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Abstract

The functioning of the labor market often has been stressed as a clear determinant in explaining poverty trends in developed countries. In this paper, we analyze the role of gender wage discrimination on household poverty rates in several EU countries, linking two related phenomena that rarely are analyzed together. In order to quantify the impact of discrimination on poverty, we propose the construction of a counterfactual distribution of wages where discrimination against women has been removed. Using this new wage distribution, we compute total household income and compare poverty rates in the absence of discrimination to those actually observed. Our results show that, in general, it is true that discrimination against women plays a determinant role in the current levels of poverty, even if we discover that results for each country present a different pattern and intensity. Further, we find that the effect of discrimination on poverty risk dramatically increases for individuals in households who largely depend on working female earnings, especially in the case of single mothers.

Keywords: poverty, inequality, income distribution, gender, wage discrimination, labor participation.
JEL Classification: J16, J31, J71.

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1. Introduction

Poverty has been shown to be a quite persistent phenomenon in rich countries, even in the presence of sustained macroeconomic growth. Among the main factors determining this persistence, the role played by individual labor market opportunities emerges as crucial.[3] Indeed, out of all possible labor market transitions, participation of adult household members has been revealed as important for allowing poor households to move above the poverty threshold and preventing vulnerable households to possibly fall below that critical line.[4]

The existence of economic or cultural barriers to the complete integration of specific groups of individuals in the labor market will be expected to reduce employment rates and to lower the effective wages of discriminated workers. In general, a lower participation rate or a lower wage of a group of individuals, evaluated in a household context, will imply a higher vulnerability of a large number of individuals in the population, given that poverty risk would rise not only among those who suffer discrimination but also among all individuals inserted in households who depend on discriminated individuals' earnings. We believe that this type of approach can help in explaining why specific demographic or socioeconomic groups face higher poverty rates in a large number of developed countries. In particular, gender is one of the most usual sources of worker discrimination in developed countries. This paper centers the discussion on the potential effects on household members' poverty risk when eliminating wage discrimination of all working females' contributions to household total income.

Until now and up to our knowledge, the evaluation of how the level of labor market discrimination faced by women affects the living conditions of their households has not yet been addressed in the literature. The studies on gender wage gap typically provide a measure of the aggregate unexplained gender wage gap or, eventually, they include a more complete analysis of its variation across the pay distribution. At the same time, within the income distribution literature, an increasing number of papers in recent years have reached the conclusion that female-headed households face a large poverty risk. However, the economic literature often has missed the link between labor market

[3] See for instance the discussion in Hoynes *et al.* (2006) about the role of the labor market in explaining poverty trends in the U.S.
[4] Two examples of how labor events affect poverty dynamics can be found in Jenkins and Rigg (2001) and Cantó (2003).

discrimination and household poverty. There are reasons to think that this linkage may be largely informative because discrimination is substantially shrinking the earnings of women while an increasing number of households' income level is strongly determined by these earnings. For this reason, the aim of this paper is precisely to bridge this gap, proposing an empirical procedure for quantifying the impact of wage discrimination against women on household poverty and household income inequality.

We use the data from the last wave of the European Community Household Panel (ECHP), carried out in 2001 in several EU countries that register different levels and evolution patterns in female labor market participation. For each country, we estimate a counterfactual household income distribution where current female wage earnings are replaced by those they would obtain if discrimination was removed. By comparing the levels of poverty and inequality computed using the actual income distribution to those computed using the counterfactual one, we provide a measure of the effects of discrimination on household income distribution. In order to make this procedure operative, we need to construct the household's counterfactual income distribution by estimating an individual discrimination gap for every working woman, which we will add to her current wage. The pay gap is obtained by running wage equations separately by gender and sector (public or private) for each country, taking into account the virtual existence of selection bias. With this simple procedure, we are able to analyze the distributive impact of discrimination in twelve EU countries.

The paper is organized as follows. Section 2 reviews the results in the related literature. Section 3 presents the methodology for measuring the effect of discrimination on the income distribution. In section 4, we describe the estimation procedure while in section 5, we undertake all the empirical analysis. The final section concludes by summarizing the main results.

2. The Related Literature

Gender is a source of worker discrimination to which the literature has paid much attention, in recent years. For most countries, the increase in female labor participation during the last decades has, in effect, dramatically changed the traditional *male bread-winne*r family model where wives' earnings were just *pin money* playing a negligible role in the household budget. The consequences on household incomes of these changes are not clear *a priori*. The result depends on how the proportional increase in family incomes due to female earnings is distributed across households at different points of the income distribution. Some empirical evidence during the 1980s in the U.S. (e.g., Juhn and Murphy, 1997; Karoly and Burtless, 1995) showed that wives' earnings contributed to the increase in inequality trends, given that employment and wage gains for wives of middle- and high-wage men were significantly larger than those for the rest. However, some more evidence for the U.S. in Reed and Cancian (2001) or Daly and Valletta (2006) appears to conclude instead that wives' earnings in that country actually have offset household inequality increasing trends. Harkness et al. (1997), using UK data, also provided evidence on an equalizing effect of female earnings on the married couples' income distribution in a period when inequality and poverty in Britain registered a rising trend. These authors additionally show that female earnings were critical in preventing poverty among married women in the UK but failed to do so in the case of single-mother families.[5] Additional evidence about the role of wives in preventing their households from falling into poverty has been provided by Maître et al. (2003) for the EU countries and by Cattan (1998) for the case of ethnic groups in the U.S..

An extensive and growing literature in labor economics has emphasized that working women, in spite of their increasing success in entering the labor market and in reducing their wage gap, are still far from facing the same opportunities than men have.[6] Indeed, even in countries displaying the greatest levels of gender equality, women still continue to encounter difficulties for balancing work and family life. They less often are promoted in their professional career or are unable to reach working conditions similar to those enjoyed by men. Researchers have tried to evaluate and explain the existence of gender segregation and gender gaps in participation, wages and unemployment rates

[5] Some more evidence exists about the equalizing effect of increasing female labor attachment on household income distribution in European countries. For instance, Alba and Collado (1999), Ruiz-Castillo and Sastre (2001) and Gradín and Otero (2001) analyze the Spanish case where, during the 1980s, there was a sharp increase in female labor participation jointly with a consistent decrease in household income inequality. The last of the three cited papers argues that the equalization effect in Spain is a result of the larger size of the equalizing effect on household income inequality of the increase in the wages of those women already in-work compared to the opposite effect that the increase in participation of highly-educated women imposed.

[6] According to the OECD (2004) report, the average rate of female labor participation in the European Union has increased in 7 percentage points between 1990 and 2003 (from 54.5 to 61.3), and a similar trend has been observed in the United States, Canada, Australia and Japan. Note, however, that this increasing average trend hides remarkable differences in the levels of participation across European countries. While Nordic countries like Sweden, Norway, Finland or Denmark register over 70 percent of female participation, Southern European countries like Spain, Italy or Greece do not reach 55 percent. Note also that Blau (1998) reports a substantial reduction in several gender gaps for American women between 1970 and 1995, after which, however, significant gaps still remain.

in several countries.[7] Within these, it is the analysis of the gender wage gap that has received the most attention. In fact, the large number of results on gender wage gaps from a large list of countries allows us to conclude that differences in human capital accumulation between men and women cannot fully explain the empirically-observed gender pay differences, indicating that they must be a result of different returns to similar characteristics by gender.[8]

We believe that a direct consequence of the existence of a gender gap could be, for example, the high and increasing poverty rates observed among female-headed families in many countries that the income distribution literature identifies with a *feminization of poverty*.[9] We argue that most of the countries whose women currently are facing discrimination would be paying a cost in terms of higher poverty levels due to two different factors: the fact that many working women receive lower wages than they should, given their endowments, and the fact that there are many women out of work as a consequence of a low female employment rate. An additional cost could be the potential increase in household income inequality, even if we should note that the impact of discrimination on household income inequality (increasing or decreasing the level of income inequality in the total population) depends on where in the income distribution the actual women facing discrimination are inserted: in the richest or in the poorest households.

We are conscious that the adequate quantification of the effect of wage discrimination on the distribution of income is a very difficult task, mainly because if discrimination were removed, apart from female wages, many decisions on participation or choices of occupation, sector or number of hours worked would change. However, despite the limitations of a static approach, we believe that undertaking this exercise gives us a rough measure of how relevant discrimination is in order to explain current levels of poverty or inequality. This measure may help us, for example, in evaluating how important equal-opportunity policies may be in the aim of fighting against poverty and social exclusion in different socioeconomic and demographic contexts.

[7] See Altonji and Blank (1999) for a good survey on this literature. Recent examples are Anker (1998), Petrongolo (2004), Antecol (2000) and Azmat et al. (2006).
[8] See, for instance, Arulampalam et al. (2005) for a recent comparison across EU countries. Additionally, Blau and Khan (2003) analyze determinant factors of unexplained gender wage gaps across countries.
[9] Albelda (1999) argues that in the U.S., this phenomenon is particularly large, in comparison to Europe, due to a particularly inadequate social welfare system regarding families' needs.

3. Measuring the Effect of Discrimination on Poverty and Inequality

Let $x = (x^1,..., x^h,..., x^H)$ be the vector of observed household incomes where each household is identified by the superscript $h = 1,..., H$. If subscript *i* refers to a specific individual living in *h*, we can write household's *h* total income, x^h, as:

$$x^h = \sum_{i \in h} (y_i t_i + \lambda_i),$$

where y_i represents the hourly wage of each individual *i* (equal to zero in case she is not in employment), t_i is the number of hours actually worked and λ_i is her income from other sources different from wages. Thus x^h is equal to the sum of earnings and incomes from any other source received by all household members.[10]

Let $x* = (x*^1,..., x*^h,..., x*^H)$ be the counterfactual distribution in the case of absence of discrimination against women, which we compute by replacing each working woman's wage y_i by the wage she would obtain, was discrimination removed, $y*_i$. Thus we can now write:

$$x*^h = \sum_{i \in h} (y*_i \, t_i + \lambda_i) = \sum_{i \in h} (y_i t_i + g_i t_i + \lambda_i) = x^h + g^h,$$

$$\text{with } g^h = \sum_{i \in h} g_i t_i,$$

where g_i is the hourly pay gap faced by member *i* (equal to zero in case females do not face any discrimination at all). Note that this term also may be interpreted as an hourly gender-specific *transfer* compensating the discrimination suffered by each woman which, if removed in order to construct a counterfactual wage, would increase her observed hourly wage y_i. Alternatively, g_i can be viewed as a gender-specific *tax* per hour of work that women have to pay when entering the labor market, thus reducing what could be defined as their market potential wage $y*_i$. Additionally, g^h is the compensation given to each household in order to construct its counterfactual income due to the amount of discrimination suffered by all working females in the household. Thus, the only difference between the actual income vector *x* and its counterfactual correspondent $x*$ is $g = (g^1,..., g^H)$, the discrimination vector. Then we have

[10] Typically, households' incomes then are adjusted by the number of equivalent adults co-habiting in the household in order to allow for comparisons of households of a different size.

$x^* = x + g$. Note that in the simple case, we are assuming that the number of hours worked t_i and all incomes other than wages λ_i are unaffected by discrimination. However, it is straightforward to extend this framework to the case where both components change.[11]

The simplest way to capture the absolute effect of discrimination on poverty in this context is to compute a poverty indicator (for instance, the head-count ratio), *P()*, before and after the compensation g takes place, and compute their difference:

$$\Delta P(x, x^*, pl) = P(x^*, pl) - P(x, pl) \ ,$$

where *pl* stands for the poverty line considered. The relative impact on poverty could then be expressed as:

$$\Delta P_r(x, x^*, pl) = \frac{\Delta P(x, x^*, pl)}{P(x, pl)} \times 100 \ ,$$

so that the impact of discrimination on poverty will positively depend upon the number of discriminated women whose equivalent income lies below the poverty line and the importance of the discrimination gap they face.

In a similar way, one can compute the absolute and relative impacts of discrimination on inequality as:

$$\Delta I(x, x^*) = I(x^*) - I(x) \quad \text{and} \quad \Delta I_r(x, x^*) = \frac{\Delta I(x, x^*)}{I(x)} 100 \ ,$$

I() being any inequality index.

It is straightforward that the distributional impact of discrimination will be neutral in the case that g is distributed proportionally to initial incomes x ($\Delta I = 0$). On the contrary, the compensation for discrimination would be *regressive* as far as g is proportionally higher in top-income households ($\Delta I > 0$) and *progressive* in the opposite case ($\Delta I < 0$).[12]

[11] Consider, for instance, the case where an unemployed woman receiving an unemployment social benefit accepts a job offer as a consequence of the higher market wage when discrimination is removed. In that case, t^*_i would indicate the new number of hours worked without discrimination while λ^*_i would accommodate the reduction in social benefits.

[12] Alternatively, if one regards g as a discrimination tax, it would be *regressive* (*progressive*) if $\Delta I < 0$ ($\Delta I > 0$).

The reader should note that any other alternative method already proposed in the income distribution literature in order to analyze the contribution to income inequality and poverty of an income source would also apply here. We simply would have to consider the compensation for discrimination g as an additional source of household income.[13]

4. Estimating the Counterfactual Income

A crucial point in order to make the previous procedure empirically operative is to properly estimate the counterfactual income vector *x**. For that, we need an adequate estimation of the hourly wage gap g_i for each working woman.

In the literature, discrimination usually is measured as the wage gap between male and female workers who are identical in their relevant productivity characteristics such as education and experience. Mincerian equations as the following are estimated separately by gender for the logarithm of the hourly wage y_i conditioning on those variables that potentially can explain a wage difference:

$$\ln(y_{m_i}) = Z'_{m_i}\beta_m + u_{m_i}$$

$$\ln(y_{f_i}) = Z'_{f_i}\beta_f + u_{f_i}$$

where subscript *m* stands for men and *f* for women, Z' are the corresponding vectors of characteristics, β are vectors of returns rates to characteristics and u are the error term vectors. As is well-known, the classical Oaxaca-Blinder approach breaks down the unconditional wage gap into two distinct components. One component is explained by the different endowments of characteristics of the average male and female worker, and another one that emerges from the different labor market returns to similar characteristics. So we can write:

$$\overline{\ln(y_m)} - \overline{\ln(y_f)} = (\overline{Z'_m} - \overline{Z'_f})\hat{\beta}_m + \overline{Z'_f}(\hat{\beta}_m - \hat{\beta}_f)$$

In this context, we can go one step further as Jenkins (1994) and Del Río et al. (2006) do, and make use of the predicted wage at the individual level. Assuming that male returns are those prevailing in the absence of discrimination, following Del Río et al.

[13] See Shorrocks (1982, 1988) for different alternatives or Sastre and Trannoy (2002) for Shapley decomposition. For comparing the impact of discrimination on poverty and inequality in different income distributions, a more robust analysis, similar to those based on *stochastic dominance*, easily can be undertaken in this framework.

(2006), for every working woman, we can compute her two predicted hourly wages: that using female returns to characteristics, $\hat{y}_{f_i}$, and that she would obtain if her endowments were remunerated just as male ones are, $\hat{r}_{f_i}$. For the OLS case, this could be written as:

$$\begin{aligned} \hat{y}_{f_i} &= \exp(Z'_{f_i}\hat{\beta}_f + \hat{\sigma}_f^2/2) \\ \hat{r}_{f_i} &= \exp(Z'_{f_i}\hat{\beta}_m + \hat{\sigma}_f^2/2) \end{aligned} \qquad \textbf{(1)}$$

where $\hat{\sigma}_f^2$ is the estimated variance of u_f.[14] The estimated individual wage gap

$$\hat{g}_{f_i} = \max\left\{(\hat{r}_{f_i} - \hat{y}_{f_i}), 0\right\}, \qquad \textbf{(2)}$$

indicates the hourly wage discrimination of female worker *i*, and the vector $\hat{g}_f = (\hat{g}_{f_1}, \ldots, \hat{g}_{f_N})$ is the discrimination vector for all working women in a population *N*. Thus, a given woman is considered to be discriminated when a man with the same relevant characteristics obtains a higher predicted wage. Thus, for each woman, the gap will depend upon her personal characteristics and the market returns differentials by gender.

Consequently, moving to a household context, we now are able to estimate the total discrimination wage gap for each household *h* with working females, $\hat{g}^h$, so that:

$$\hat{x}^{*h} = x^h + \sum_{f_{i,\, i\in h}} \hat{g}_{f_i} t_{f_i} = x^h + \hat{g}^h,$$

which, for the whole population, is a new counterfactual income vector such that: $\hat{x}^* = x + \hat{g}$.

It is important to note here that the values in the household counterfactual income vector will crucially depend on how the individual wage gap was estimated for each working woman. Our methodological proposal accommodates all the different alternatives available in the relevant literature in order to estimate this gap. For instance, the wage structure that would prevail in the lack of discrimination could differ from that of males. Also, the empirical specification of the wage regression could either include or exclude

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[14] Exp $(Z'_{fi}\hat{\beta}_f + \hat{\sigma}_f^2/2)$ is the expected value of the log-normal variable y_f conditioned on Z_{fi} in the OLS regression. Note that in the case of estimating wage equations using Quantile Regressions, expression (1) would become: $\hat{y}_{f_i}^q = \exp(Z'_{fi}\hat{\beta}_f^q)$, $\hat{r}_{f_i}^q = \exp(Z'_{fi}\hat{\beta}_m^q)$ where *q* stands for the corresponding quantile.

specific employment variables such as occupation, job status, type of contract, etc. Depending on which of these variables are included in the regression of the estimated pay gap, the measure of gender wage discrimination would be including all or just a part of job segregation. Finally, a variety of econometric methods (Ordinary Least Squares, Quantile Regression, etc.) can be used for the estimation of Mincerian wage equations, which eventually allow for the control of the selection bias imposed by the lack of information on the wages of not-employed potential workers.

5. The Effect of Discrimination on Poverty and Inequality in the EU

The following empirical analysis is based on the last wave of the *European Community Household Panel Survey* (ECHP), conducted in 2001. The advantage of this database, compared to others used in the analysis of European labor markets (such as the *Wage Structure Surveys*) is that it provides us the necessary information to link the labor market situation of the individual to her household living conditions. Most precisely, this database combines detailed labor information at the individual level required to estimate discrimination gaps with the necessary demographic and socioeconomic information on households in order to undertake the analysis of household income distribution. Further, all the population living in private households are eligible to be part of the sample, thus no particular labor market sector or activity is being excluded from observation as often happens in labor-market-specific surveys. All countries that were members of the EU15 in 2001 are included in the ECHP, except Sweden. Note, however, that for different reasons, Luxembourg and The Netherlands could not be included in the analysis[15], and we will present results on 12 EU countries.

5.1 Female labor participation and poverty

As is known—and our results show in Table 1—female participation rates are significantly different in the European countries we analyze. However, in most of the countries considered, participation rates and, most strongly, the shares of employees among poor females, generally are very low. According to the last two columns of this table, wage earner rates are low for poor females in countries with a low average female participation rate (such as those situated in the Mediterranean area), but also for those in countries where average female participation is high (such as the Northern

[15] Luxembourg was excluded because of its small population size, while The Netherlands was excluded because since December 2003, the share of population holding a university degree in the ECHP is implausibly small.

European group).[16] Indeed, even in countries like Denmark, Finland or Portugal (all three registering a female participation rate above 80 percent), there is a large employment gap between poor and non-poor females. The same happens in countries like Italy and Greece, where only 13 percent of poor females aged between 25 and 55 earn a wage while up to 50 percent (in Italy) or 42 percent (in Greece) of non-poor females are wage-earners. Spain is a similar case and registers one of the largest differences between the two last columns of Table 1 (18 vs. 52 percent).[17] It seems as if, in most of the countries considered, whatever their average female participation and employment rates, policies aimed to remove the barriers to labor market access at the bottom of the income distribution could play a significant role in reducing poverty and social exclusion by pushing an important number of poor females into work.

Table 1. Female labor market information: poor and non-poor households

Country	females aged 25 to 55 / all females %			females aged 25 to 55								
				activity rate			unemployment rate			wage earners %		
	Total	poor	non poor	Total	poor	non poor	Total	poor	non poor	Total	poor	non poor
Germany	50	46	51	78	65	80	5	19	4	66	41	68
Denmark	55	23	61	90	55	92	5	17	5	81	37	85
Belgium	53	43	54	78	42	82	4	26	3	67	26	72
France	54	45	56	75	48	79	8	31	6	66	28	72
UK	52	35	56	77	37	82	-	-	-	71	30	77
Ireland	56	44	60	64	35	70	5	16	4	57	23	63
Italy	52	50	53	64	46	68	17	64	11	44	13	50
Greece	50	32	54	61	51	63	12	30	10	38	13	42
Spain	52	45	54	64	48	67	13	43	9	47	18	52
Portugal	52	35	56	80	59	82	5	13	4	59	25	64
Austria	54	33	56	78	57	80	4	12	4	65	29	67
Finland	54	39	56	86	63	89	8	45	4	74	31	79
unweighted average	53	39	56	75	51	78	7	26	5	61	26	66

Source: Own calculations using ECHP (2001)
Note: An individual is counted as poor if her equivalent income is below 60% median equivalent income in her country; see the definition of poverty in section 5.2.

[16] The only exception to this pattern is Germany, which shows, compared to the rest, a relatively small gap between poor females and non-poor females participation rates: 41 percent of wage-earners among the poor and 68 percent among the rest.
[17] This result for Spain can be explained by the combined effect of a low activity rate and a huge unemployment rate among poor females in this country.

5.2 Actual and counterfactual household income

Our estimations of the counterfactual household income for each country are based on a set of four regressions of the log of hourly wage on education and experience, run separately for each sector (public and private) and gender. Actual experience is captured through different proxies: age, age squared, tenure in current employment, the existence of previous experience and short and long-term spells of unemployment during the previous five years. Regional dummies also are included in each regression, and the eventual existence of selection bias in those men and women with an observed wage is corrected in all cases using the Full Maximum Likelihood procedure. Further, male and female observations at the top and bottom percentiles of the wage distribution have not been used in regressions, in order to limit the effects of eventual distortions of results due to measurement error. According to this specification of the wage equation, the estimated wage gap may be interpreted as discrimination in a wide sense: women working either in the private or the public sectors are paid differently than men with the same education and experience, while living in the same region. Thus, any wage gap generated by gender segregation by job type in the same sector is considered here to be included in discrimination. However, in section 5.4 we also will consider the effect of including a list of additional variables in the regression that describe the actual job in more detail (firm activity and size, type of contract held [i.e., fixed-term or undetermined and full or part-time], type of occupation, job status and information on over-qualification for the job). This second specification measures discrimination in a narrower sense: men and women with similar education and experience working in similar jobs in the same region are paid differently.

Table 2 presents the raw and estimated gender wage gaps conditional on education and experience.[18] From these results, it appears that gender wage discrimination affects all of the European countries considered, even if with a widely-different intensity and a distinct public-private pattern. Indeed, in all countries with the exception of Denmark, the estimated gender wage gap due to different returns to characteristics (i.e., not explained by education and experience) in the private sector is 80 percent or more of the observed one. Southern European countries like Spain or Portugal show high discrimination in the private sector but low in the public one. Countries like Denmark

[18] Table A1.a in the Appendix summarizes the main results of the corresponding wage regressions.

or Belgium show low discrimination in both sectors, which is precisely the opposite of what seems to be happening in Germany or France.

Table 2. Gender wage gap in EU countries

Country	**% population working in public sector**	**Private Sector wage gap**			**Public Sector wage gap**		
		raw (logs)	**estimated (logs)**	**%**	**raw (logs)**	**estimated (logs)**	**%**
Germany	30.0	0.248	0.221	89.2	0.317	0.263	82.9
Denmark	54.5	0.031	0.007	23.1	0.065	0.054	82.5
Belgium	37.1	0.065	0.066	101.9	0.067	0.059	88.7
France	39.1	0.165	0.192	116.4	0.208	0.227	109.4
UK	32.2	0.203	0.178	88.0	0.139	0.151	108.0
Ireland	28.1	0.097	0.121	124.6	0.195	0.147	75.4
Italy	38.7	0.177	0.187	106.0	0.022	0.015	66.2
Greece	34.7	0.322	0.288	89.5	0.076	-0.085	-111.1
Spain	23.1	0.321	0.343	106.6	0.081	0.075	92.7
Portugal	25.4	0.281	0.319	113.5	0.079	0.061	77.3
Austria	28.4	0.147	0.121	81.9	0.047	0.019	39.3
Finland	49.8	0.068	0.098	144.4	0.122	0.134	109.9
unweighted average	35.1	0.177	0.178	98.8	0.118	0.093	68.4

Note: The raw wage gap is computed as the difference between the log male and log female hourly wage. The estimated gap is the gap explained by different returns (i.e. that not explained through different endowments).
Source: Own calculations using ECHP (2001)

Our proposal here is to go beyond the Oaxaca-Blinder approach and estimate, for each woman, her corresponding discrimination gap according to expression (2) based on her predicted wage under both alternative return schemes with and without discrimination, as in expression (1). In the first column of Table 3, we report the number of women who suffer some wage gap, and results show that a large majority of them (on average, 85 percent) are discriminated. The lowest number of discriminated females is found in countries like Denmark and Greece (61 and 69 percent, respectively) and the largest in Portugal, France, Germany, Spain or Finland, all above 90 percent. Table 3 also provides the average discrimination gap that lies above 2 euros per hour in Germany and France, and is only around 60 cents in Denmark or Belgium. When we measure the gap in relative terms (as a proportion of female current hourly wage), Spanish female earners face the largest average discrimination gap (almost 40 percent), while Danish females again are those facing the lowest one (only 6 percent). Disaggregating workers by sector, we find that in all countries, 90 percent or more of female workers in the private sector receive a wage that is below her expected wage, were she remunerated as a man, with the only exception of Denmark, where the percentage drops to 54 percent.

In some countries—like Spain, Italy, Austria and especially, Greece—the proportion of women facing some discrimination in the public sector, and the size of their gap, is substantially smaller than in the private sector.

Table 3. Estimated discrimination gap among working women in EU countries

Country	All female wage earners			Private Sector			Public Sector		
	% discriminated	$\bar{g}$ (€)	$\overline{\left(\frac{g}{y}\right)} \bullet 100$	% discriminated	$\bar{g}$ (€)	$\overline{\left(\frac{g}{y}\right)} \bullet 100$	% discriminated	$\bar{g}$ (€)	$\overline{\left(\frac{g}{y}\right)} \bullet 100$
Germany	91.9	2.1	33.6	90.0	1.9	32.0	96.5	2.5	37.4
Denmark	60.8	0.6	6.0	54.0	0.3	3.3	66.4	0.8	8.2
Belgium	81.9	0.6	8.2	90.5	0.6	7.8	67.3	0.6	8.9
France	96.5	2.1	28.5	96.7	1.8	26.6	96.2	2.6	31.3
UK	88.5	2.0	24.0	92.1	1.9	24.5	81.0	2.1	22.8
Ireland	87.0	1.5	18.0	89.4	1.3	16.4	80.9	2.1	21.8
Italy	82.4	0.8	14.9	99.6	1.1	21.7	55.0	0.3	4.1
Greece	69.2	0.7	22.2	100.0	1.1	33.6	11.0	0.0	0.6
Spain	90.4	1.7	39.0	100.0	1.9	46.1	58.6	0.9	15.2
Portugal	93.3	0.8	32.7	100.0	1.0	40.4	73.4	0.4	10.2
Austria	82.0	0.8	13.2	94.2	0.9	15.6	51.1	0.5	7.2
Finland	90.1	1.0	14.4	89.5	0.9	12.4	90.7	1.2	16.4
unweighted average	84.5	1.2	21.2	91.3	1.2	23.4	69.0	1.2	15.4

Source: Own calculations using ECHP (2001)

Having estimated the discrimination gap for each female wage earner, the next step is to aggregate individual discrimination gaps within households so that we then can compute the counterfactual household income vector by adding the compensation for discrimination to all original family incomes.

Results are presented in Table 4. The first three columns of this table summarize, for all countries, the actual households' income average, the average value (in euros) of total female wages in the household and its weight within total family income, all in equivalent income terms[19]. Thus for Germany, for instance, the mean households' equivalent income is 1,319 euros per month, out of which 244 (almost 19 percent) come from the contribution of female wage earners in the household. The average share of household income in EU countries coming from female wages varies from the lowest level of 14 percent in Greece (17 percent in Italy and Spain) to the highest levels of 25-30 percent in Ireland, Finland and Denmark. It is interesting to note that this share would increase up to between 40 to 50 percent in most countries if we restrict our

[19] Equivalent household's income is the current total monthly household's net income divided by the number of equivalent adults using a modified OECD scale (which weights 1.0 the first adult, 0.5 other individuals aged 14 or over who are living in the household and 0.3 children aged less than 14 years).

analysis to households with at least one female wage earner among their members. Thus, even if the point about the relevance of female wages in European family income often is missed in the analysis of household economics, we have calculated that in countries like Finland, Ireland or Denmark, up to 18 percent of all households obtain half or more than half of their total incomes from female wages. This largely contrasts with the results for Greece, Italy or Spain, where this percentage drops to 10 percent.

Table 4. Households' incomes in EU countries: monthly average amounts per equivalent adult

	actual			discrimination		counterfactual without discrimination		
Country	$\bar{x}$ **average household equivalent income €**	$\overline{\sum_{i\in h} y_i t_i}$ **average female wages €**	**% equivalent income**	$\bar{g}$ **average estimated household gap €**	**% equivalent income**	$\overline{x^*}$ **average household equivalent income €**	$\overline{\sum_{i\in h} y^*{}_i t_i}$ **average female wages €**	**% equivalent income**
Germany	1,319	244	18.9	67	5.3	1,386	311	20.9
Denmark	1,691	519	28.9	26	1.5	1,717	545	29.6
Belgium	1,190	287	23.0	21	1.7	1,211	308	23.6
France	1,354	331	23.7	72	5.5	1,426	402	25.6
UK	1,854	407	20.8	79	4.4	1,933	485	22.6
Ireland	1,269	335	26.6	49	3.9	1,317	383	27.2
Italy	882	164	17.1	21	2.3	902	185	18.1
Greece	649	102	14.3	18	2.9	667	119	15.4
Spain	847	172	17.3	48	5.9	896	220	19.6
Portugal	640	151	21.7	35	6.3	676	186	24.5
Austria	1,258	259	19.8	31	2.4	1,288	289	20.8
Finland	1,199	344	26.7	48	3.8	1,247	392	28.1
unweighted average	1,179	276	21.6	43	3.8	1,222	319	23.0

Note: Households' equivalent income is monthly disposable income by any source (actual or counterfactual) divided by the number of equivalent adults (modified OECD equivalent scale: 1 for the first adult, 0.5 for the rest of adults and 0.3 for children).

Source: Own calculations using ECHP (2001)

The fourth and fifth columns in Table 4 show the average estimated household gender wage gap, both in euros per month and as a share of total family income. These are precisely the amounts that households would obtain additionally from female wages in the absence of female wage discrimination. The quantities vary from only 18 euros per equivalent adult in Greece to 79 in the UK. In relative terms, the largest compensation is found for Portuguese and Spanish households (around 6 percent of household income), closely followed by German and French families (above 5 percent). In the opposite situation, Danish and Belgian households would obtain less than 2 percent of their actual incomes if discrimination was compensated. The resulting counterfactual households' income and female wages by country (after adding the compensation for discrimination) are displayed in the last three columns in Table 4. Comparing these columns with the first three columns of this table, we can see that in Germany, for instance, female wages mean contribution to households' income would increase from 244 euros per equivalent adult to 311 after removing discrimination, due to a compensation of 67 euros. As a consequence, in the German counterfactual household income distribution, female wages represent, on average, 21 percent of households' income, instead of the 19 percent that is observed in the real distribution of incomes.

5.3 The impact of discrimination on poverty and inequality

Having estimated the counterfactual household income distribution vector $x*$, we now are able to quantify the impact of discrimination on inequality and poverty: ΔI and ΔP. With regard to inequality, the impact of removing female wage discrimination appears to be positive even if rather small, given that the Gini index is only slightly higher in most of the countries using the counterfactual distribution of incomes, compared to using the observed one (with the exception of Portugal), as reported in Table 5.[20] The reason for this result is that even if the household's compensation for discrimination is largest for households whose total income is in the highest deciles of the income distribution, its final impact on inequality is small, given that it represents a relatively small share of total family income. Indeed, as Figure 1 shows, the relative compensation for discrimination has a roughly inverse-U shape in countries like Spain, Belgium, Finland, Germany and Portugal, reaching a maximum relative impact at the 7th or 8th decile (or at the median for Portugal). Note, however, that some countries (like Denmark) do not show a clear pattern in the relative importance of compensations on total household income by deciles.

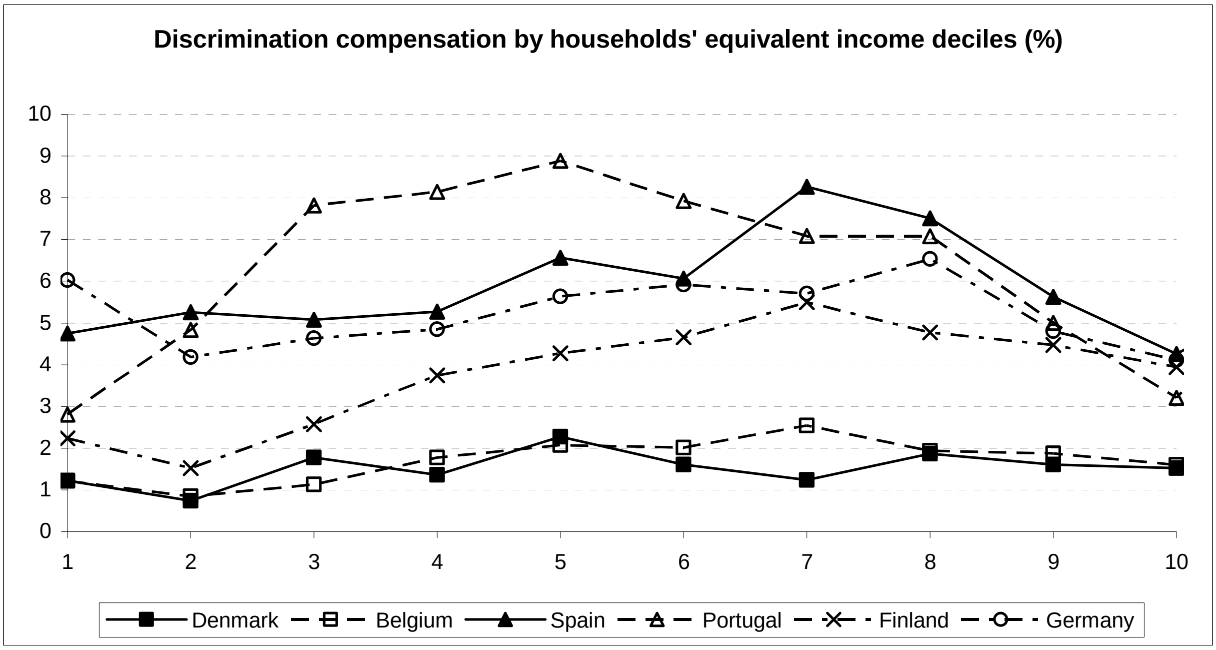
[20] Similar results are obtained if we decide to use other inequality indices, such as those from the family of Generalized Entropy.

Table 5. Impact of discrimination on inequality in EU countries
Gini index

Country	$I(x)$	$I(x^*)$	ΔI_r
Germany	0.248	0.251	1.4
Denmark	0.214	0.215	0.5
Belgium	0.228	0.230	0.6
France	0.297	0.298	0.5
UK	0.304	0.304	0.2
Ireland	0.284	0.288	1.1
Italy	0.281	0.283	0.7
Greece	0.333	0.333	0.1
Spain	0.311	0.314	0.8
Portugal	0.376	0.372	-1.3
Austria	0.213	0.214	0.6
Finland	0.252	0.257	1.7
unweighted average	0.279	0.280	0.6

Source: Own calculations using ECHP (2001)

Figure 1



Focusing most particularly on the effects of discrimination on households at the bottom of the income distribution, we quantify the impact of female wage discrimination on household poverty. Table 6 reports the consistent reduction in the *head-count* and *poverty gap* ratios in all countries considered when using the 60 percent of the median equivalent income as the poverty threshold. The first half of the table displays the *head-count ratio* (indicating *poverty risk*) for the whole population with actual and counterfactual incomes, and the absolute and relative reduction after compensating households for discrimination. The largest poverty risk reduction is found in those countries whose female workers in the private sector registered the largest discrimination level: In Portugal and Spain, poverty risk reduces from 17.6 to approximately 15.8 percent. This means that almost 2 percent of their population, or about 10 percent of their corresponding poor people, would leave poverty if female wage discrimination disappears. In Germany, despite the fact that the absolute reduction in poverty risk is only 1.1 percent, the relative impact of removing discrimination is also large, similar to that of Portugal or Spain. In countries like Ireland, France and the UK, the reduction is somewhat smaller: Slightly over 1 percent of the whole population and above 6 percent of the currently poor would leave poverty. Finally, countries with the lowest female wage discrimination (like Belgium or Denmark) present small potential reductions of poverty risk, which are all below 0.5 percent of their total population. Italy has also a small reduction in poverty rates when discrimination is removed, despite being a country that registers a medium level of female wage gap in the private sector.

The last four columns in Table 6 repeat the same exercise, moving to a different poverty index: The *poverty gap ratio* is the product of the *head-count ratio* and the average poverty gap[21], thus it takes into account not only the number of households leaving poverty but also all eventual reductions in the poverty gap of those that remain poor. According to this second index, the largest poverty reduction takes place in Germany (14 percent), followed by Ireland (9.3 percent), and subsequently by Portugal, France, Spain and Austria (all around 7 percent). Interestingly, we find that compensating discrimination at the household level reduces poverty in all twelve European countries considered, which suggests that removing discrimination also would alleviate the severity of those remaining poor. In some of them, however, reductions fall to levels of below 5 percent of the index, making the change in the *poverty risk* particularly small.

[21] The poverty gap is defined as distance between the poverty line and the income of each poor person, relative to the former.

Table 6. Impact of discrimination on poverty in EU countries								
Country	**Head-count ratio (*H*)** *number of poor / population (in %)*				**Poverty Gap ratio (*HI*)** *H · average poverty gap (in %)*			
	$P(x)$	$P(x^*)$	ΔP	ΔP_r	$P(x)$	$P(x^*)$	ΔP	ΔP_r
Germany	10.1	9.1	-1.1	*-10.5*	2.1	1.8	-0.3	*-13.9*
Denmark	13.8	13.4	-0.3	*-2.4*	2.4	2.3	-0.1	*-4.2*
Belgium	11.2	10.8	-0.4	*-3.6*	1.8	1.7	-0.1	*-4.6*
France	17.4	16.3	-1.1	*-6.6*	4.3	4.0	-0.3	*-7.2*
UK	16.1	15.1	-1.0	*-6.4*	4.2	4.0	-0.2	*-5.0*
Ireland	18.5	17.1	-1.4	*-7.6*	4.0	3.6	-0.4	*-9.3*
Italy	17.7	17.3	-0.4	*-2.2*	4.7	4.5	-0.2	*-4.0*
Greece	19.1	18.3	-0.8	*-4.0*	5.6	5.4	-0.2	*-3.9*
Spain	17.6	15.9	-1.7	*-9.7*	4.4	4.1	-0.3	*-7.4*
Portugal	17.6	15.8	-1.8	*-10.2*	5.0	4.6	-0.4	*-7.3*
Austria	9.3	8.5	-0.7	*-7.7*	1.6	1.5	-0.1	*-7.1*
Finland	14.0	13.4	-0.6	*-4.5*	3.6	3.4	-0.2	*-4.7*
unweighted average	*15.2*	*14.3*	*-0.9*	*-6.3*	*3.6*	*3.4*	-0.2	*-6.5*

Source: Own calculations using ECHP (2001)

In any case, it is the mixture of individuals in households that will be an important determinant of the differential effect of removing the gender wage gap on particular demographic or socioeconomic groups in countries with a similar absolute female wage gap. In fact, we should be aware that only those persons living in households with one or more female earners would directly benefit from removing female wage discrimination in the labor market. Table 7 shows that, in most countries (except Germany), the risk of poverty among those individuals living with female wage earners is relatively lower than the mean. However, there are large differences on poverty when removing female wage discrimination: In countries like Spain or Portugal, the reduction is large—above 50 percent of the index—while in others, the effect on poverty drops to levels around 20 to 30 percent. At the extreme, Denmark and Italy show particularly low percentages of change in these poverty risks that fall below a 15 percent reduction of the index. We should underline here that in countries like France, the UK and Germany, the effect is substantially larger if we only consider those households where female wages represent a half or more than a half of total household incomes.

Table 7. Impact of discrimination on poverty risks in EU countries: households with female earners *Head-Count Ratio = number of poor / population (in %)*								
Country	**Households with female earners**				**Households with female wages being more than 50% of hh incomes**			
	$P(x)$	$P(x^*)$	ΔP	ΔP_r	$P(x)$	$P(x^*)$	ΔP	ΔP_r
Germany	8.2	5.9	-2.3	-27.9	15.2	10.4	*-4.8*	-31.6
Denmark	4.2	3.7	-0.5	-12.2	9.0	7.9	*-1.1*	-12.3
Belgium	3.9	3.1	-0.8	-20.8	11.0	8.8	*-2.2*	-20.4
France	7.6	5.2	-2.4	-31.1	12.3	7.0	*-5.3*	-42.9
UK	6.1	4.2	-2.0	-32.0	11.5	6.9	*-4.6*	-40.3
Ireland	7.6	4.8	-2.8	-36.5	15.3	10.8	*-4.5*	-29.4
Italy	7.1	6.0	-1.0	-14.7	16.1	14.1	*-2.0*	-12.6
Greece	6.1	3.6	-2.5	-40.6	15.3	9.6	*-5.7*	-37.1
Spain	7.0	2.7	-4.3	-60.9	10.9	4.2	*-6.7*	-61.7
Portugal	6.4	2.9	-3.4	-53.9	13.1	5.8	*-7.3*	-55.6
Austria	4.0	2.6	-1.4	-35.2	10.2	6.9	*-3.4*	-33.0
Finland	5.2	4.1	-1.2	-22.3	10.8	7.9	*-2.9*	-26.5
unweighted average	6.1	4.1	-2.0	-32.3	12.6	8.4	*-4.2*	-33.6

Source: Own calculations using ECHP (2001)

Going into more detail, Table 8 reports the impact of discrimination on the *poverty risks* of two distinct groups of women: those more likely to be in work and who are between 25 and 55 years of age, and all those who actually earn a wage. In both cases, the *poverty risk* is somewhat lower than that of the average population, especially in the second case. However, the relative impact of removing discrimination is quite large on these individuals: about 15 percent of poor female adults would leave poverty in Germany, Portugal and Spain, and about 10 percent in France, the UK, Ireland, Austria and Finland. The impact becomes critical in the case of female wage earners; about 60 percent of the poor would be pushed above the poverty line in Spain and Portugal, 30 percent or more in the rest of the countries (with only a few exceptions—Denmark, Italy and Finland).

Table 8. Impact of discrimination on poverty risks in EU countries: females *Head-Count Ratio = number of poor / population (in %)*								
Country	**Females 25-55 years old**				**Female wage earners**			
	$P(x)$	$P(x^*)$	ΔP	ΔP_r	$P(x)$	$P(x^*)$	ΔP	ΔP_r
Germany	9.4	8.1	*-1.4*	-14.5	6.8	4.9	*-1.9*	-28.0
Denmark	7.4	7.0	*-0.4*	-5.8	5.0	4.5	*-0.5*	-10.3
Belgium	9.7	8.8	*-0.8*	-8.6	4.2	3.0	*-1.2*	-29.6
France	14.3	12.8	*-1.6*	-11.1	6.5	4.1	*-2.4*	-36.7
UK	11.7	10.2	*-1.5*	-13.0	6.1	3.9	*-2.2*	-36.2
Ireland	15.5	14.2	*-1.3*	-8.2	6.6	4.4	*-2.2*	-33.0
Italy	16.6	16.1	*-0.5*	-3.1	5.5	4.6	*-0.9*	-16.3
Greece	13.6	12.6	*-1.0*	-7.1	5.8	3.5	*-2.3*	-40.1
Spain	15.3	13.0	*-2.3*	-14.9	6.1	2.3	*-3.8*	-62.3
Portugal	11.5	9.8	*-1.7*	-15.2	4.8	2.0	*-2.8*	-58.5
Austria	6.9	6.0	*-0.9*	-13.0	3.6	2.1	*-1.5*	-42.0
Finland	11.3	10.1	*-1.1*	-9.8	5.9	4.6	*-1.3*	-22.4
unweighted average	11.9	10.7	*-1.2*	-10.4	5.6	3.6	*-1.9*	-34.6

Source: Own calculations using ECHP (2001)

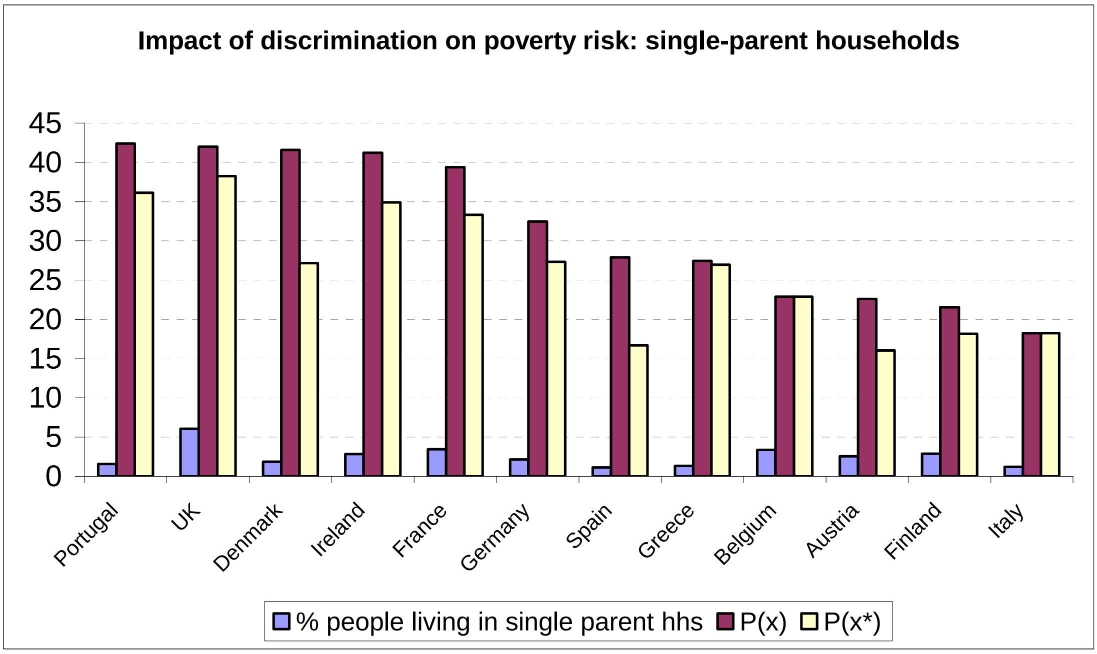
In Table 9, we show the results for some particularly relevant groups who are indirectly affected by discrimination: dependent adults and children below 16 years old. The reduction in *poverty risks* for the first group is important in countries like Germany (17.5 percent, in relative terms) and in Austria or France (9 and 8 percent, respectively). In general, child poverty would be reduced significantly by removing female wage discrimination (16.5 to 15.5 percent of reduction in all countries), with the largest relative reduction in Portugal (2.4 points, 11 percent) and Austria, Ireland, Denmark and Germany (around 9 percent). Interestingly, a country with a very low total impact of discrimination on poverty, like Denmark, shows a relatively large reduction of child poverty when discrimination is removed, the opposite of what happens in countries like Spain where the total impact of discrimination on poverty is large but its impact on child poverty is much smaller.

Table 9. Impact of discrimination on poverty risks in EU countries: dependent individuals *Head-Count Ratio = number of poor / population (in %)*								
Country	**Dependent Adults (above 16 years)**				**Children (below 16 years)**			
	$P(x)$	$P(x^*)$	ΔP	ΔP_r	$P(x)$	$P(x^*)$	ΔP	ΔP_r
Germany	10.8	8.9	*-1.9*	-17.5	12.4	11.4	*-1.0*	-8.4
Denmark	24.8	24.8	*0.0*	0.0	9.7	8.9	*-0.8*	-8.5
Belgium	18.0	17.7	*-0.3*	-1.4	8.9	8.8	*-0.1*	-1.3
France	17.5	16.1	*-1.4*	-8.1	20.0	18.6	*-1.4*	-6.8
UK	20.1	18.6	*-1.5*	-7.6	20.7	19.2	*-1.4*	-6.9
Ireland	12.4	11.8	*-0.6*	-4.9	21.7	19.8	*-1.8*	-8.4
Italy	27.8	27.3	*-0.5*	-1.8	22.0	21.6	*-0.3*	-1.6
Greece	24.2	23.0	*-1.2*	-5.0	16.0	15.3	*-0.7*	-4.2
Spain	23.2	22.1	*-1.1*	-4.7	22.6	21.4	*-1.2*	-5.4
Portugal	18.8	17.7	*-1.2*	-6.1	22.6	20.2	*-2.4*	-10.7
Austria	15.8	14.4	*-1.4*	-9.0	8.7	7.8	*-0.9*	-10.3
Finland	13.6	13.6	*0.0*	0.0	13.4	12.7	*-0.6*	-4.8
unweighted average	18.9	18.0	*-0.9*	-5.5	16.5	15.5	*-1.1*	-6.4

Source: Own calculations using ECHP (2001)

Finally, we believe that it is interesting to further focus our analysis on the effect of removing discrimination on a particular household type that seems to be facing an extremely high and increasing poverty risk in many developed countries frequently associated with the so-called *feminization of poverty* phenomenon: a single-parent household with one or more dependent children. This demographic group accounts for more than 6 percent of the population in the UK and around 3 percent in Belgium, France, Ireland and Finland while, in contrast, it is still small (in demographic terms) in most Southern European countries. In this sense, even if one should be cautious in the interpretation of results due to the low sample size, Figure 2 consistently shows a very large *poverty risk*, more than 25 percent in all countries, with only a few exceptions (Italy, Finland, Austria and Belgium). Interestingly, we find that the impact of removing female wage discrimination on the poverty risk of this group is particularly large. This does not come as a surprise if, as one would expect, many of them are female-headed. Our results show that between 35 and 40 percent of poor single-parent households would cross the poverty line if discrimination was removed. It is interesting to underline, however, that this happens in a similar way in countries that are radically different in their gender wage gap size, such as Denmark and Spain. This percentage, in fact, would involve more than 10 percent of all individuals actually living in those types of households in these two countries.

Figure 2



Source: Own calculations using ECHP (2001)

5.4 The role of segregation

So far, all of the results presented are based on a wide notion of discrimination, due to the fact that estimated wages were conditioned only on education and experience. Therefore, any wage gap arising through gender segregation by type of employment also is interpreted as discrimination. In order to use a narrower notion of discrimination that moves towards the idea of "equal pay for equal work", we condition wage estimations on a list of employment variables such as the firm activity, the number of regular paid employees in the local unit of the firm, the type of contract held (permanent or fixed-term, full-time or part-time), the type of occupation (managers, professionals, technicians, clerks, service workers or other occupations), the individual's job status (supervisory, intermediate, not supervisory) and whether employee skills are higher than those actually needed for the job (overqualified). In this case, as it is shown in Table 10[22], in most countries, gender discrimination is lower than when we consider a wider notion of discrimination that includes gender job segregation. Thus, a smaller number of females are discriminated and the average wage gap is also substantially smaller. Consequently, the impacts of compensations due to female wage discrimination on poverty indices are generally more moderate. This is particularly the case for Spain and Portugal, where all households' poverty risk is cut down in about 5-8 percent instead of the previous 10 percent, and in the case of female wage earners, the reduction

[22] See Tables A1.b to A9 and Figures A1-A2 in the Appendix for more details.

drops to about 38-47 percent, in contrast to the 60 percent obtained previously. Note that reductions are also relevant for Ireland and Austria. This seems to suggest that, in these countries, a large part of the effect of wage discrimination on poverty is due to gender job segregation.

Table 10. Discrimination and poverty when estimated wage is conditioned on employment variables

Country	Labor market		Households' income		Head-count ratio (*H*) ΔP_r	
	% female discriminated	$\overline{\left(\frac{g}{y}\right)} \bullet 100$	households' discrimination gap	% actual equivalent income	All population	Female wage earners
Germany	86.8	32.1	62	4.9	-9.5	-27.4
Denmark	68.2	10.9	52	3.0	-5.3	-27.5
Belgium	62.6	13.4	29	2.4	-5.2	-42.5
France	77.2	17.0	39	3.1	-5.3	-28.3
UK	75.3	16.0	51	2.8	-4.5	-28.4
Ireland	60.8	16.4	49	3.9	-2.2	-17.5
Italy	76.3	13.5	19	2.1	-2.0	-15.1
Greece	82.4	19.8	16	2.5	-3.0	-31.5
Spain	83.0	23.9	32	3.6	-5.5	-39.2
Portugal	83.6	28.1	31	5.3	-7.7	-47.3
Austria	60.9	9.7	25	1.9	-5.2	-24.5
Finland	70.9	13.2	43	3.4	-3.6	-17.9
unweighted average	74.0	17.8	37	3.2	-4.9	-28.9

However, it is interesting to underline that this is not the case in all countries, given that, for example, in Germany or Italy, segregation appears to be rather neutral on its effect on the previously estimated female wage gap—given that we find no significant difference in the results when moving from one definition of discrimination to the other. More surprisingly, the country with the lowest levels of female wage discrimination, Denmark, displays many more discriminated female earners with larger wage gaps when employment variables are included as explanatory variables. This results in a significantly stronger impact of our compensation for discrimination on Danish households' poverty risk. A similar story applies to Belgium, even if the number of discriminated women in that particular case drops significantly. Most precisely, when we control for employment variables, in countries like Belgium and Denmark, compensating discrimination makes poverty incidence reduce up to 5 percent of the whole population, a reduction of a similar size to that taking place in other countries like Spain, France, UK or Austria. When the analysis is restricted to female wage earners, the effect on poverty risk rises up to 27 percent in Denmark and up to 42 percent in Belgium.

6. Conclusions

The existence of wage gaps due to different market returns, to characteristics such as education or experience for men and women, has been so far well-documented and often referred to as *wage discrimination*. There is also wide evidence in the literature on income distribution linking the performance of low-income households' members in the labor market to an increasing household poverty risk in many rich countries. In this paper, we analyze the link between these two phenomena, providing a measure of the impact of discrimination against women on poverty and family income inequality. We do that by comparing, for each household in the sample, its actual total family income to a counterfactual one in which wage discrimination against women has been removed. This counterfactual family income is based on the estimation of individual gender wage gaps explained by different returns that are then aggregated within households.

Results using the *ECHP* show that discrimination is important in countries like Spain, Portugal and Germany. In these countries, more than 90 percent of female wage earners are discriminated, and these women are getting between 80 and 210 cents per hour less than a similar male, which, on average, can account for a third part of their corresponding salaries. The income loss due to discrimination against females in these countries represents, on average, about 5 or 6 percent of total family income. The situation is radically different in countries like Denmark or Belgium, where female wage discrimination is found to be smaller and the loss of family income is estimated to be about 1.5 percent of the total. The compensation for discrimination in many of the countries considered tends to be larger in richer households even if its final effect on overall inequality is found to be regressive (even if rather small).

Empirical results also support that, in spite of the extremely low employment rates among females living in low-income households, removing discrimination from their wages would substantially reduce poverty in most EU countries. This impact varies widely across the EU, being larger in countries with highest levels of discrimination (where about 10 percent of the poor would leave poverty), and smaller in those with lowest levels (where only between 2 and 4 percent of the poor would cross the poverty threshold). However, the impact of discrimination on poverty is critical in all countries for working females and their households, with a notable effect in many of them on reducing poverty among dependent children and dependent adults. Special mention should be paid to single-mother households, a small but expanding demographic group, which are facing increasing poverty in most EU countries and who are conforming the process of the so-called *feminization of poverty*.

The use of a narrower concept of discrimination, trying to separate strict wage difference for equal work from job segregation, reduces the gender wage gap and its effects on poverty in several countries, mainly Spain, France and the UK. This implies that compensating households for discrimination in this context would reduce these countries' poverty risk still in 5 percent. Countries like Ireland and Austria also show a particularly large reduction of the number of discriminated women when we condition wages on employment variables. In contrast, in the particular cases of Denmark and Belgium, wage differences are actually wider if we compare male and female pay in a similar job as a consequence of the relevant role that job segregation has in favoring the reduction of male-female wage differences. Consequently, compensating households for discrimination in these countries also pushes approximately 5 percent of the poor population out of poverty.

In our view, the evidence we present in this paper supports the idea that gender-specific equal-opportunity policies in the labor market are expected to have a significant collateral effect on promoting social inclusion of some particularly disadvantaged poor households in the EU, showing the strong complementarity of these two main goals stressed by the Lisbon European Council in 2000.

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Appendix

Table A1.a Full-Maximum likelihood estimates: wage equations without employment variables

Female, Private Sector	**Germany**		**Denmark**		**Belgium**		**France**		**UK**		**Ireland**		**Italy**		**Greece**		**Spain**		**Portugal**		**Austria**		**Finland**	
university	0.409	*	0.231	*	0.234	*	0.374	*	0.181	*	0.300	*	0.389	*	0.380	*	0.421	*	0.793	*	0.412	*	0.192	*
secondary school	0.196	*	0.086		0.052		0.248	*	0.112	*	0.100	*	0.163	*	0.120	*	0.191	*	0.275	*	0.231	*	0.018	
age	0.055	*	0.021		-0.006		0.046	*	0.042	*	0.020		0.037	*	0.054	*	0.035	*	0.035	*	0.034	*	0.010	
age^2	-0.0006	*	-0.0002		0.0001		-0.0005	*	-0.0005	*	-0.0002		-0.0004	*	-0.0006	*	-0.0004	*	-0.0004	*	-0.0003	*	-0.0001	
tenure 1-5 years	0.139	*	0.021		-0.005		0.045		0.028		0.081	*	0.053		0.094	*	0.097	*	0.050		-0.022		0.038	
tenure 5-15 years	0.167	*	0.064		0.054		0.157	*	-0.037		0.200	*	0.119	*	0.146	*	0.246	*	0.124	*	0.026		0.088	*
tenure 15+ years	0.228	*	0.049		0.116	*	0.328	*	0.012		0.147	*	0.155	*	0.240	*	0.334	*	0.117	*	0.130	*	0.156	*
unemployment spell	0.015		0.055		0.017		-0.008		0.002		-0.026		0.021		0.010		0.105	*	0.007		0.035		0.047	
long-term unemp. spell	-0.031		0.066	*	0.004		-0.055	*	-0.048		-0.008		-0.012		0.007		0.031		0.023		0.014		-0.007	
previous experience	-0.007		0.020		-0.040		0.015		0.046		0.000		0.026		0.023		0.056		-0.026		0.026		0.077	
constant	0.349		1.587	*	1.887	*	0.733	*	1.418	*	1.607	*	0.446	*	-0.330		0.142		-0.105		0.857	*	1.482	*
N of uncensored observations	1,780		521		545		1,162		1,532		566		1,042		607		1,265		1,388		793		721	
Female, Public Sector	**Germany**		**Denmark**		**Belgium**		**France**		**UK**		**Ireland**		**Italy**		**Greece**		**Spain**		**Portugal**		**Austria**		**Finland**	
university	0.409	*	0.250	*	0.346	*	0.423	*	0.197	*	0.568	*	0.461	*	0.459	*	0.374	*	0.731	*	0.329	*	0.268	*
secondary school	0.179	*	0.092		0.143	*	0.212	*	0.047		0.224	*	0.215	*	0.202		0.096		0.284	*	0.241	*	0.034	
age	0.057	*	0.038	*	0.042	*	0.065	*	0.022		0.044		0.006		0.047		0.029		-0.009		0.042		0.021	
age^2	-0.0006	*	-0.0004	*	-0.0004	*	-0.0007	*	-0.0003		-0.0005		0.0000		-0.0004		-0.0003		0.0002		-0.0005		-0.0002	
tenure 1-5 years	0.007		0.086	*	0.008		0.248	*	0.060		0.056		0.109	*	0.143	*	0.130		-0.050		-0.028		-0.003	
tenure 5-15 years	0.199	*	0.125	*	0.091		0.333	*	0.109	*	0.157	*	0.093		0.129		0.293	*	0.037		0.000		0.006	
tenure 15+ years	0.250	*	0.088		0.087		0.403	*	0.107	*	0.115		0.107		0.161		0.395	*	0.168		0.002		-0.006	
unemployment spell	-0.064	*	-0.006		0.041		-0.021		-0.100		-0.050		-0.014		0.022		-0.079		0.113	*	0.006		0.093	*
long-term unemp. spell	-0.107	*	-0.006		-0.007		-0.136	*	-0.130	*	-0.050		0.000		-0.002		0.016		-0.027		-0.089		0.038	
previous experience	0.082		-0.030		-0.069	*	-0.067		0.041		-0.162	*	-0.027		0.058		-0.030		-0.086		-0.055		-0.029	
constant	0.602		1.290	*	0.772	*	0.248		2.025	*	1.323	*	1.450	*	0.147		1.035		0.853		0.960	*	1.221	*
N of uncensored observations	710		611		394		722		694		229		718		331		436		564		310		699	

** Significant at 5%.*

Dummies have been included for region and missings and selection bias for non-participation has been corrected. Reference: primary studies, no tenure and no previous experience or unemployment spell.

Male, Private Sector	**Germany**		**Denmark**		**Belgium**		**France**		**UK**		**Ireland**		**Italy**		**Greece**		**Spain**		**Portugal**		**Austria**		**Finland**	
university	0.449	*	0.323	*	0.280	*	0.428	*	0.202	*	0.262	*	0.328	*	0.345	*	0.302	*	0.715	*	0.505	*	0.242	*
secondary school	0.209	*	0.170	*	0.116	*	0.179	*	0.082	*	0.041		0.156	*	0.189	*	0.133	*	0.222	*	0.289	*	0.060	*
age	0.087	*	0.029	*	-0.012		0.063	*	0.067	*	0.031	*	0.038	*	0.039	*	-0.012		0.020		0.028	*	0.014	
age^2	-0.0010	*	-0.0003		0.0002		-0.0006	*	-0.0008	*	-0.0003		-0.0004	*	-0.0003		0.0003		-0.0002		-0.0002		-0.0001	
tenure 1-5 years	0.046		-0.027		0.002		0.060	*	-0.017		0.068		0.031		0.017		0.093	*	-0.023		0.052		0.062	
tenure 5-15 years	0.229	*	0.009		0.024		0.179	*	0.032		0.141	*	0.073	*	0.057		0.201	*	0.069		0.118	*	0.092	*
tenure 15+ years	0.245	*	0.021		0.123	*	0.284	*	-0.013		0.232	*	0.060		0.154	*	0.282	*	0.117	*	0.135	*	0.029	
unemployment spell	-0.011		-0.018		0.042		0.029	*	0.062		0.091		0.006		0.019		0.060		0.025		0.006		0.010	
long-term unemp. spell	-0.035	*	0.002		-0.021		-0.006		0.005		0.042		-0.015		-0.038		-0.008		-0.013		-0.051	*	-0.033	
previous experience	0.056		0.038		-0.008		-0.048		0.035		0.017		-0.022		0.036		0.017		0.034		0.075	*	-0.052	
constant	-0.147		1.495	*	1.918	*	0.485	*	0.917	*	1.226	*	0.640	*	0.096		1.531	*	0.446	*	0.983	*	1.594	*
N of uncensored observations	2,335		839		663		1,629		1,750		657		1,782		948		2,105		1,959		1,040		1,009	
Male, Public Sector	**Germany**		**Denmark**		**Belgium**		**France**		**UK**		**Ireland**		**Italy**		**Greece**		**Spain**		**Portugal**		**Austria**		**Finland**	
university	0.409	*	0.250	*	0.346	*	0.423	*	0.197	*	0.568	*	0.461	*	0.459	*	0.374	*	0.329	*	0.268	*	0.450	*
secondary school	0.179	*	0.092		0.143	*	0.212	*	0.047		0.224	*	0.215	*	0.202		0.096		0.241	*	0.034		0.252	*
age	0.057	*	0.038	*	0.042	*	0.065	*	0.022		0.044		0.006		0.047		0.029		0.042		0.021		0.053	*
age^2	-0.0006	*	-0.0004	*	-0.0004	*	-0.0007	*	-0.0003		-0.0005		0.0000		-0.0004		-0.0003		-0.0005		-0.0002		-0.0005	*
tenure 1-5 years	0.007		0.086	*	0.008		0.248	*	0.060		0.056		0.109	*	0.143	*	0.130		-0.028		-0.003		-0.157	*
tenure 5-15 years	0.199	*	0.125	*	0.091		0.333	*	0.109	*	0.157	*	0.093		0.129		0.293	*	0.000		0.006		-0.054	
tenure 15+ years	0.250	*	0.088		0.087		0.403	*	0.107	*	0.115		0.107		0.161		0.395	*	0.002		-0.006		0.009	
unemployment spell	-0.064	*	-0.006		0.041		-0.021		-0.100		-0.050		-0.014		0.022		-0.079		0.006	*	0.093	*	-0.037	
long-term unemp. spell	-0.107	*	-0.006		-0.007		-0.136	*	-0.130	*	-0.050		0.000		-0.002		0.016		-0.089		0.038		-0.027	
previous experience	0.082		-0.030		-0.069	*	-0.067		0.041		-0.162	*	-0.027		0.058		-0.030		-0.055		-0.029		0.140	*
constant	0.602		1.290		0.772		0.248	*	2.025		1.323		1.450		0.147		1.035		0.960		1.221		0.739	
N of uncensored observations	521		285		317		567		326		217		789		460		422		416		336		342	

** Significant at 5%.*

Note: Dummies have been included for region. Dummies were also included for cases where there was an important number of missing values. Selection bias for non-participation has been corrected. Reference: primary studies, no tenure and no previous experience or unemployment spell.

Table A1.b Full-Maximum likelihood estimates: wage equations with employment variables

Female, Private Sector	Germany		Denmark		Belgium		France		UK		Ireland		Italy		Greece		Spain		Portugal		Austria		Finland	
university	0.227	*	0.117		0.077		0.148	*	0.082	*	0.088		0.208	*	0.214	*	0.160	*	0.197	*	0.114		0.084	*
secondary school	0.093	*	0.040		-0.026		0.120	*	0.061	*	0.028		0.079	*	0.064	*	0.121	*	-0.012		0.115	*	0.004	
age	0.044	*	0.005		-0.003		0.034	*	0.033	*	0.018	*	0.029	*	0.045	*	0.018		0.032	*	0.012		0.006	
age^2	-0.0005	*	0.0000		0.0001		-0.0004	*	-0.0004	*	-0.0002		-0.0003	*	-0.0005	*	-0.0002		-0.0004	*	-0.0001		0.0000	
tenure 1-5 years	0.096	*	-0.023		-0.030		0.008		0.026		0.055		0.053		0.066	*	0.060	*	0.010		-0.049		0.020	
tenure 5-15 years	0.087	*	0.004		0.004		0.101	*	0.004		0.120	*	0.113	*	0.096	*	0.165	*	0.045		-0.022		0.056	
tenure 15+ years	0.136	*	-0.013		0.047		0.213	*	-0.048		0.091		0.133	*	0.149	*	0.249	*	0.075		0.060		0.094	*
unemployment spell	0.016		0.043		0.004		-0.001		0.018		-0.032		0.016		0.000		0.051		0.004		0.023		0.044	
long-term unemp. spell	-0.011		0.060		-0.005		-0.049	*	-0.009		0.004		-0.003		0.012		0.008		0.033		0.016		0.001	
previous experience	-0.004		-0.023		-0.023		0.009		0.013		-0.015		0.014		0.005		0.034		-0.003		0.020		0.051	
permanent employment	0.216	*	0.214	*	0.044		0.142	*	0.031		0.050		0.016		0.086	*	0.075	*	0.060		0.069		0.080	*
part-time	0.051		0.147	*	0.108	*	0.062				0.037		0.114	*	0.127	*	0.171	*	0.035		0.128	*	0.122	*
agriculture, forestry, fishing	-0.086		-0.249		0.068		-0.285	*	-0.057		0.319	*	0.136		-0.249		-0.061		0.028		0.030		-0.176	
energy	0.137		-0.027		0.151		-0.242		0.129		0.241		0.064		-0.170	*	-0.109		-0.322	*	0.183		0.141	
manufacture of food	-0.068		0.072		-0.089		-0.067		0.000		-0.005		0.130		-0.167	*	-0.026		-0.078		-0.069		-0.080	
manufacture of textiles	-0.138	*	0.044		-0.188	*	-0.140		-0.144		0.043		0.005		-0.210	*	-0.204	*	-0.058		-0.086		-0.037	
manufacture of wood, paper products	-0.047		0.037		-0.038		-0.108		-0.119		-0.039		0.007		-0.216	*	-0.143		0.134		0.021		-0.047	
manufacture of energy products	0.029		0.001		0.041		-0.031		0.175		0.187		0.098	*	-0.271	*	-0.172		-0.080		0.029		0.119	
other manufacturing	-0.045		-0.011		-0.269	*	-0.017		-0.010		0.050		0.051		0.036		-0.082		0.160	*	0.023		-0.038	
construction	-0.071		-0.017		-0.079		-0.201	*	0.039		0.202		0.080		-0.260	*	-0.017		0.226		0.016		0.066	
trade and repair	-0.126	*	-0.042		-0.091		-0.131	*	-0.186	*	0.085		0.113	*	-0.292	*	-0.138	*	0.144	*	0.003		-0.062	
hotels and restaurants	-0.242	*	-0.077		-0.054		-0.158		-0.218	*	0.100		0.135	*	-0.170	*	-0.112		0.049		0.016		-0.009	
transport and communication	-0.124		-0.130		0.004		-0.077		-0.093		0.043		0.016		-0.139		-0.003		0.211	*	-0.028		-0.022	
financial intermediation	-0.053		0.036		0.080		-0.042		0.017		0.231	*	0.206	*	-0.101		0.113		0.381	*	0.072		0.084	
real state	-0.063		0.085		-0.015		-0.093		-0.025		0.076		0.074		-0.194	*	-0.105		0.104		-0.005		0.039	
education	-0.002		0.016		-0.023		-0.176		-0.128		0.323	*	0.116		-0.311	*	0.047		0.161	*	-0.075		0.230	
health and social work	-0.052		0.089		-0.049		-0.153	*	-0.190	*	0.198	*	0.079		-0.164		-0.122		0.044		0.045		0.002	
other services and public adm.	-0.137		-0.001		-0.097		-0.163	*	-0.124	*	0.073		0.068		-0.277	*	-0.278	*	0.028		-0.028		-0.030	

managers	0.410	*	0.146		0.328	*	0.576	*	0.216	*	0.182	*	0.256		0.415	*	0.423	*	0.717	*	0.389	*	0.312	*
professionals	0.324	*	0.323	*	0.245	*	0.615	*	0.406	*	0.428	*	0.306	*	0.392	*	0.295	*	0.600	*	0.490	*	0.295	*
technicians	0.207	*	0.285	*	0.184	*	0.467	*	0.315	*	0.268	*	0.124	*	0.198	*	0.144	*	0.579	*	0.365	*	0.105	
clerks	0.188	*	0.170	*	0.115	*	0.284	*	0.121	*	0.186	*	0.130	*	0.191	*	-0.034		0.317	*	0.267	*	0.106	*
service workers	0.117	*	0.133	*	0.113	*	0.107	*	-0.004		0.075		0.048		0.187	*	-0.058		0.047		0.124	*	0.104	*
skilled agriculture workers	-0.025												-0.203		-0.213		-0.104		-0.005		0.072		0.247	*
craft trade workers	0.139	*	0.159		0.006		0.222	*	0.043		0.110		0.019		0.033		-0.080		0.063		0.112	*	-0.024	
operators	0.020		0.052		0.239		0.228	*	-0.103		0.119		0.023		0.004		0.112		0.118	*	0.077		0.081	
none employee	0.167	*	0.018		-0.263	*			0.530	*	-0.101		-0.018		0.287		0.288	*	0.017		0.266	*	-0.083	
1-4 employees^{+}	-0.266	*	-0.009		-0.155	*			-0.023		-0.116		-0.174	*	-0.113	*	-0.145	*	-0.213	*	-0.165	*	-0.100	*
5-19 employees	-0.177	*	-0.072	*	-0.097	*					-0.064		-0.098	*	-0.076		-0.137	*	-0.170	*	-0.096	*	-0.103	*
20-49 employees^{++}	-0.168	*	-0.030		-0.069	*			0.023		0.000		-0.036		-0.104	*	-0.075		-0.130	*	-0.113	*	-0.091	*
50-99 employees^{+++}	0.019		-0.072		-0.009				0.040		-0.005		-0.022		-0.056		-0.052		-0.116	*	-0.025		-0.026	
500+ employees			0.050		0.006				0.080	*	0.116	*	-0.023		0.054		0.041		-0.099		-0.074		0.039	
supervisory			0.129	*	0.101	*	0.112	*	0.091	*	0.168	*	0.161	*	0.134	*	0.154	*	0.184	*	0.109	*	0.088	*
intermediate			0.032		0.041		0.090	*	-0.029		0.049		0.007		0.086		0.178	*	0.126	*	0.072	*	0.044	
over-qualification			-0.021		-0.048	*	-0.002				-0.074	*	-0.006		-0.033		-0.022		0.034		-0.030		-0.022	
constant	0.525	*	1.716	*	1.902	*	0.818	*	1.484	*	1.533	*	0.639	*	0.051		0.902	*	-0.038		1.256	*	1.479	*
N of uncensored observations	1,780		521		545		1,162		1,532		566		1,042		607		1,265		1,388		793		721	

** Significant at 5%.*

Note: Dummies have been included for region. Dummies also were included for cases where there was an important number of missing values. Selection bias for non-participation has been corrected. Reference: primary studies, no tenure, no previous experience or unemployment spell, fixed-term/full-time contract, “manufacture of metal products, machinery and equipment” activity, elementary occupation, 100-499 regular employees in the local unit, non-supervisory job status, no skills or qualifications for a more demanding job. Joined categories: skilled agricultural and fishery workers with craft and related trade workers (Denmark, Belgium, France, UK and Ireland). Duration of contract dropped in the UK due to collinearity. Over-qualification not available in Germany and the UK. Job status at current job not available in Germany. Number of employees not used in France due to high number of missings.

$^{+}$ In the UK 1-9.

$^{++}$ In the UK 10-49, in Germany 20-1999.

$^{+++}$ In Germany 2000 or more.

Female, Public Sector	Germany		Denmark		Belgium		France		UK		Ireland		Italy		Greece		Spain		Portugal		Austria		Finland	
university	0.023		0.098		0.148	*	0.083		0.135	*	0.324	*	0.052		0.321		-0.017		0.476	*	0.124		0.112	*
secondary school	0.025		0.031		0.105	*	0.016		0.043		0.175	*	-0.044		0.187		0.048		0.166	*	0.061		0.029	
age	0.043	*	0.025	*	0.034	*	0.046	*	0.017		0.043	*	-0.012		0.064		0.022		0.012		0.006		0.017	
age^2	-0.0004		-0.0003	*	-0.0003		-0.0005		-0.0002		-0.0005		0.0002		-0.0006		-0.0002		0.0000		0.0000		-0.0002	
tenure 1-5 years	0.018		0.043		0.009		0.271	*	0.065	*	0.038		0.047		0.101		0.040		-0.050		0.033		-0.056	
tenure 5-15 years	0.202	*	0.057		0.055		0.276	*	0.137	*	0.082		0.057		0.108		0.121	*	0.042		0.082		-0.060	
tenure 15+ years	0.237	*	0.016		0.048		0.344	*	0.142	*	0.155		0.048		0.138		0.235	*	0.153		0.121		-0.046	
unemployment spell	-0.043		0.001		0.012		-0.010		-0.082		-0.109		-0.024		0.035		-0.120	*	0.090	*	-0.035		0.069	*
long-term unemp. spell	-0.072	*	0.010		-0.005		-0.111	*	-0.096	*	-0.057		-0.033		0.002		0.010		0.002		-0.060		0.039	*
previous experience	0.141		-0.036		-0.067	*	-0.092		0.041		-0.100		0.001		0.017		0.022		-0.035		0.006		0.014	
permanent employment	0.068		0.040		0.024		0.129	*	-0.031		0.071		-0.010		0.078		0.241	*	0.029		0.119		0.082	*
part-time	-0.002		0.057		0.149	*	0.162	*			-0.027		0.065		0.074		0.096		0.224	*	0.218	*	0.064	
rest of activities	-0.073		0.044		0.073		-0.007		-0.203		0.298		0.158	*	0.040		-0.097		-0.017		-0.101		0.165	*
transport and communication	0.067		-0.095	*	-0.004		0.109	*	-0.255	*			0.187	*	0.135		-0.078		0.113		0.174	*	-0.027	
Financial interm.+ real state	0.009		-0.024		-0.041		0.040		0.034		0.032		-0.011		0.014		0.206	*	0.200	*	-0.067		-0.065	
education	0.086		-0.063		0.067		0.017		-0.103	*	0.185		0.089	*	0.170	*	0.031		0.100	*	0.043		-0.024	
health and social work	-0.072		0.035		0.003		-0.006		-0.039		0.088		-0.025		-0.046		-0.063		-0.050		0.129	*	-0.067	
other services	-0.115		0.001		0.103		-0.138	*	-0.070				-0.061		0.022		-0.029		0.089		0.026		-0.071	
managers	0.384	*	0.197	*	0.316	*	0.740	*	0.414	*	0.019		0.518	*	0.193		0.419	*	0.771	*	0.485	*	0.419	*
professionals	0.408	*	0.212	*	0.281	*	0.676	*	0.418	*	0.225	*	0.445	*	0.325	*	0.627	*	0.581	*	0.295	*	0.325	*
technicians	0.198	*	0.106	*	0.223	*	0.415	*	0.378	*	0.090		0.275	*	0.091		0.244	*	0.563	*	0.273	*	0.166	*
clerks	0.161	*	0.079		0.194	*	0.289	*	0.263	*	-0.047		0.141	*	0.105		0.221	*	0.352	*	0.184	*	0.200	*
service workers	-0.091		-0.027		0.037		0.137	*	0.141	*	-0.109		0.103	*	0.109		0.203	*	0.167	*	0.102		0.081	*
other occupations	-0.126		-0.094		0.275	*	0.008		0.266	*	-0.250		-0.071		0.077		0.143		0.150		0.161		0.112	
none employee	0.076		0.027		-0.037						0.047		-0.111								0.107		-0.195	*
1-4 employees^{+}	-0.153		-0.111	*	-0.147	*			-0.028		0.063		-0.086	*	-0.083		-0.006		-0.084		-0.179	*	-0.062	
5-19 employees	-0.092		-0.022		-0.135	*					0.075		-0.048		-0.053		0.005		-0.059		-0.056		-0.015	
20-49 employees^{++}	-0.084		-0.030		-0.056				-0.036		-0.037		0.004		-0.030		0.059		-0.069		-0.031		0.053	
50-99 employees^{+++}	-0.009		0.037		-0.036				0.056		0.142		0.038		-0.026		-0.065		0.003		-0.017		-0.019	
500+ employees			0.029		0.018				-0.007		-0.042		0.039		-0.123	*	0.059		0.009		-0.001		0.005	
supervisory			0.046		0.181		0.154	*	0.200	*	0.108		0.036		-0.070		0.180	*	-0.023		0.256	*	0.135	*

intermediate			-0.024		0.083	*	0.060	*	0.094	*	0.016		0.052		-0.028		0.037		-0.065		0.098	*	-0.028	
over-qualification			-0.023		-0.031		-0.042				0.003		-0.003		-0.008		-0.063	*	-0.014		-0.068	*	-0.036	
constant	0.786	*	1.570	*	0.897	*	0.427		1.808		1.295	*	1.998	*	-0.376		1.057	*	0.195		1.371	*	1.234	*
N of uncensored observations	710		611		394		722		694		229		718		331		436		564		310		699	

** Significant at 5%.*

Note: Dummies have been included for region. Dummies also were included for cases where there was an important number of missing values. Selection bias for non-participation has been corrected. Reference: primary studies, no tenure, no previous experience or unemployment spell, fixed-term/full-time contract, “manufacture of metal products, machinery and equipment” activity, elementary occupation, 100-499 regular employees in the local unit, non-supervisory job status, no skills or qualifications for a more demanding job. Joined categories: skilled agricultural and fishery workers with craft and related trade workers (Denmark, Belgium, France, UK and Ireland). Duration of contract dropped in the UK due to collinearity. Over-qualification not available in Germany and the UK. Job status at current job not available in Germany. Number of employees not used in France due to high number of missings.

[+] In the UK 1-9.

[++] In the UK 10-49, in Germany 20-1999.

[+++] In Germany 2000 or more.

Male, Private Sector	Germany		Denmark		Belgium		France		UK		Ireland		Italy		Greece		Spain		Portugal		Austria		Finland	
university	0.246	*	0.108	*	0.200	*	0.200	*	0.085	*	0.118	*	0.095	*	0.243	*	0.096	*	0.249	*	0.187	*	0.110	*
secondary school	0.137	*	0.079	*	0.102	*	0.059		0.035		0.018		0.047	*	0.142	*	0.030		0.062		0.141	*	0.036	
age	0.077	*	0.008		-0.001		0.038	*	0.054	*	0.010		0.028	*	0.031	*	-0.019		0.012		0.015		0.006	
age^2	-0.0008	*	0.0000		0.0001		-0.0004	*	-0.0006	*	-0.0001		-0.0002	*	-0.0002		0.0003		-0.0001		-0.0001		0.0000	
tenure 1-5 years	0.009		-0.011		0.011		0.020		-0.007		0.000		-0.004		-0.014		0.055	*	-0.033		0.057		0.035	
tenure 5-15 years	0.136	*	0.033		-0.017		0.142	*	0.037		0.036		0.010		0.034		0.153	*	-0.003		0.066		0.044	
tenure 15+ years	0.130	*	0.062		0.017		0.230	*	-0.034		0.208	*	0.008		0.075		0.195	*	0.026		0.102	*	-0.012	
unemployment spell	-0.001		-0.024		0.036	*	0.026	*	0.045		0.060		0.005		0.011		0.041		0.028		0.009		-0.019	
long-term unemp. spell	-0.013		0.015		-0.002		0.004		0.015		0.048		-0.009		-0.035		-0.004		-0.003		-0.016		-0.024	
previous experience	0.047		0.057		-0.026		-0.035		0.001		0.033		0.000		0.020		0.051		0.049		0.071	*	-0.006	
permanent employment	0.209	*	0.031		0.111	*	0.112	*	-0.012		0.108	*	0.072	*	0.086	*	0.043		0.071	*	0.093	*	0.078	
part-time	0.326	*	-0.107		0.290	*	0.183	*			-0.011		0.177	*	0.145		0.124		0.247	*	-0.103		-0.136	
agriculture, forestry, fishing	-0.071		0.020		-0.150		-0.316	*	-0.187	*	-0.140		0.007		-0.061		-0.140	*	0.069		-0.080		0.029	
energy	0.135	*	0.122	*	0.006		0.003		0.047		0.002		0.012		-0.040		0.072		0.152		-0.060		0.196	*
manufacture of food	-0.044		0.003		-0.212	*	0.021		-0.117	*	0.018		0.091	*	-0.086		-0.102	*	-0.050		-0.044		0.078	
manufacture of textiles	-0.115	*	0.006		-0.030		-0.093		-0.250	*	-0.328	*	-0.100	*	-0.215	*	-0.109		-0.077		-0.346	*	-0.007	
manufacture of wood, paper products	0.047		0.094	*	-0.063		0.049		-0.011		0.071		0.006		-0.059		-0.018		-0.019		-0.003		-0.026	
manufacture of energy products	0.012		0.081		-0.027		0.146	*	0.067		0.092		-0.008		0.149		0.098	*	0.091	*	0.015		-0.003	
other manufacturing	-0.003		0.119	*	-0.077		0.005		0.036		-0.015		-0.023		-0.035		-0.041		0.017		-0.033		0.054	
construction	-0.031		0.089	*	-0.035		-0.125	*	0.011		0.113	*	0.030		0.041		0.036		0.093	*	-0.001		0.035	
trade and repair	-0.080	*	0.033		-0.128	*	-0.112	*	-0.107	*	-0.093		-0.015		-0.063		-0.110	*	0.059		-0.029		0.065	
hotels and restaurants	-0.220		0.031		-0.181	*	-0.196	*	-0.210	*	-0.123		-0.010		-0.057		-0.086		-0.025		-0.024		-0.002	
transport and communication	-0.026		-0.009		-0.063		-0.056		-0.040		0.119		0.077	*	0.109		-0.020		0.060		-0.080		-0.005	
financial intermediation	0.082		0.140	*	0.011		0.031		0.109	*	0.031		0.235	*	0.075		0.337	*	0.586	*	0.037		0.071	
real state	-0.005		0.129	*	-0.061		-0.039		0.069		0.048		-0.021		-0.026		0.017		0.003		0.124		0.093	*
education	-0.301	*	-0.137		-0.036		-0.118		-0.035		-0.012		0.277	*	0.010		0.152		0.297	*	-0.075		-0.019	
health and social work	0.043		0.138		-0.216	*	-0.323	*	-0.084		-0.121		0.039		-0.149		-0.069		-0.261	*	-0.080		-0.071	
other services and public adm.	-0.033		0.056		-0.101		-0.229	*	-0.152	*	0.015		0.040		-0.047		-0.147		0.060		-0.062		0.102	
managers	0.250	*	0.191	*	0.144	*	0.378	*	0.256	*	0.153	*	0.306	*	0.284	*	0.372	*	0.282		0.367	*	0.149	*
professionals	0.349	*	0.216	*	0.151	*	0.326	*	0.292	*	0.172	*	0.181	*	0.210	*	0.239	*	0.460	*	0.270	*	0.138	*

technicians	0.172	*	0.215	*	0.084		0.198	*	0.277	*	0.190	*	0.130	*	0.130	*	0.208	*	0.302	*	0.326	*	0.122	*
clerks	0.080		0.130	*	0.008		0.053		0.088	*	0.009		0.079	*	0.081		0.211	*	0.194	*	0.300	*	-0.057	
service workers	0.011		0.012		-0.023		-0.008		0.017		0.001		-0.041		0.179	*	0.056		0.186	*	0.170	*	-0.147	*
skilled agriculture workers	0.034												-0.215	*	-0.062		0.002		-0.163	*	0.070		0.105	
craft trade workers	0.096	*	0.059		0.017		0.027		0.145	*	0.050		0.011		0.138	*	0.066	*	0.159	*	0.210	*	0.031	
operators	0.075		-0.009		0.020		0.031		0.045		0.028		-0.008		0.127	*	0.036		0.125	*	0.134	*	0.033	
none employee	-0.211	*	0.098		0.090				-0.379	*	-0.244	*	0.084		0.653	*	-0.053		0.129		0.394	*	-0.120	
1-4 employees[+]	-0.313	*	-0.185	*	-0.138	*			-0.130	*	-0.225	*	-0.134	*	-0.185	*	-0.272	*	-0.279	*	-0.151	*	-0.264	*
5-19 employees	-0.244	*	-0.117	*	-0.165	*			0.000		-0.076		-0.053		-0.052		-0.213	*	-0.189	*	-0.063	*	-0.148	*
20-49 employees[++]	-0.175	*	-0.070	*	-0.078	*			-0.121	*	-0.007		-0.008		-0.038		-0.141	*	-0.157	*	-0.034		-0.113	*
50-99 employees[+++]	-0.110	*	-0.086		-0.036				-0.064	*	-0.083		-0.020		0.007		-0.099	*	-0.130	*	0.032		-0.047	
500+ employees			-0.011		0.074	*			0.010		0.196	*	0.030		0.062		0.006		0.098		0.110	*	0.054	
supervisory			0.067	*	0.011		0.159	*	0.147	*	0.203	*	0.141	*	0.119	*	0.220	*	0.372	*	0.135	*	0.067	*
intermediate			0.052		0.019		0.083	*	0.025		0.010		0.046	*	0.165	*	0.095	*	0.141	*	0.045	*	0.022	
over-qualification			-0.042		0.038		-0.004				0.005		-0.009		-0.035		-0.013		0.036		-0.009		0.010	
constant	0.024		1.893	*	1.698	*	0.934	*	1.128	*	1.602	*	0.903	*	0.248		1.842	*	0.536	*	1.101	*	1.725	*
N of uncensored observations	2,335		839		663		1,629		1,750		657		1,782		948		2,105		1,959		1,040		1,009	

** Significant at 5%.*

Note: Dummies have been included for region. Dummies also were included for cases where there was an important number of missing values. Selection bias for non-participation has been corrected. Reference: primary studies, no tenure, no previous experience or unemployment spell, fixed-term/full-time contract, “manufacture of metal products, machinery and equipment” activity, elementary occupation, 100-499 regular employees in the local unit, non-supervisory job status, no skills or qualifications for a more demanding job. Joined categories: skilled agricultural and fishery workers with craft and related trade workers (Denmark, Belgium, France, UK and Ireland). Duration of contract dropped in the UK due to collinearity. Over-qualification not available in Germany and the UK. Job status at current job not available in Germany. Number of employees not used in France due to high number of missings.

[+] In the UK 1-9.

[++] In the UK 10-49, in Germany 20-1999.

[+++] In Germany 2000 or more.

Male, Public Sector	Germany		Denmark		Belgium		France		UK		Ireland		Italy		Greece		Spain		Portugal		Austria		Finland	
university	0.246	*	0.030		0.157	*	0.111	*	0.124		0.087		0.203	*	0.101		0.098		0.278		0.258	*	0.261	*
secondary school	0.203	*	-0.050		0.067		0.079		0.092		0.071		0.060	*	0.046		0.097		0.063	*	0.108		0.107	
age	0.047	*	-0.005		-0.018		0.026		0.046		-0.010		0.006		0.008		-0.012		0.005		-0.006		0.021	
age^{2}	-0.0004	*	0.0001		0.0003		-0.0001		-0.0005		0.0002		0.0000		-0.0001		0.0002		0.0000		0.0002		-0.0002	
tenure 1-5 years	-0.121		-0.010		0.021		0.245	*	0.011		0.091		-0.006		-0.019		0.175	*	-0.022		-0.063		0.070	
tenure 5-15 years	0.029		-0.014		0.093		0.340	*	0.023		0.140		0.005		0.013		0.112	*	-0.054		-0.013		0.046	
tenure 15+ years	0.024		-0.112		0.175	*	0.312	*	-0.027		0.261		0.055		0.153		0.197		0.034		0.057		0.076	
unemployment spell	-0.043	*	-0.010		0.062		0.002		0.041		0.028		-0.010		-0.043		0.015	*	0.123	*	0.091		-0.063	
long-term unemp. spell	-0.009		0.027		-0.027		-0.003		-0.052		0.047		-0.004		-0.062	*	0.010		0.057		0.087	*	-0.032	
previous experience	0.165	*	0.071		0.084	*	-0.122	*	0.033		0.139		0.014		0.077		0.017		-0.149		-0.020		-0.033	
permanent employment	0.045		0.047		0.110		0.149	*	-0.029		0.159		0.092		0.276	*	0.150	*	0.097		0.048		0.110	
part-time	-0.094		-0.071		0.435	*	-0.056				0.080		-0.020		0.221	*	0.128		0.530	*	0.242		0.168	
rest of activities	-0.085		-0.076		-0.007		0.153	*	0.051		-0.044		-0.019		0.061		0.067		-0.122		0.033		0.089	
transport and communication	-0.010		-0.021		0.046		0.097	*	-0.007		-0.136		-0.019		0.050		0.113		0.125	*	-0.024		0.090	
Financial interm.+ real state	0.060		0.046		0.055		-0.054		-0.153	*	-0.052		0.012		0.014		0.273	*	0.479	*	0.082		0.004	
education	-0.041		-0.205	*	-0.075		-0.039		-0.094	*			0.048		0.255	*	0.003		0.074		0.094		-0.004	
health and social work	-0.147	*	-0.039		-0.051		-0.126	*	-0.146	*	-0.086		-0.011		-0.125	*	-0.051		-0.134		0.053		0.003	
other services	-0.071		-0.079		-0.086		-0.204		0.022				0.078		-0.140	*	0.166	*	0.150		-0.090		-0.032	
managers	0.487	*	0.336	*	0.244	*	0.423	*	0.300	*	0.205	*	0.402	*	0.155		0.116		0.847	*	0.395	*	0.278	*
professionals	0.515	*	0.206	*	0.198	*	0.533	*	0.355	*	0.405	*	0.438	*	0.211	*	0.414	*	0.411	*	0.064		0.330	
technicians	0.347	*	0.155	*	0.095		0.325	*	0.289	*	0.235	*	0.194	*	0.091		0.177	*	0.523	*	0.188	*	0.122	
clerks	0.163		0.004		0.105		0.198	*	0.065		0.191	*	0.098	*	-0.037		-0.071	*	0.316	*	0.140		0.094	
service workers	0.303	*	0.098		-0.116		0.227	*	0.225	*	0.394	*	0.216	*	0.000		0.160	*	0.406	*	0.067		0.067	
other occupations	0.229	*	0.110		0.000		0.177	*	0.184	*	0.203	*	0.150	*	-0.043		-0.041		0.164		0.077		0.163	
none employee	0.093		0.084		-0.029						-0.317		0.139		0.155						-0.337	*	-0.196	*
1-4 employees^{+}	0.080		0.182		0.150				-0.083		-0.046		-0.058		-0.062		-0.145		-0.090		-0.141		-0.094	
5-19 employees	0.007		-0.071		0.082						-0.011		-0.052		-0.028		-0.138	*	-0.043		-0.088	*	-0.154	*
20-49 employees^{++}	-0.159	*	-0.018		0.064				-0.075		0.010		-0.015		-0.035		0.075		0.014		-0.018		-0.079	
50-99 employees^{+++}	-0.030		0.024		0.047				-0.104		0.056		0.012		-0.017		0.013		0.114		-0.005		-0.085	
500+ employees			-0.012		0.076	*			-0.042		0.084		0.064		0.070		0.030		0.057		0.012		0.021	

supervisory			-0.044		0.078		0.120	*	0.233	*	0.088		0.115	*	0.068		0.042		0.084		0.094		0.120	*
intermediate			-0.005		0.067	*	0.087	*	0.041		0.095		0.080	*	0.057		0.047		0.227		0.049		0.103	
over-qualification			-0.046		-0.035		-0.022				0.014		-0.021		-0.018		-0.003		-0.063		-0.008		-0.048	
constant	0.604		2.308	*	1.799	*	0.851	*	1.042		2.031	*	1.356	*	1.123		1.620	*	0.660		1.550		1.209	
N of uncensored observations	521		285		317		567		326		217		789		460		422		416		336		342	

** Significant at 5%.*

Note: Dummies have been included for region. Dummies also were included for cases where there was an important number of missing values. Selection bias for non-participation has been corrected. Reference: primary studies, no tenure, no previous experience or unemployment spell, fixed-term/full-time contract, “manufacture of metal products, machinery and equipment” activity, elementary occupation, 100-499 regular employees in the local unit, non-supervisory job status, no skills or qualifications for a more demanding job. Joined categories: skilled agricultural and fishery workers with craft and related trade workers (Denmark, Belgium, France, UK and Ireland). Duration of contract dropped in the UK due to collinearity. Over-qualification not available in Germany and the UK. Job status at current job not available in Germany. Number of employees not used in France due to high number of missings.

[+] In the UK 1-9.

[++] In the UK 10-49, in Germany 20-1999.

[+++] In Germany 2000 or more.

Table A2. Gender wage gap in EU countries
with employment variables in wage regressions

Country	% population working in public sector	Private Sector wage gap			Public Sector wage gap		
		raw (logs)	estimated (logs)	%	raw (logs)	estimated (logs)	%
Germany	30.0	0.248	0.226	91.2	0.317	0.184	58.0
Denmark	54.5	0.031	0.028	90.9	0.065	0.085	130.1
Belgium	37.1	0.065	0.046	70.7	0.067	0.113	169.4
France	39.1	0.165	0.117	71.1	0.208	0.085	41.0
UK	32.2	0.203	0.127	62.5	0.139	0.045	32.2
Ireland	28.1	0.097	0.000	-0.2	0.195	0.216	111.1
Italy	38.7	0.177	0.162	91.4	0.022	-0.008	-38.0
Greece	34.7	0.322	0.208	64.7	0.076	0.124	163.0
Spain	23.1	0.321	0.199	62.0	0.081	0.052	63.6
Portugal	25.4	0.281	0.236	83.9	0.079	0.129	163.0
Austria	28.4	0.147	0.020	13.3	0.047	0.072	152.5
Finland	49.8	0.068	0.060	88.4	0.122	0.099	81.0
unweighted average	35.1	0.177	0.119	65.8	0.118	0.100	93.9

Note: The raw wage gap is computed as the difference between the log male and log female hourly wage. The estimated gap is the gap explained by different returns (i.e. that not explained through different endowments).
Source: Own calculations using ECHP (2001)

Table A3. Estimated discrimination gap among working women in EU countries
with employment variables in wage regressions

Country	All female wage earners			Private Sector			Public Sector		
	% discriminated	$\bar{g}$ (€)	$\overline{\left(\frac{g}{y}\right)} \bullet 100$	% discriminated	$\bar{g}$ (€)	$\overline{\left(\frac{g}{y}\right)} \bullet 100$	% discriminated	$\bar{g}$ (€)	$\overline{\left(\frac{g}{y}\right)} \bullet 100$
Germany	86.8	1.9	32.1	88.1	2.0	33.8	84.0	1.8	27.9
Denmark	68.2	1.0	10.9	62.1	0.8	8.6	73.4	1.2	12.8
Belgium	62.6	1.0	13.4	58.5	0.7	10.8	69.7	1.4	17.8
France	77.2	1.1	17.0	79.6	1.1	18.3	73.4	1.2	14.8
UK	75.3	1.3	16.0	82.7	1.4	17.5	59.8	1.1	12.9
Ireland	60.8	1.4	16.4	50.9	0.7	8.5	86.3	3.2	36.4
Italy	76.3	0.7	13.5	93.8	1.0	19.3	48.6	0.3	4.4
Greece	82.4	0.7	19.8	93.8	0.8	24.9	60.9	0.4	10.1
Spain	83.0	1.0	23.9	90.1	1.1	26.8	59.2	0.8	14.3
Portugal	83.6	0.8	28.1	89.8	0.7	30.1	65.3	0.9	22.1
Austria	60.9	0.6	9.7	58.0	0.5	8.4	68.1	0.8	12.9
Finland	70.9	0.9	13.2	66.7	0.8	12.4	75.1	1.0	14.1
unweighted average	74.0	1.0	17.8	76.2	1.0	18.3	68.6	1.2	16.7

Table A4. Households' incomes in EU countries: monthly average amounts per equivalent adult
with employment variables in wage regressions

	actual			discrimination		counterfactual without discrimination		
Country	$\overline{x}$ average household equivalent income €	$\overline{\sum_{i \in h} y_i t_i}$ average female wages €	% equivalent income	$\overline{g}$ average estimated household gap €	% equivalent income	$\overline{x^*}$ average household equivalent income €	$\overline{\sum_{i \in h} y^*_i t_i}$ average female wages €	% equivalent income
Germany	1,319	244	18.9	62	4.9	1,381	306	20.9
Denmark	1,691	519	28.9	52	3.0	1,743	570	30.1
Belgium	1,190	287	23.0	29	2.4	1,219	316	24.1
France	1,354	331	23.7	39	3.1	1,393	370	24.8
UK	1,854	407	20.8	51	2.8	1,905	457	22.0
Ireland	1,269	335	26.6	49	3.9	1,318	384	26.6
Italy	882	164	17.1	19	2.1	900	183	18.0
Greece	649	102	14.3	16	2.5	665	117	15.3
Spain	847	172	17.3	32	3.6	879	204	18.8
Portugal	640	151	21.7	31	5.3	671	182	24.0
Austria	1,258	259	19.8	25	1.9	1,282	283	20.6
Finland	1,199	344	26.7	43	3.4	1,242	387	27.9
unweighted Average	1,179	276	21.6	37	3.2	1,217	313	22.7

Table A5. Impact of discrimination on inequality in EU countries
Gini index
with employment variables in wage regressions

country	$I(x)$	$I(x^*)$	ΔI_r
Germany	0.248	0.251	1.2
Denmark	0.214	0.217	1.2
Belgium	0.228	0.230	0.6
France	0.297	0.297	-0.1
UK	0.304	0.304	0.2
Ireland	0.284	0.289	1.7
Italy	0.281	0.283	0.7
Greece	0.333	0.333	0.1
Spain	0.311	0.314	1.0
Portugal	0.376	0.374	-0.6
Austria	0.213	0.215	1.2
Finland	0.252	0.257	1.9
unweighted average	0.279	0.280	0.8

Figure A1

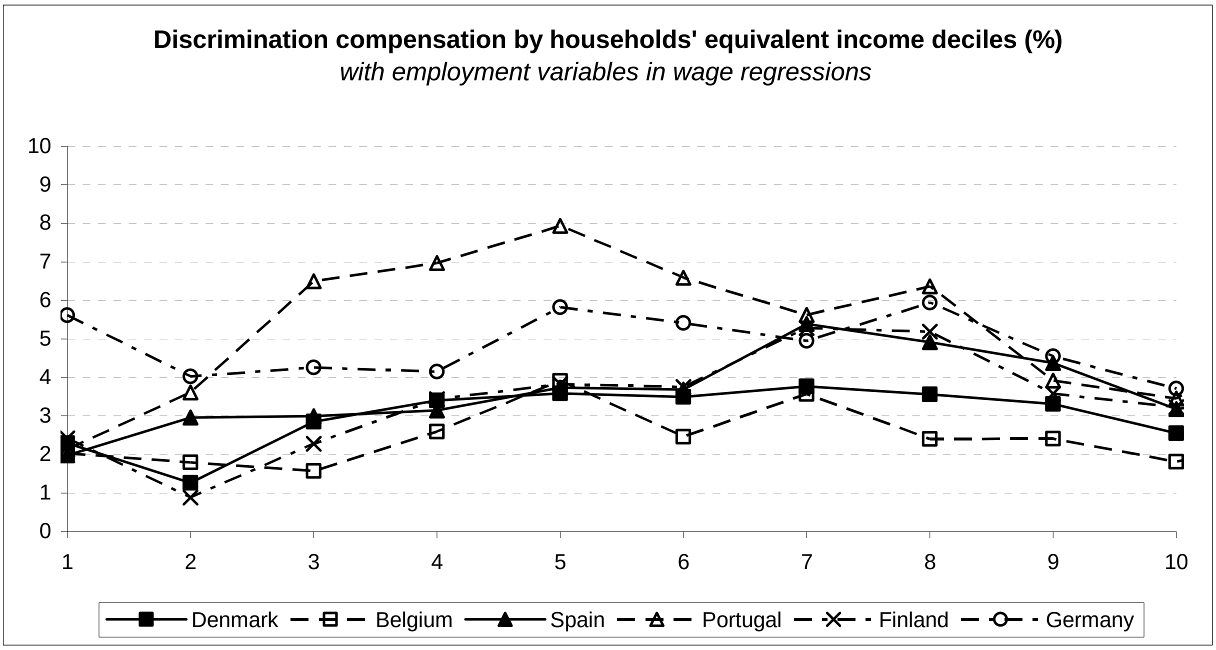

Table A6. Impact of discrimination on poverty in EU countries
with employment variables in wage regressions

Country	Head-count ratio (*H*) *number of poor / population (in %)*				Poverty Gap ratio (*HI*) *H · average poverty gap (in %)*			
	$P(x)$	$P(x^*)$	ΔP	ΔP_r	$P(x)$	$P(x^*)$	ΔP	ΔP_r
Germany	10.1	9.2	-1.0	*-9.5*	2.1	1.8	-0.3	*-13.6*
Denmark	13.8	13.0	-0.7	*-5.3*	2.4	2.2	-0.1	*-5.7*
Belgium	11.2	10.6	-0.6	*-5.2*	1.8	1.7	-0.1	*-6.4*
France	17.4	16.5	-0.9	*-5.3*	4.3	4.1	-0.2	*-5.4*
UK	16.1	15.4	-0.7	*-4.5*	4.2	4.1	-0.1	*-3.5*
Ireland	18.5	18.1	-0.4	*-2.2*	4.0	3.8	-0.2	*-4.7*
Italy	17.7	17.3	-0.4	*-2.0*	4.7	4.5	-0.2	*-4.1*
Greece	19.1	18.5	-0.6	*-3.0*	5.6	5.4	-0.2	*-3.3*
Spain	17.6	16.6	-1.0	*-5.5*	4.4	4.2	-0.2	*-4.7*
Portugal	17.6	16.3	-1.4	*-7.7*	5.0	4.7	-0.3	*-5.5*
Austria	9.3	8.8	-0.5	*-5.2*	1.6	1.5	-0.1	*-5.2*
Finland	14.0	13.5	-0.5	*-3.6*	3.6	3.4	-0.1	*-3.9*
unweighted Average	*15.2*	*14.5*	*-0.7*	*-4.9*	*3.6*	*3.5*	*-0.2*	*-5.5*

Table A7. Impact of discrimination on poverty risks in EU countries: households with female earners *Head-Count Ratio = number of poor / population (in %)* *with employment variables in wage regressions*								
Country	**Households with female earners**				**Female wages being more than 50% of hh incomes**			
	$P(x)$	$P(x^*)$	ΔP	ΔP_r	$P(x)$	$P(x^*)$	ΔP	ΔP_r
Germany	8.2	6.1	*-2.1*	-25.3	15.2	10.7	*-4.5*	-29.8
Denmark	4.2	3.0	*-1.2*	-27.5	9.0	5.6	*-3.4*	-37.5
Belgium	3.9	2.8	*-1.2*	-29.5	11.0	7.9	*-3.1*	-28.1
France	7.6	5.7	*-1.9*	-25.1	12.3	8.5	*-3.8*	-30.8
UK	6.1	4.8	*-1.4*	-22.5	11.5	8.2	*-3.3*	-28.5
Ireland	7.6	6.8	*-0.8*	-10.5	15.3	13.4	*-1.9*	-12.5
Italy	7.1	6.1	*-1.0*	-13.5	16.1	14.3	*-1.8*	-11.3
Greece	6.1	4.3	*-1.8*	-29.8	15.3	11.5	*-3.8*	-25.0
Spain	7.0	4.6	*-2.4*	-34.5	10.9	7.5	*-3.4*	-31.0
Portugal	6.4	3.8	*-2.6*	-41.1	13.1	5.9	*-7.2*	-54.7
Austria	4.0	3.0	*-1.0*	-23.9	10.2	7.8	*-2.4*	-23.5
Finland	5.2	4.3	*-0.9*	-18.0	10.8	8.7	*-2.1*	-19.2
unweighted average	*6.1*	*4.6*	*-1.5*	-25.1	*12.6*	*9.2*	*-3.4*	-27.7

Table A8. Impact of discrimination on poverty risks in EU countries: females *Head-Count Ratio = number of poor / population (in %)* *with employment variables in wage regressions*								
Country	**Females 25-55 years old**				**Female wage earners**			
	$P(x)$	$P(x^*)$	ΔP	ΔP_r	$P(x)$	$P(x^*)$	ΔP	ΔP_r
Germany	9.4	8.2	*-1.3*	-13.3	6.8	5.0	*-1.9*	-27.4
Denmark	7.4	6.4	*-1.0*	-13.0	5.0	3.6	*-1.4*	-27.5
Belgium	9.7	8.4	*-1.2*	-12.9	4.2	2.4	*-1.8*	-42.5
France	14.3	13.0	*-1.3*	-9.0	6.5	4.6	*-1.8*	-28.3
UK	11.7	10.5	*-1.2*	-10.3	6.1	4.3	*-1.7*	-28.4
Ireland	15.5	14.8	*-0.7*	-4.3	6.6	5.4	*-1.1*	-17.5
Italy	16.6	16.2	*-0.4*	-2.5	5.5	4.7	*-0.8*	-15.1
Greece	13.6	12.9	*-0.7*	-5.2	5.8	3.9	*-1.8*	-31.5
Spain	15.3	14.0	*-1.3*	-8.8	6.1	3.7	*-2.4*	-39.2
Portugal	11.5	10.1	*-1.4*	-12.1	4.8	2.5	*-2.3*	-47.3
Austria	6.9	6.2	*-0.7*	-9.9	3.6	2.7	*-0.9*	-24.5
Finland	11.3	10.4	*-0.9*	-7.9	5.9	4.9	*-1.1*	-17.9
unweighted average	11.9	10.9	*-1.0*	-9.1	5.6	*4.0*	*-1.6*	-28.9

Table A9. Impact of discrimination on poverty risks in EU countries: dependent individuals
Head-Count Ratio = number of poor / population (in %)
with employment variables in wage regressions

Country	Dependent Adults (above 16 y. o.)				Children (below 16 y. o.)			
	$P(x)$	$P(x^*)$	ΔP	ΔP_r	$P(x)$	$P(x^*)$	ΔP	ΔP_r
Germany	10.8	9.2	*-1.6*	-14.8	12.4	11.1	*-1.3*	-10.4
Denmark	24.8	24.6	*-0.2*	-0.7	9.7	8.3	*-1.4*	-14.4
Belgium	18.0	17.7	*-0.3*	-1.4	8.9	8.7	*-0.2*	-2.2
France	17.5	16.2	*-1.3*	-7.2	20.0	19.0	*-1.0*	-5.0
UK	20.1	20.1	*0.0*	0.0	20.7	19.8	*-0.9*	-4.4
Ireland	12.4	11.8	*-0.6*	-4.9	21.7	21.2	*-0.4*	-1.9
Italy	27.8	27.4	*-0.4*	-1.4	22.0	21.6	*-0.3*	-1.5
Greece	24.2	23.4	*-0.8*	-3.4	16.0	15.5	*-0.5*	-3.0
Spain	23.2	22.7	*-0.5*	-2.2	22.6	22.3	*-0.3*	-1.1
Portugal	18.8	17.6	*-1.2*	-6.2	22.6	20.5	*-2.1*	-9.3
Austria	15.8	15.3	*-0.5*	-3.1	8.7	8.0	*-0.7*	-8.0
Finland	13.6	13.6	*0.0*	0.0	13.4	12.8	*-0.6*	-4.7
unweighted average	18.9	18.3	*-0.6*	-3.8	16.5	15.7	*-0.8*	-5.5

Figure A2