)	0.03 (0.02)	0.07 (0.02)	0.13 (0.03)	0.04 (0.03)	-0.04 (0.02)	0.22 (0.02)	0.06 (0.03)	-0.05 (0.04)	0.12 (0.04)	0.16 (0.02)	0.17 (0.03)
Real estate activities, etc.	-0.06 (0.03)	-0.12 (0.03)	-0.20 (0.02)	-0.07 (0.03)	-0.09 (0.03)	-0.09 (0.03)	-0.03 (0.02)	-0.01 (0.03)	-0.13 (0.04)	-0.17 (0.03)	-0.06 (0.02)	0.01 (0.03)
Public administration and defense, compulsory social security	-0.09 (0.03)	-0.11 (0.02)	-0.20 (0.02)	-0.04 (0.04)	-0.02 (0.03)	-0.12 (0.02)	0.16 (0.02)	0.05 (0.02)	-0.25 (0.05)	0.06 (0.03)	0.16 (0.02)	0.15 (0.03)
Education; human health and social work	-0.14 (0.03)	-0.20 (0.02)	-0.20 (0.02)	-0.21 (0.03)	-0.12 (0.03)	-0.15 (0.02)	0.09 (0.02)	-0.12 (0.03)	-0.33 (0.04)	-0.11 (0.03)	0.09 (0.02)	-0.05 (0.03)
Arts, etc.; activities of households as employers; extraterritorial bodies	-0.18 (0.06)	-0.14 (0.04)	-0.21 (0.04)	-0.23 (0.05)	-0.28 (0.05)	-0.11 (0.03)	0.03 (0.03)	-0.11 (0.05)	-0.24 (0.06)	-0.11 (0.06)	-0.11 (0.03)	0.02 (0.05)
Constant	2.30 (0.08)	2.52 (0.06)	2.05 (0.06)	2.65 (0.28)	2.41 (0.08)	2.32 (0.10)	1.86 (0.04)	2.21 (0.07)	2.74 (0.11)	1.02 (0.17)	1.79 (0.05)	2.11 (0.17)

NOTE.—Reference education level: at most lower secondary education. Reference occupation: legislators, senior officials and managers; professionals. Reference sector of activity: agriculture forestry and fishing; mining and quarrying; manufacturing; electricity, etc.; water supply, etc. (-) means not included in log wage equation.

Table A5**Estimation Results for Log-Wage Equations (Specification 2): Women in Full-time Employment(St. Err. in brackets)**

	AT	BE	DE	DK	FI	FR	IT	NL	NO	PL	ES	UK
Nationality	0.06 (0.03)	0.00 (0.03)	-0.05 (0.03)	0.05 (0.07)	0.08 (0.04)	0.03 (0.03)	0.13 (0.02)	0.00 (0.04)	0.14 (0.07)	0.05 (0.12)	0.07 (0.02)	-0.01 (0.03)
At most upper secondary education	0.10 (0.04)	0.08 (0.03)	-0.05 (0.04)	0.08 (0.05)	0.02 (0.02)	0.08 (0.02)	0.18 (0.02)	0.04 (0.05)	0.05 (0.05)	0.14 (0.04)	0.14 (0.02)	0.18 (0.05)
Tertiary education	0.35 (0.06)	0.23 (0.04)	0.05 (0.04)	0.17 (0.06)	0.14 (0.03)	0.21 (0.03)	0.30 (0.03)	0.31 (0.07)	0.49 (0.12)	0.41 (0.05)	0.33 (0.03)	0.52 (0.07)
Labor Market Experience	0.02 (0.00)	0.02 (0.00)	0.03 (0.00)	0.02 (0.01)	0.02 (0.00)	0.02 (0.00)	0.02 (0.00)	0.03 (0.01)	0.05 (0.01)	0.03 (0.00)	0.02 (0.00)	0.03 (0.00)
Labor Market Experience Squared	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Number of Children 0-5 Years	-	-	-	-0.07 (0.03)	-0.09 (0.06)	-	-	0.03 (0.06)	-0.36 (0.07)	-	-	-0.24 (0.07)
Number of Children 06-11 Years	-	-	-	0.01 (0.05)	-0.01 (0.01)	-	-	0.06 (0.06)	-0.17 (0.06)	-	-	-0.16 (0.05)
Number of Children above 12	-	-	-	-0.00 (0.01)	-0.01 (0.01)	-	-	-0.09 (0.03)	-0.09 (0.03)	-	-	-0.11 (0.02)
Degree of Urbanization of Local area	0.00 (0.02)	-0.04 (0.04)	0.15 (0.02)	0.04 (0.03)	0.05 (0.01)	0.03 (0.02)	-0.03 (0.01)	-	-	0.05 (0.01)	0.03 (0.01)	0.04 (0.05)
Firm with more than 11 Employees	0.11 (0.02)	0.09 (0.02)	0.16 (0.02)	0.11 (0.02)	0.07 (0.01)	0.12 (0.02)	0.14 (0.01)	0.10 (0.05)	0.06 (0.04)	0.08 (0.02)	0.13 (0.02)	0.09 (0.02)
Permanent Contract	0.09 (0.06)	0.09 (0.03)	0.19 (0.03)	-0.30 (0.08)	0.09 (0.02)	0.17 (0.03)	0.18 (0.02)	0.07 (0.05)	0.14 (0.05)	0.11 (0.02)	0.10 (0.01)	0.06 (0.17)
Managerial Position	0.10 (0.02)	0.09 (0.02)	0.11 (0.02)	0.09 (0.02)	0.06 (0.02)	0.06 (0.02)	0.09 (0.01)	0.10 (0.03)	0.07 (0.03)	0.10 (0.02)	0.09 (0.02)	0.08 (0.02)
Technicians and associate professionals	-0.06 (0.04)	-0.07 (0.02)	-0.11 (0.02)	-0.14 (0.02)	-0.23 (0.02)	-0.10 (0.02)	-0.11 (0.02)	-0.05 (0.04)	-0.01 (0.03)	-0.16 (0.02)	-0.23 (0.01)	-0.12 (0.02)
Clerks	-0.08 (0.04)	-0.12 (0.02)	-0.14 (0.03)	-0.23 (0.03)	-0.32 (0.02)	-0.22 (0.03)	-0.19 (0.02)	-0.25 (0.04)	-0.01 (0.05)	-0.27 (0.02)	-0.31 (0.02)	-0.28 (0.02)
Service, Shop and Market Sales Workers	-0.23 (0.04)	-0.16 (0.04)	-0.43 (0.03)	-0.26 (0.03)	-0.31 (0.02)	-0.30 (0.03)	-0.30 (0.03)	-0.21 (0.05)	-0.04 (0.04)	-0.47 (0.03)	-0.44 (0.02)	-0.40 (0.03)
Skilled workers	-0.34 (0.07)	-0.34 (0.05)	-0.46 (0.04)	-0.28 (0.04)	-0.37 (0.03)	-0.36 (0.04)	-0.40 (0.03)	-0.49 (0.08)	-0.11 (0.08)	-0.41 (0.03)	-0.46 (0.02)	-0.46 (0.05)
Elementary Occupations	-0.36 (0.05)	-0.30 (0.04)	-0.56 (0.05)	-0.33 (0.04)	-0.41 (0.03)	-0.32 (0.03)	-0.43 (0.03)	-0.55 (0.09)	-0.16 (0.09)	-0.53 (0.03)	-0.50 (0.03)	-0.37 (0.04)

Table A5 (Continued)**Estimation Results for Log-Wage Equations (Specification 2): Women in Full-time Employment(St. Err. in brackets)**

	AT	BE	DE	DK	FI	FR	IT	NL	NO	PL	ES	UK
Construction, Transport and Storage	0.05 (0.05)	-0.10 (0.05)	-0.15 (0.04)	-0.05 (0.04)	-0.00 (0.03)	-0.04 (0.04)	0.07 (0.03)	-0.07 (0.06)	0.07 (0.08)	0.01 (0.03)	0.09 (0.03)	-0.02 (0.05)
Wholesale and Retail Trade, etc.	0.03 (0.04)	-0.11 (0.04)	-0.11 (0.03)	-0.04 (0.03)	-0.06 (0.03)	-0.10 (0.03)	0.00 (0.02)	-0.23 (0.07)	-0.04 (0.07)	-0.05 (0.03)	-0.06 (0.03)	-0.17 (0.04)
Accommodation and Food Services	-0.14 (0.06)	-0.26 (0.08)	-0.43 (0.06)	0.04 (0.06)	-0.12 (0.04)	-0.10 (0.05)	-0.11 (0.04)	-0.34 (0.10)	0.12 (0.11)	-0.14 (0.04)	-0.03 (0.03)	-0.36 (0.07)
Information, Communication, Finance and Insurance	0.19 (0.05)	0.11 (0.04)	0.14 (0.03)	0.14 (0.04)	0.08 (0.03)	0.04 (0.04)	0.23 (0.03)	0.06 (0.06)	0.19 (0.08)	0.17 (0.03)	0.12 (0.03)	0.11 (0.04)
Real Estate Activities, etc.	0.04 (0.05)	-0.05 (0.04)	-0.14 (0.03)	-0.03 (0.03)	-0.10 (0.03)	-0.09 (0.04)	-0.00 (0.03)	-0.02 (0.06)	0.05 (0.07)	-0.02 (0.03)	-0.06 (0.03)	-0.03 (0.04)
Public Administration and Defense; Compulsory Social Security	0.06 (0.05)	-0.09 (0.03)	-0.06 (0.03)	0.00 (0.03)	-0.04 (0.03)	-0.11 (0.03)	0.16 (0.02)	0.05 (0.05)	-0.01 (0.08)	0.06 (0.03)	0.17 (0.03)	0.05 (0.04)
Education; Human Health and Social Work	0.05 (0.04)	-0.13 (0.03)	-0.12 (0.03)	-0.09 (0.03)	-0.06 (0.02)	-0.11 (0.03)	0.11 (0.02)	-0.15 (0.05)	-0.10 (0.08)	-0.05 (0.02)	0.12 (0.03)	-0.07 (0.03)
Arts, etc.; Activities of Households as Employers; Extraterritorial Bodies	-0.01 (0.06)	-0.05 (0.05)	-0.17 (0.04)	-0.01 (0.05)	-0.09 (0.03)	-0.25 (0.03)	-0.01 (0.03)	-0.17 (0.09)	-0.15 (0.08)	-0.03 (0.04)	-0.07 (0.02)	-0.08 (0.05)
Selection-Correction Term	0.09 (0.04)	0.08 (0.04)	0.00 (0.03)	-0.00 (0.47)	0.17 (0.10)	-0.04 (0.04)	0.12 (0.03)	0.07 (0.12)	1.09 (0.45)	0.17 (0.05)	0.17 (0.03)	0.46 (0.11)
Constant	1.95 (0.12)	2.25 (0.11)	2.15 (0.08)	2.99 (0.21)	2.38 (0.08)	2.30 (0.16)	1.67 (0.07)	2.36 (0.16)	1.92 (0.27)	0.69 (0.15)	1.68 (0.06)	1.80 (0.21)

NOTE.—Reference education level: at most lower secondary education. Reference occupation: legislators, senior officials and managers; professionals. Reference sector of activity: agriculture forestry and fishing; mining and quarrying; manufacturing; electricity, etc.; water supply, etc. (-) means not included in log wage equation.

Table A6**Estimation Results for Log-Wage Equations (Specification 2): Women in Part-time Employment(St. Err. in brackets)**

	AT	BE	DE	DK	FI	FR	IT	NL	NO	PL	ES	UK
Nationality	0.15 (0.05)	0.09 (0.04)	0.04 (0.05)	0.54 (1.06)	0.18 (0.27)	-0.02 (0.06)	0.01 (0.04)	-0.00 (0.04)	-0.08 (0.23)	1.24 (0.47)	0.00 (0.05)	0.01 (0.05)
At most upper secondary education	0.05 (0.05)	0.03 (0.03)	0.03 (0.05)	0.37 (0.50)	0.27 (0.15)	0.03 (0.04)	0.06 (0.04)	0.06 (0.02)	0.00 (0.11)	0.09 (0.14)	0.08 (0.04)	0.17 (0.06)
Tertiary education	0.34 (0.07)	0.20 (0.04)	0.15 (0.05)	0.42 (0.61)	0.69 (0.31)	0.07 (0.06)	0.25 (0.07)	0.23 (0.03)	-0.04 (0.34)	0.28 (0.25)	0.21 (0.07)	0.44 (0.08)
Labor Market Experience	0.01 (0.01)	0.02 (0.00)	0.02 (0.01)	-0.01 (0.04)	0.04 (0.03)	0.01 (0.01)	0.02 (0.01)	0.02 (0.00)	-0.01 (0.03)	0.01 (0.01)	0.02 (0.00)	0.01 (0.01)
Labor Market Experience Squared	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Number of Children 0-5 Years	-	-	-	-0.33 (0.50)	-1.15 (0.57)	-	-	-0.01 (0.03)	0.03 (0.25)	-	-	-0.11 (0.08)
Number of Children 6-11 Years	-	-	-	-0.35 (0.80)	-0.24 (0.10)	-	-	-0.04 (0.02)	0.16 (0.18)	-	-	-0.14 (0.06)
Number of Children Older than 12	-	-	-	-0.02 (0.11)	-0.01 (0.05)	-	-	-0.03 (0.01)	0.13 (0.09)	-	-	-0.07 (0.03)
Degree of Urbanization of Local area	0.00 (0.03)	0.12 (0.05)	0.06 (0.03)	0.24 (0.34)	0.06 (0.08)	0.05 (0.04)	-0.01 (0.03)	-	-	0.04 (0.07)	0.05 (0.04)	0.01 (0.06)
Firm with more than 11 Employees	0.04 (0.03)	0.06 (0.03)	0.20 (0.02)	-0.02 (0.06)	0.01 (0.08)	0.18 (0.03)	0.14 (0.03)	0.078 (0.02)	-0.02 (0.08)	0.03 (0.07)	0.13 (0.01)	0.04 (0.03)
Permanent Contract	0.08 (0.08)	0.22 (0.04)	0.22 (0.04)	d	0.17 (0.10)	0.20 (0.04)	0.19 (0.04)	0.08 (0.03)	-0.04 (0.11)	-0.08 (0.06)	0.04 (0.04)	-0.05 (0.18)
Managerial Position	0.05 (0.03)	0.02 (0.03)	0.02 (0.03)	0.04 (0.08)	0.09 (0.16)	0.09 (0.04)	0.00 (0.04)	0.04 (0.02)	-0.04 (0.11)	0.06 (0.14)	0.05 (0.05)	0.11 (0.03)
Technicians and associate professionals	-0.15 (0.07)	-0.02 (0.03)	-0.19 (0.04)	-0.17 (0.08)	0.03 (0.15)	-0.03 (0.06)	-0.00 (0.06)	-0.06 (0.02)	-0.04 (0.11)	-0.34 (0.14)	-0.27 (0.07)	-0.06 (0.05)
Clerks	-0.18 (0.07)	-0.10 (0.03)	-0.32 (0.04)	-0.26 (0.09)	-0.03 (0.15)	-0.17 (0.06)	0.00 (0.06)	-0.25 (0.03)	-0.12 (0.16)	-0.29 (0.15)	-0.48 (0.07)	-0.23 (0.04)
Service, Shop and Market Sales Workers	-0.29 (0.07)	-0.15 (0.04)	-0.45 (0.04)	-0.27 (0.09)	-0.10 (0.16)	-0.33 (0.07)	-0.19 (0.07)	-0.29 (0.03)	-0.23 (0.12)	-0.42 (0.14)	-0.59 (0.07)	-0.29 (0.04)
Skilled workers	-0.20 (0.11)	-0.09 (0.06)	-0.71 (0.06)	-0.13 (0.17)	-0.06 (0.27)	-0.45 (0.10)	-0.20 (0.08)	-0.33 (0.06)	0.01 (0.32)	-0.54 (0.20)	-0.57 (0.11)	-0.36 (0.12)
Elementary Occupations	-0.44 (0.08)	-0.23 (0.04)	-0.66 (0.05)	-0.31 (0.11)	-0.28 (0.17)	-0.33 (0.07)	-0.34 (0.07)	-0.41 (0.04)	-0.24 (0.18)	-0.56 (0.13)	-0.66 (0.07)	-0.33 (0.06)

Table A6 (Continued)**Estimation Results for Log-Wage Equations (Specification 2): Women in Part-time Employment(St. Err. in brackets)**

	AT	BE	DE	DK	FI	FR	IT	NL	NO	PL	ES	UK
Construction, Transport and Storage	-0.06 (0.08)	-0.03 (0.07)	-0.17 (0.06)	0.06 (0.15)	0.28 (0.24)	0.10 (0.10)	-0.01 (0.08)	0.06 (0.05)	0.23 (0.27)	0.01 (0.20)	-0.03 (0.09)	-0.11 (0.09)
Wholesale and Retail Trade, etc.	-0.09 (0.06)	-0.05 (0.05)	-0.24 (0.04)	-0.25 (0.12)	-0.10 (0.20)	-0.16 (0.08)	0.10 (0.05)	-0.09 (0.04)	-0.24 (0.20)	-0.14 (0.13)	0.01 (0.07)	-0.36 (0.08)
Accommodation and Food Services	-0.21 (0.07)	0.05 (0.08)	-0.29 (0.07)	d	0.14 (0.28)	-0.16 (0.11)	-0.03 (0.06)	-0.25 (0.06)	-0.05 (0.25)	-0.27 (0.21)	0.04 (0.08)	-0.29 (0.09)
Information, Communication, Finance and Insurance	0.16 (0.08)	0.22 (0.06)	0.05 (0.05)	-0.04 (0.18)	0.31 (0.26)	0.04 (0.10)	0.27 (0.06)	0.12 (0.04)	0.09 (0.28)	0.27 (0.24)	-0.05 (0.11)	0.03 (0.09)
Real Estate Activities, etc.	-0.02 (0.07)	0.02 (0.05)	-0.12 (0.05)	-0.18 (0.12)	0.01 (0.23)	0.04 (0.10)	0.00 (0.05)	0.01 (0.04)	-0.02 (0.23)	-0.25 (0.14)	-0.08 (0.07)	-0.20 (0.08)
Public Administration and Defense; Compulsory Social Security	0.04 (0.07)	0.05 (0.05)	-0.04 (0.05)	0.00 (0.14)	0.01 (0.29)	-0.05 (0.07)	0.14 (0.06)	0.11 (0.04)	-0.18 (0.21)	-0.09 (0.18)	0.08 (0.09)	-0.04 (0.08)
Education; Human Health and Social Work	0.04 (0.06)	0.02 (0.04)	-0.15 (0.04)	-0.08 (0.11)	0.13 (0.20)	-0.13 (0.07)	0.12 (0.05)	-0.04 (0.03)	-0.05 (0.15)	-0.900 (0.13)	-0.03 (0.07)	-0.18 (0.07)
Arts, etc.; Activities of Households as Employers; Extraterritorial Bodies	-0.17 (0.09)	0.04 (0.05)	-0.19 (0.05)	-0.05 (0.13)	0.00 (0.22)	-0.16 (0.08)	-0.09 (0.05)	-0.09 (0.05)	d	0.10 (0.17)	-0.02 (0.07)	-0.19 (0.09)
Selection-Correction Term	0.02 (0.04)	-0.00 (0.04)	-0.02 (0.02)	1.62 (3.28)	0.95 (0.49)	-0.04 (0.05)	0.03 (0.04)	0.08 (0.06)	-0.27 (0.60)	0.03 (0.13)	0.04 (0.04)	0.25 (0.08)
Constant	2.36 (0.16)	2.11 (0.10)	2.05 (0.12)	4.44 (2.54)	3.35 (0.56)	1.78 (0.32)	1.80 (0.12)	2.63 (0.09)	2.71 (0.79)	0.05 (0.50)	1.97 (0.14)	2.59 (0.23)

NOTE.—Reference education level: at most lower secondary education. Reference occupation: legislators, senior officials and managers; professionals. Reference sector of activity: agriculture forestry and fishing; mining and quarrying; manufacturing; electricity, etc.; water supply, etc. (-) means not included in log wage equation. (d) means dropped because of collinearity.

Table A7. Robustness Checks for Full-time Gender Wage Gap (Specification 2)

	AT			IT			PL			SP			UK		
Wage computed using income: Sample	Annual A	Monthly A	Monthly B	Annual A	Monthly A	Monthly B	Annual A	Monthly A	Monthly B	Annual A	Monthly A	Monthly B	Annual A	Monthly A	Monthly B
Mean Male Log-wage	2.82	2.67	2.67	2.53	2.39	2.39	1.37	1.31	1.30	2.36	2.37	2.37	2.66	2.66	2.66
Mean Female Log-wage	2.64	2.52	2.51	2.47	2.34	2.32	1.28	1.24	1.23	2.28	2.29	2.26	2.47	2.47	2.46
Log-Wage Difference	0.19	0.15	0.16	0.05	0.05	0.07	0.08	0.07	0.07	0.09	0.08	0.10	0.19	0.19	0.20
Explained Part															
Other Characteristics	0.00 (ns)	-0.00 (ns)	-0.00 (ns)	-0.00	-0.00	-0.00	-0.00	-0.00 (ns)	-0.00	-0.00 (ns)	-0.00 (ns)	-0.00 (ns)	0.01	0.01	0.01
Human Capital Indicators	0.02	0.02	0.02	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02	0.01	0.01	0.01	-0.01	-0.01	-0.01
Horizontal Segregation	0.04	0.04	0.03	-0.00 (ns)	-0.00 (ns)	0.00 (ns)	0.03	0.03	0.03	0.01 (ns)	0.00 (ns)	0.01 (ns)	0.03	0.03	0.03
Vertical Segregation	0.00 (ns)	-0.01 (ns)	-0.00 (ns)	-0.03	-0.02	-0.02	-0.03	-0.03	-0.04	-0.03	-0.03	-0.02	0.04	0.05	0.04
Total Explained Part	0.06	0.05	0.05	-0.04	-0.03	-0.02	-0.03	-0.02	-0.03	-0.01 (ns)	-0.02 (ns)	-0.00 (ns)	0.08	0.08	0.08
Unexplained Part															
Unexplained Part 1	0.05	0.05	0.05	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.07	0.07	0.07
Unexplained Part 2	0.14	0.15	0.14	0.12	0.14	0.17	0.14	0.11	0.11	0.13	0.12	0.15	0.33	0.32	0.39
Selection Part	-0.06	-0.09	-0.08	-0.07	-0.08	-0.10	-0.06	-0.05	-0.05	-0.07	-0.07	-0.09	-0.28	-0.27	-0.34

NOTE.— The selection of sample A is explained in Section III A. Sample B includes also those individuals excluded from sample A in order to manage the issue of time lag between the end of the income reference period and the time of the interview when computing the hourly wage (individual included in sample B are i) workers who have changed job since the previous year; ii) workers who worked some months full-time and some months part-time during the income reference period; iii) workers who spent the last 12 months in full-time employment and now are not in a full-time job; iv) workers who spent the last 12 months in part-time employment and now are not in a part-time job; v) workers who were inactive for the last 12 months and are now working). (ns) means not statistically significant at 1% level.

Table A8. Robustness Checks for Female Full-time/Part-time Wage Gap (Specification 2)

	AT			IT			PL			SP			UK		
Wage computed using income:	Annual	Monthly	Monthly	Annual	Monthly	Monthly	Annual	Monthly	Monthly	Annual	Monthly	Monthly	Annual	Monthly	Monthly
Sample:	A	A	B	A	A	B	A	A	B	A	A	B	A	A	B
Mean Male Log-wage	2.64	2.52	2.51	2.47	2.34	2.32	1.28	1.24	1.23	2.28	2.29	2.26	2.48	2.47	2.46
Mean Female Log-wage	2.56	2.41	2.40	2.24	2.23	2.24	1.10	0.99	1.03	2.02	2.02	2.05	2.28	2.27	2.25
Log-Wage Difference	0.07	0.11	0.11	0.23	0.11	0.08	0.18	0.25	0.20	0.26	0.27	0.21	0.20	0.20	0.21
Explained Part															
Other Characteristics	-0.00 (ns)	-0.00 (ns)	0.00 (ns)	-0.00 (ns)	-0.00 (ns)	0.00	-0.01	-0.01	-0.00 (ns)	0.00 (ns)	0.00 (ns)	0.00 (ns)	-0.01	-0.01	-0.01
Human Capital Indicators	0.03	0.03	0.03	0.04	0.03	0.03	0.05	0.05	0.04	0.06	0.06	0.05	0.02	0.02	0.02
Horizontal Segregation	0.03	0.03	0.03	0.08	0.05	0.05	0.08	0.08	0.08	0.10	0.09	0.08	0.04	0.04	0.05
Vertical Segregation	0.06	0.06	0.06	0.07	0.05	0.05	0.13	0.14	0.11	0.11	0.13	0.11	0.12	0.12	0.13
Total Explained Part	0.12	0.13	0.13	0.18	0.13	0.12	0.26	0.26	0.23	0.27	0.28	0.24	0.17	0.17	0.18
Unexplained Part															
Unexplained Part 1	-0.14	-0.15	-0.14	-0.12	-0.14	-0.17	-0.14	-0.11	-0.11	-0.13	-0.12	-0.15	-0.33	-0.32	-0.39
Unexplained Part 2	0.03 (ns)	-0.01 (ns)	0.02 (ns)	0.09 (ns)	0.01 (ns)	0.00 (ns)	-0.03 (ns)	0.08 (ns)	0.03 (ns)	0.02 (ns)	0.02 (ns)	-0.01 (ns)	-0.02 (ns)	0.02 (ns)	0.06 (ns)
Selection Part	0.07	0.14	0.10	0.08	0.11	0.12	0.08 (ns)	0.02 (ns)	0.05 (ns)	0.09	0.09	0.12	0.37	0.33	0.36

NOTE.— The selection of sample A is explained in Section III A. Sample B includes also those individuals excluded from sample A in order to manage the issue of time lag between the end of the income reference period and the time of the interview when computing the hourly wage (individual included in sample B are i) workers who have changed job since the previous year; ii) workers who worked some months full-time and some months part-time during the income reference period; iii) workers who spent the last 12 months in full-time employment and now are not in a full-time job; iv) workers who spent the last 12 months in part-time employment and now are not in a part-time job; v) workers who were inactive for the last 12 months and are now working; vi) workers who had more than one job during the income reference period. (ns) means not statistically significant at 1% level.

References

- Apps Patricia, Jan Kabátek, Ray Rees, and Arthur van Soest. 2012. Labor supply heterogeneity and demand for child care of mothers with young children. IZA DP No. 7007.
- Ashenfelter Orley and James Heckman. 1974. The Estimation of income and substitution effects in a model of family labor supply. *Econometrica* 42, no. 1: 73-85.
- Bardasi Elena and Janet C. Gornick. 2008. Working for less? Women's part-time wage penalties across countries. *Feminist Economics* 14, no. 1: 37-72.
- Barry Ursula, Francesca Bettio, Hugo Figueiredo, Damian Grimshaw, Friederike Maier, and Robert Plasman. 2001. Indicators on gender gaps in pay and income. In *Indicators on gender equality in the European Employment Strategy*, ed. Jill Rubery, Colette Fagan, Damian Grimshaw, Hugo Figueiredo, and Mark Smith. Manchester: EWERC.
- Bayard Kimberly, Judith Hellerstein, David Neumark, and Kenneth Troske. 2003. New Evidence on Sex Segregation and Sex Differences in Wages from Matched Employee-Employer Data. *Journal of Labor Economics* 21, no. 4: 887 – 922.
- Beblo Miriam and Elke Wolf. 2002. How much does a year off cost? Estimating the wage effects of employment breaks and part-time periods. *Cahiers Économique de Bruxelles* 45, no. 2: 191-217.
- Becker Gary. 1957. The economics of discrimination. The university of Chicago press, London.
- Belous Richard S. 1989. *The Contingent Economy: The Growth of The Temporary, Part-Time and Subcontracted Workforce*. Washington, DC: National Planning Association.
- Bender, Keith A., Susan M. Donohue, and John S. Heywood. 2005. Job satisfaction and gender segregation. *Oxford Economic Papers* 57, no. 3: 479-496.
- Bielby William and Baron James. 1984. A woman's place is with other women: sex segregation within organizations. In *Sex Segregation in the Workplace: Trends, Explanations, Remedies*, ed. Barbara Reskin. Washington, DC: National Academy Press.
- Blank Rebecca M. 1998. Labor market dynamics and part-time work. In Solomon W. Polachek (Eds.), *Research in Labor Economics*, Volume 17. Greenwich, CN : JA1 Press.
- Blau Francine D. 1997. *Equal pay in the office*. Lexington, MA: Heath.
- Blau, Francine D. and Lawrence M. Kahn. 1996. Wage structure and gender earnings differentials: an international comparison. *Economica* 63, no. 250: S29-S62.

- Blau, Francine D. and Lawrence M. Kahn. 1997. Swimming upstream: trends in the gender wage differential in 1980s. *Journal of Labor Economics* 15, no. 1: 1-42.
- Blau, Francine D. and Lawrence M. Kahn. 2000. Gender Differences in Pay. *Journal of Economic Perspectives* 14, no.4: 75-99.
- Blinder Alan S. 1973. Wage discrimination: reduced form and structural estimates. *The Journal of Human Resources* 8, no. 4: 436-455.
- Blundell Richard, Thomas MaCurdy, and Costas Meghir. 2007. Labor supply models: Unobserved heterogeneity, nonparticipation and dynamics, in: James Heckman and Edward Leamer (Eds.), *Handbook of Econometrics: Volume 6*, pp. 4667 – 4771. Amsterdam: Elsevier.
- Carrington, William J. and Kenneth R. Troske. 1998. Sex segregation in U.S. Manufacturing. *Industrial and Labor Relations Review* 5, no.3 : 445-64.
- Chevalier Arnaud. 2007. Motivation, expectations, and the gender pay gap for UK graduates. *Oxford Bulletin of Economics and Statistics* 69, no. 6: 819-842.
- Cotton Jeremiah. 1988. On the Decomposition of wage differentials. *The Review of Economics and Statistics* 70, no. 2: 236-243.
- Ermisch, John F. and Robert. E. Wright. 1993. Wage offers and full-time and part-time employment by British women. *The Journal of Human Resources* 28, no. 1: 111-133.
- European Commission. 1998. *Employment in Europe 1998*. Brussels: European Commission.
- Fagan Colette and Jacqueline O'Reilly. 1998. Conceptualizing part-time work: the value of an integrated comparative perspective. In Jacqueline O'Reilly and Colette Fagan (Eds.), *Part-Time Prospects: An International Comparison of Part-Time Work in Europe, North America, and the Pacific Rim*, pp. 1 - 31. London: Routledge.
- Fernández-Kranz Daniel and Núria Rodríguez-Planas. 2011. The part-time pay penalty in a segmented labor market. *Labour Economics* 18, no. 5: 591-606.
- Fields Judith and Edward N. Wolff. 1995. Interindustry wage differentials and the gender wage gap. *Industrial and Labor Relations Review* 49, no. 1: 105-20.
- Filer Randall K. 1985. Male-female wage differences: the importance of compensating differentials. *Industrial and Labor Relations Review* 38, no. 3: 426-437.
- Ganguli Ina and Katherine Terrell. 2006. Institutions, markets and men's and women's wage inequality: Evidence from Ukraine. *Journal of Comparative Economics* 34, no. 2: 200-227.
- Goldberg Dey Judy and Catherine Hill. 2007. Behind the pay gap. American Association of University Women Educational Foundation, Washington.

- Gornick, Janet C. and Jerry A. Jacobs. 1996. A cross-national analysis of the wages of part-time workers: evidence from the United States, the United Kingdom, Canada, and Australia. *Work, Employment and Society* 10, no.1: 1- 27.
- Hamermesh, Daniel S. and Albert E. Rees. 1993. *The Economics of work and pay*. New York: Harper Collins College Publisher, Fifth Edition.
- Heckman James and Robert J. Willis. 1977. A beta-logistic model for the analysis of sequential labor force participation by married women. *Journal of Political Economy* 85, no. 1: 27-58.
- Houseman, Susan N. and Machiko Osawa. 1998. What is the nature of part-time work in the United States and Japan?. In Jacqueline O'Reilly and Colette Fagan (Eds.), *Part-Time Prospects: An International Comparison of Part-Time Work in Europe, North America, and the Pacific Rim*, pp. 232 – 251. London: Routledge.
- Ilias Livanos and Konstantinos Pouliakas. 2012. Educational segregation and the gender wage gap in Greece. *Journal of Economic Studies* 39, no. 5: 554 – 575.
- Jepsen Maria, Sile P. O'Dorchai, Robert Plasman, and François Rycx. 2005. The wage penalty induced by part-time work: the case of Belgium. *Brussels Economic Review* 48, no. 1-2: 73-94.
- Kabeer Naila. 2008. Gender, labour, markets and poverty: an overview. In *Poverty in Focus. Gender Equality* 13.UNDP.
- Killingsworth, Mark R. and James. J. Heckman. 1986. Female labor supply: a survey. In *Handbook of Labor Economics*, vol. 1, ed. Orley Ashenfelter and Richard Layard. New York: Elsevier Science Publishers BV.
- Lin, Eric S. 2010. Gender wage gaps by college major in Taiwan: empirical evidence from the 1997-2003 Manpower Utilization Survey. *Economics of Education Review* 29, no. : 156-164.
- Lindbeck Assar and Dennis J. Snower. 2000. Multitask learning and the reorganization of work: from tayloristic to holistic organization. *Journal of Labor Economics* 18, no. 3: 353-376.
- Machin Stephen and Patrick A. Puhani. 2003. Subject of degree and the gender wage gap differential: Evidence from the UK and Germany. *Economic Letters* 79, no. 3: 393-400.
- Macpherson, David A. and Barry T. Hirsch. 1995. Wages and gender composition: why do women's jobs pay less?. *Journal of Labor Economics* 13, no. 3: 26–71.
- Manning Alan and Barbara Petrongolo. 2008. The part-time pay penalty for women in Britain. *Economic Journal* 118, no. 526: 28-51.

- Matteazzi Eleonora, Ariane Pailhé, and Anne Solaz. 2012. Part-time wage penalties in Europe: a matter of selection or segregation?. *ECINEQ Working Papers Series 250*.
- McDonald, Judith A. and Robert J. Thornton. 2007. Do new male and female college graduates receive unequal pay?. *Journal of Human Resources* 42, no. 1: 32-48.
- McGinnity Frances and Patricia McManus. 2007. Paying the price for reconciling work and family life: comparing the wage penalty for women's part-time work in Britain, Germany and the United States. *Journal of Comparative Policy Analysis: Research and Practice* 9, no. 2: 115 - 234.
- Meulders Danièle and Robert Plasman. 1993. Part-Time work in the EEC countries: evolution during the 1980s. *Labour* 7, no. 3: 49-71.
- Meurs Dominique and Sophie Ponthieux. 2004. « Les écarts de salaire entre les femmes et les hommes en Europe - Effets de structures ou discrimination ? » *Revue de l'OFCE* 90: 153-192.
- Meurs Dominique and Sophie Ponthieux. 2006. Can the gender wage go further down?. *Economie et Statistique*, 398: 99-129.
- Meurs Dominique, Ariane Pailhé, and Sophie Ponthieux. 2010. Child-related career interruptions and the gender wage gap in France. *Annales d'Economie et de Statistique*, 99-100: 15-46.
- Meyersson Milgrom, Eva M., Trond Petersen, and Vemund Snartland. 2001. Equal pay for equal work? Evidence from Sweden and a comparison with Norway and the US. *Scandinavian Journal of Economics* 103, no.4: 559-583.
- Montgomery Mark. 1988. On the determinants of employer demand for part-time workers. *Review of Economics and Statistics* 70, no.1: 112-116.
- Neuman Shoshana and Ronald Oaxaca. 2004. Wage decompositions with selectivity-corrected wage equations: a methodological note. *Journal of Economic Inequality* 2, no. 1: 3-10.
- Neumark David. 1988. Employers' discriminatory behavior and the estimation of wage discrimination. *The Journal of Human Resources* 23, no. 3: 279-295.
- Oaxaca Ronald. 1973. Male-female wage differentials in urban labor markets. *International Economic Review* 14, no. 3: 693-709.
- Oi Walter Y. 1962. Labor as a quasi-fixed factors. *Journal of Political Economy* 70, no. 6: 538-555.
- Owen John D. 1979. *Working Hours*. Lexington, Massachusetts: Lexington Books.

- Petersen Trond and Vemund Snartland. 2004. Firms, wages, and incentives: incentive systems and their impacts on wages, productivity, and risks. *Research in Social Stratification and Mobility* 21: 255–288.
- Phelps Edmund. 1972. The statistical theory of racism and sexism. *The American Economic Review* 62, no. 4: 659-661.
- Plantenga Jannekeet Chantal Remery. 2006. *The Gender Pay Gap. Origins and Policy Responses*. Luxembourg : Office for Official Publications of the European Communities.
- Reimers Cordelia W. 1983. Labor market discrimination against Hispanic and black men. *The Review of Economics and Statistics* 65, no. 4: 570–579.
- Rice Patricia. 1999. Gender earnings differentials: the European experience. Policy Research Report on Gender and Development, Working Paper Series, No. 8, World Bank.
- Riley Nicola-Maria. 1997. Determinants of union membership: a review. *Labor* 11, no. 2: 265-301.
- Robertson Peter. 1989. Some explanations for the growth of part-time employment in Australia. *Australian Bulletin of Labor* 15, no. 5: 384-399.
- Rubery Jill, Damian Grimshaw, and Hugo Figueiredo. 2002. The gender pay gap and gender mainstreaming pay policy in EU Member States. Manchester: European Work and Employment Research Centre.
- Sadler Chris and Phil Aungles. 1990. Part-time employment growth in Australia, 1978-1989. *Australian Bulletin of Labor* 16, no. 4: 286-296.
- Skyt Nielsen Helena, Marianne Simonsen, and Mette Verner. 2004. Does the gap in family-friendly Policies drive the family gap? *Scandinavian Journal of Economics* 106, no. 4: 721-744.
- Smith Mark, Colette Fagan and Jill Rubery. 1998. Where and why is part-time work growing in Europe?. In *Part-time prospects: an international comparison of part-time work in Europe, North America and the Pacific Rim*, ed. Jacqueline O'Reilly and Colette Fagan: London and New York: Routledge.
- Tilly Chris. 1990. Short hours, short shrift: causes and consequences of part-time work. Washington, DC: Economic Policy Institute.
- Waldfoegel Jane. 1997. The Effects of Children on Women's Wages. *American Journal of Sociology* 62, no.2: 209-217.