

Gender Pay Differentials in Portugal: Contributions to the Employment Policy Debate in the European Union

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Abstract

Since the implementation of the European Employment Strategy in the 1990s, the issue of gender gaps in the European Union labour markets has been granted a high profile. The Portuguese labour market has performed well on various indicators relating to gender equality, namely, participation and employment rates. Nevertheless, a persistent pay gap remains despite the recent evolution of the labour market, especially concerning the average education level of workers. This article investigates the main factors explaining the gender pay gap across two decades and the way those factors perform along time. We also discuss the means of closing the gap in the context of the European Employment Strategy, considering the lessons from other member states. We used wage decomposition techniques to analyse the relative importance of differences in the productive characteristics of workers, differences in the way men and women are distributed among jobs and the relative importance of discrimination practices. Our findings suggest that most of the pay gap is due to discrimination practices. Individual action by economic agents is insufficient to solve the persistent pay gap. Social partners must incorporate this issue within collective bargaining in order to construct an adequate strategy for reducing the gap, which can only be done by engaging men and women, employees and employers.

Keywords

Discrimination; Employment policy; Gender; Labour market; Portugal

Introduction

The gender dimension of the labour markets has been granted increasing visibility within European Union (EU) debates on how the labour market works and the way it should work. Within both analytical and policy debates, the issue of gender pay gaps has entered the European agenda. One of the main questions raised seeks to explain why these gaps persist more than

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thirty years after the implementation of the first Directive on Equal Pay¹ and ten years after the implementation of the European Employment Strategy (EES). Several studies have analysed the trends characterizing this issue in the EU to allow a better understanding of how the increasing involvement of women in the labour market has influenced (or not) their relative pay and on how gender diversity in pay affects (or is affected by) the emerging imbalances in terms of reconciliation of work and family life.

Portugal: An Interesting Case Study within the EU

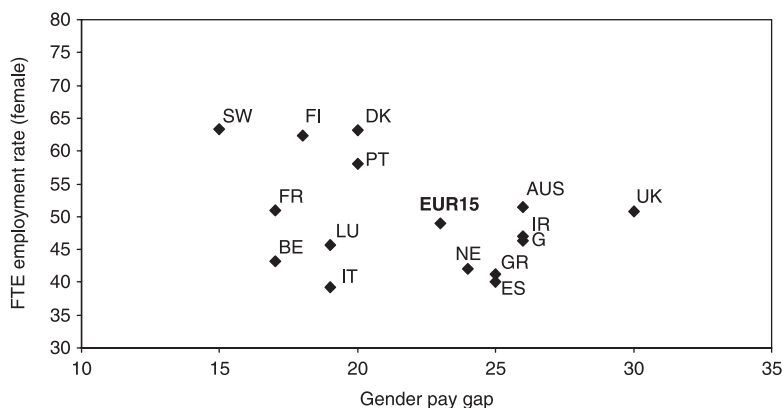
Despite certain evidence of increasing similarities within the EU labour market, national diversities among the different member states remain visible. Portugal is quite an interesting case within the EU regarding a certain number of characteristics, especially from a gender perspective. It has a female participation rate that ranks among the highest within the EU and is much closer to the level of Northern than Southern European countries (see table A1 in the Appendix). Moreover, it is worth stressing that this is not a recent process: high female participation has been a persistent characteristic of the Portuguese labour market for at least the last three decades (see Appendix, table A2).

Moreover, if we consider the full-time equivalent employment rate (FTE), Portugal shows, when compared to its EU partners, good performance of female workers, once again close to that in Scandinavian countries (see Appendix, table A3): Portuguese women of working age have high participation in both employment and full-time work. As to the gender pay gap, although important where it occurs in all European countries, it is lower in Portugal than on average for EU member states² (see Appendix, table A4).

Considering the centrality of the policy targets relating to employment rates and gender pay gaps, we represent in figure 1 the situation of 15 European member states (EU15), referring to both female full-time equivalent employment

Figure 1

Female full-time employment rate and gender pay gap in EU15 in 2002



rates and to the gender pay gap in each state. As compared to the average situation of the EU, some countries clearly perform better on both indicators (Sweden, Finland, Denmark and Portugal), others clearly worse (Greece, Spain, Netherlands, Germany and Ireland), the remainder showing a more mixed performance. In terms of female employment rates and the gender pay gap, the proximity between Portugal and the Scandinavian countries is surprising, considering the diversity across Southern European countries. In this article we aim to discuss some aspects highlighting this.

In previous research (González *et al.* 1991; González 1992; Ruivo *et al.* 1998; Castro *et al.* 1999), we discussed in depth the issue of the high female participation rate and the low incidence of part-time work in Portugal. We concluded that, despite the similarities, the recent historical process shows relevant differences between Portugal and its neighbouring Southern EU member states, which appear relevant to the explanation of the huge diversity of female labour market participation behaviour within the EU.

The main identified factors relate to the particularly huge labour shortages observable in Portugal in the 1960s owing to strong emigration (a phenomenon common to other Southern European countries) and to male recruitment into colonial war (specific to Portugal). These shortages of labour supply in the context of the industrialization process implied more pressure on, and opportunities for, women to enter the labour market. Also, the transition to democracy that occurred in the 1970s was, in political and social terms, quite different among Portugal, Spain and Greece: in Portugal the revolutionary process introduced deep cultural changes, thus giving social participation a very high profile, especially regarding employment. Last but not least, the low level of Portuguese wages puts huge constraints on family budgets, so that effectively two earners are needed to make ends meet.

In this article we will focus in greater depth on the issue of the gender pay gap. We take into account recent analysis developed on EU gender gaps, namely, the study by Gupta *et al.* (2006) on the Danish case. In this study, the authors argue that the glass ceiling in pay in Denmark in the mid-1980s to mid-1990s that especially affected high-wage women was associated with policy implementations. They stressed the existence of possible *boomerang* effects of some 'family friendly welfare schemes . . . [that] had the unintended consequence of facilitating frequent absences from work and thereby reducing women's attractiveness as employees' (2006: 261). This could then promote statistical discrimination as an unexpected outcome: as care work is mainly done by women,³ employers assume that for identical 'productive characteristics' it is more risky to recruit a woman than a man, as there is a higher probability of a woman being less engaged in a job given her higher engagement in care.

This same issue has been increasingly recognized within the European Employment Policy debate and is stressed by the Commission of the European Communities (CEC) (2007: 7) as follows: 'Allowing people scope to reconcile their working and private lives helps to create a better balance in the sharing of domestic and family responsibilities between women and men and thus encourages more continuous involvement by women in the labour market; this, in turn, helps to reduce the pay gap.'

With this background in mind, we aim in the present article to investigate the causes of the persistent gender pay gap in Portugal and discuss ways of tackling it.

Decomposing the Gender Pay Gap: A Tool for Measuring Discrimination

The gender pay gap referred to above has a very concrete meaning: in the EU25 and in average terms (see Appendix, table A4), men's hourly earnings are 25 per cent higher than women's (23 per cent in the EU15). How can we explain this difference? What part of the gap can be explained by differences in the characteristics of workers? What part of the gap can be explained by differences in the distribution of men and women in jobs, sectors and firms? And what part cannot be explained by the previous elements, meaning that there exists discrimination?

Defining and measuring discrimination

Economic literature deals with various definitions of discrimination in the labour market, most issued from the seminal work of Becker (1957). In general, 'labour market discrimination is said to currently exist if individual workers who have identical productive characteristics are treated differently because of the demographic group to which they belong' (Ehrenberg and Smith 1994: 402). In his pioneering work on the decomposition of the pay gap, Oaxaca (1973: 694) stated that 'discrimination against women can be said to exist whenever the relative wage of males exceeds the relative wage that would have prevailed if males and women were paid according to the same criteria'.

The first definition emphasizes the fact that discrimination means remunerating differently individuals who are identical in terms of their potential contribution to the economic process, in other words, having the same 'productive characteristics'. The second definition is broader in the sense that it puts the accent on the 'criteria' of remuneration. This issue implies, as the previous one did, the clear identification of the variables that are relevant to explain wage diversity, but also stresses the importance of identifying the wage structure corresponding to the situation of non-existence of discrimination.

So, discussion on discrimination in general can be misleading and some previous remarks have to be clarified. Different individuals can have different wages because they have diverse skills of different value in the labour market, i.e. different education level, different areas of education specialization, different work experience and many others. This makes individual workers different and they are, of course, remunerated accordingly, as they expect. From the perspective of workers and employers, this makes sense and seems fair. So the gap in earnings linked to these differences in the 'quality' of individual workers cannot be confused with employers' prejudice.

However, the theoretical problem persists: individually, a lot of elements can explain the diversity of the productive characteristics of workers, some linked to their individual choice but many linked to the institutions, such as family, education and training system, which shape these choices. Among

other targets, the European Employment Policy aims precisely at promoting policy action in order to ensure equal opportunities of individuals in terms of access to employment.

Yet we find evidence that a certain demographic group, women in this case, has a disadvantage in its average wage, thus diminishing the previous reasoning. In fact, even if we consider that none of the EU employers has any prejudice against women, we have to be able to answer the question: why do women have, in average terms, less favourable 'productive characteristics' than men do? This has to do with a more global process relying on culture, tradition, habits and stereotypes, which shape social norms and contribute to what we can call a social discrimination against women that affects their behaviour prior to their entry (or not) into the labour market. This process obviously interferes with their decisions and with the constraints they face regarding factors employers evaluate, but cannot and should not be confused with individual employers' prejudice. Nevertheless, it cannot be ignored.

Interpretation of the gender pay gap and the importance of using decomposition techniques: unadjusted versus adjusted gender pay gap

Aiming at dealing with the problem of the diversity of wages according to gender and race, Oaxaca (1973) decomposed the gender pay gap into two components: one that could be explained by 'differences in individual characteristics'; and a second one corresponding to the 'estimated effects of discrimination'. In his procedure, he had to address two central issues: (1) the choice of the non-discriminating wage structure; and (2) the identification of the variables considered as capable of explaining differences in pay.

As to the first issue, several alternative choices have been suggested in the literature. According to Oaxaca (1973), either the current male or the current female wage structure could be used. This procedure has often been discussed in the literature, as some authors have argued that the rationale behind these proposals is too extreme, essentially because it implies the conception that discrimination affects only one group.

Other authors have worked with wage structures that reflect both male and female pay in the labour market. This procedure allows the hypothesis that practices of wage discrimination may have two effects: advantage, that is, to raise the wage of the members of the non-discriminated group (men, if we are analysing the gender pay gap); and disadvantage, that is, to reduce the wage of the members of the discriminated group (women). This has been considered a more adequate procedure (see, among others, Oaxaca and Ransom 1994) and, accordingly, we used as the non-discriminating wage structure the pooled sample of male and female wages.

As to the issue of identifying the characteristics that must be considered as capable of explaining differences in pay among either male or female workers, it is consensual that different endowments in human capital, within or between groups, such as education, experience and tenure, are relevant for explaining the diversity of wages.

However, this cannot be the whole story. Workers, either male or female, have different remunerations according to the job they occupy. Also different

sectors and firms pay differently, namely, because productive conditions differ, as do the negotiated collective agreements.

So, aside from the inclusion of the human capital variables, we also used variables to control for the characteristics of jobs, sectors and firms. Differences in these last characteristics can imply different productivity profiles for individuals (male or female) with similar personal characteristics. And again these characteristics cannot be associated with employers' prejudice. To correct those effects and taking into account the availability of data,⁴ we used variables allowing us to control for differences in firm size, region, occupation, sector of activity and type of contract (part-time job).

Recent evolution of the gender pay gap and its decomposition in Portugal

To understand the recent evolution of the gender pay gap in Portugal, estimations of the gap and its decomposition were made for some of the years covering the period 1985–2005.⁵ We considered 1985 as the first year of the study in order to allow for comparison of the situation before and after integration into the EU, Portugal having joined in 1986.

The interim years were included in order to decompose the whole period into five sub-periods of similar length⁶ and also to consider years that reflect different situations in the Portuguese labour market: in 1991, Portugal had the lowest unemployment rate of the entire period (4.0 per cent). Moreover, both in 1995 and 2005 this rate was one of the highest in the period after Portuguese integration into the EU (respectively, 7.3 and 7.6 per cent) (European Commission 2006).

The total gender pay gap (logarithmic) for all the years considered is presented in table 1: 0.221 in the year 2005, slightly lower than the gap in 1985, despite higher values in the interim reported years. Since the beginning of the 1990s the gender pay gap has shown a continuously decreasing tendency. So, even if the process is not linear, the gap in Portugal did not show deep changes twenty years after integration into the EU. Nevertheless, there is a clear decreasing tendency since the beginning of the 1990s.

To understand the reasons lying behind this pay gap it has been decomposed into an explained (endowment differential) and an unexplained (discrimination differential) part. The results of this decomposition are reported in table 2. In accordance with some previous international estimates (Oaxaca and Ransom 1994; Reilly and Wirjanto 1999), the measured discrimination differential dominates the estimated endowment differential.

Table 1

Total pay gap (natural logarithm)

	1985	1991	1995	2000	2005
Total gender gap	0.237	0.276	0.252	0.238	0.221

Table 2

Decomposition of total pay gap (natural logarithm)

	1985	1991	1995	2000	2005
Total gender gap	0.237	0.276	0.252	0.238	0.221
Endowment differential (%)	48	45	44	36	33
Discrimination differential (%)	52	55	56	64	67
Male advantage (%)	33	37	40	42	45
Female disadvantage (%)	67	63	60	58	55
Discrimination coefficient	0.131	0.165	0.152	0.163	0.161

Following our results, the discrimination coefficient, i.e. the additional cost that in average terms employers attribute to recruiting a woman as compared to a man, was 16.1 per cent in the year 2005, a similar value to that at the beginning of the 1990s but higher than the one calculated for 1985 (0.131). This coefficient is a rather simple and understandable indicator of employers' discrimination: it measures the differences in pay among individuals having the same 'productive characteristics', thus, relating to employers' prejudice on the grounds of gender. Moreover, by correcting differences in wages relating to how differently male and female workers are distributed among jobs, sectors and firms, it also corrects the gap from some of the elements that shape the more general processes of social discrimination.⁷

As table 2 shows, despite the changes in the total gender gap there has been, throughout the period, an increase in the relative importance of discrimination in explaining the gender pay gap. Moreover, differences in attributes have been decreasing over the last 20 years.

The discrimination differential can be divided into two components: the so-called male advantage, the wage males receive above what would be due if their sample characteristics were to be rewarded by a non-discriminating wage structure; and the female disadvantage, the difference between the wage women should receive if the non-discriminating wage structure were enforced and the wage they actually receive. Results show a consistent increase in the relative importance of the male advantage and consequent decrease in that of the female disadvantage.

The part of the gap attributable to differences in the characteristics of workers and jobs has also been decomposed into its components (table 3) showing the diverse importance, along time, of the different characteristics of workers and jobs in explaining the gap.

The main factors explaining the part of the gap due to the endowment differential relate to the characteristics of jobs. The results show that industry is the largest source of this gap, contributing to its widening and explaining 98.4 per cent of that part of the gap in the year 2005.⁸

A more detailed analysis of the relative importance of the different sectors in explaining the pay gap shows that *Textile*, *Services* and *Transportation* contributed the most to its widening in 2005. In the same year, *Finance* was the only sector

Table 3

Contributions of variables to the pay gap due to endowment (or attribute) differential

Contribution Source	1985		1991		1995		2000		2005	
	Value (ln)	%	Value (ln)	%	Value (ln)	%	Value (ln)	%	Value (ln)	%
Human capital	0.031	27.4%	0.033	26.7%	0.020	18.6%	0.006	7.3%	-0.012	-16.6%
Plant size	-0.002	-2.1%	-0.004	-3.4%	-0.006	-5.8%	0.000	0.1%	0.003	3.5%
Location	0.003	2.3%	0.001	0.6%	0.000	-0.1%	-0.001	-1.3%	-0.001	-1.2%
Occupation	0.005	4.1%	0.005	4.4%	0.016	14.6%	0.016	19.0%	0.011	15.2%
Industry	0.080	70.6%	0.092	74.8%	0.086	77.6%	0.066	77.2%	0.071	98.4%
Part-time	-0.003	-2.4%	-0.004	-3.2%	-0.005	-4.8%	-0.002	-2.3%	0.001	0.8%
Gap due to attributes	0.113	100.0%	0.123	100.0%	0.110	100.0%	0.086	100.0%	0.072	100.0%
(% attr. dif. in total)	(48)%		(45)%		(44)%		(36)%		(33)%	
Total gender gap	0.237		0.276		0.252		0.238		0.221	

that acted towards reducing the gap. These sectors have a different role in female and male job structures: Textile and Services have a high concentration of female workers while Transportation is highly male-concentrated. Finance is the sector with the lowest level of gender segregation in the Portuguese labour market.

The strong influence of industry in explaining the pay gap persisted through the whole period, a slight increase in its relative importance being noticeable in more recent years.

Occupation accounts for 15.2 per cent of the gender wage differential due to attributes, contributing to its widening. A different distribution of men and women among occupations is clearly associated with these results as men are more concentrated at the top and bottom occupation levels, whereas women are relatively more concentrated in intermediate occupation-level jobs. Thus, the importance of occupation in explaining the gender pay gap over time was reinforced.

The results also show that in 2005 human capital variables (education, experience and tenure) contributed towards reducing the gender pay gap, in contrast with what happened up to 2000. Their relative importance significantly decreased through the period under analysis. Taking only the years from 2000 to 2005, the loss in the relative weight was as high as 24 percentage points. It is worth noting that this global evolution of human capital variables occurred alongside the contribution of education to the reduction in the gender pay gap, this effect being offset (or partially offset) by the contribution of experience and tenure. Also, it is important to stress that educational policies were introduced in the country, especially since the mid-1980s, improving the average education of both men and women, although favouring the latter, thus increasing the already existing gender educational gap. In 2005, among the population aged 15 to 64, 13.1 per cent of women held a college degree whereas only 8.7 per cent of males held such a qualification (in the EU25, for the same year, these percentages were 19.9 for both groups) (European Commission 2006: 54).

Part-time work (0.8 per cent), location (−1.2 per cent) and plant size (3.5 per cent) have a minor or almost null effect in the explanation of the wage differential through the period.

So the high pay gap that prevails in the Portuguese private sector is the outcome of a process whereby discrimination ('measurable' discrimination in the sense highlighted by our previous discussion) plays the most important role. It is interesting to note that in the part of the pay gap that can be explained by diverse characteristics, only differences in job characteristics are responsible for increasing the gap in 2005. The characteristics of male and female workers are becoming more similar and are now clearly more favourable to women, especially regarding education, thus contributing to reducing the pay gap.

The Gender Pay Gap in Portugal and the European Employment Strategy

With implementation of the EES, the closing of the gender pay gap has been given increasing importance (see Commission of European Communities 2006). Nevertheless, as we previously mentioned, important disparities remain within

the EU with only a slight tendency towards the closing of this gap having been achieved, in contrast to intense changes in indicators such as the employment rate.

The CEC recently recognized that gender gaps are closing faster in employment ratios than in pay (Commission of European Communities 2007: 4). This can be linked to some of the main characteristics of the recent evolution of the EES. In fact, quantitative policy targets have been set for employment rates for 2005 and 2010, while the reduction in the gender pay gap is identified as a global objective with no quantified targets. The closing of the gender employment gap has been clearly identified as a main policy objective since the very beginning of the implementation of the EES, while the closing of the gender pay gap had a rather low profile until its first revision in 2003. Since then it has been given more emphasis with coordinate increase in research in this area (see, among others, Beblo *et al.* 2003; Rubery *et al.* 2005; Plantenga and Remery 2006). However, analysis of this topic, especially comparative research, is confronted with an important handicap: the lack of an adequate EU data set on wages (Plantenga and Remery 2006: 21–2; Rubery *et al.* 2005: 188). Given the fact that the value of the pay gap varies widely according to the data set we use and also to the fact that the relative position of the diverse member states may be different according to the database used, the problem of the settlement of quantitative targets, even if it had a political consensus (which is problematic in itself), would bring about a big improvement in EU statistics.

Also, it is worth stressing that in most EU member states, including Portugal, the debate on gender gaps is far from being a central issue in employment debates and policy design despite implementation of the EES (see Plantenga and Remery 2006).

In spite of the above identified statistical problem, all the existing studies point to similar conclusions to those we identified in the Portuguese case: improvement in the productive characteristics of individuals does not close the existing gender pay gaps as most of the gap is linked to the characteristics of jobs and firms, and discrimination.

The experience of other EU countries could prove to be relevant for the design of the Portuguese policy on this issue. The Danish experience in particular could provide some insights as Denmark entered the EU before Portugal did and has, like all the other Scandinavian countries, a long tradition of policy action in the area of equal opportunities from a gender perspective.

In recent research, Gupta *et al.* (2006) tried to find why in Denmark, after decades of policies promoting equal opportunities,⁹ the gender pay gap rose in the 1990s after over a decade of stagnation. Among their conclusions, they refer to possible *boomerang* effects of some policy measures aiming at promoting reconciliation of work and family life and, by this means, promoting women's employment. The authors argue that 'although these policies [paid maternity leave, family care days and flexible working hours] facilitated women's entrance into the labour market, perhaps even raising their total compensation, they had the unintended consequence of facilitating frequent absences from work and thereby reducing women's attractiveness as employees' (2006: 261).

They further developed analysis and discussion of the emergence of a glass ceiling¹⁰ relating to the 'growing statistical discrimination against high-wage women' (2006: 262). The rationale they present is that the disproportion of time dedicated by men compared to women to domestic and care work¹¹ implies that the short-term effect of the improvements implemented resulted in a backward effect in the medium to long term: the increase in social rights, given the fact that those rights were largely taken by women, made the employment of female workers less attractive to employers.

Recent EU reports also refer to the link between pay gaps and family organization models, emphasizing the need for developing both care structures and more equal distribution of care (namely, by means of division of leave) and domestic work between men and women (see Commission of European Communities 2007; Plantenga and Remery 2006). Further, more emphasis has been placed on the importance of integrating all the social agents within this debate. Aside from the need to raise awareness of reconciliation of work and family life among male and female workers, the need to encourage employers to contribute to eliminate gender pay gaps is also more and more emphasized.

The European Commission (Commission of European Communities 2007: 9) stresses the importance of employers' action in closing pay gaps, explicitly stating that 'the promotion of equality is not only an ethical matter but creates a comparative advantage for companies by allowing their staff to make full use of their productive potential'. This argument has been developed in line with the arguments of the efficiency wage theory (see Weiss 1990). According to this theory, some firms might choose to pay above market wages as a means of investing in workers' motivation and engagement. The more efficient work of highly paid workers would compensate for the additional wage costs. Under these conditions, high wages represent for firms an investment in the quality of the work provided by their employees.

An identical argument can be applied to the promotion of gender equality. Firms that create conditions for their workers to reconcile work and family life, such as care services provided by the enterprise and flexible working times, are investing in the creation of the conditions for a more engaged, more motivated, less stressed and so more productive labour force.

Also at a national level the outcome of a better care infrastructure and a more equal division of care leave by men and women would be an important signal for economic agents: workers would be given the signal that working and caring is a task for all (essentially the provision of care services but also the cuts in experience linked to the absences from work) and benefits all; firms would be given the signal that both parents have equal social rights and so it is not more risky for firms to hire workers that are (or can become) mothers than workers that are (or can become) fathers, because if men and women are to divide necessary leave, the recruitment of a woman worker (mother or potential mother) is not more risky than the recruitment of a man (father or potential father).

These measures would then also be a way of challenging stereotypes and inducing cultural changes. The traditional way of dealing with the dominating models of division of tasks within families today has been to centralize

reconciliation issues only on women either by their low participation in the labour market (as is the case in Spain, Italy and Greece), their high engagement in part-time work (as is the case in Denmark), by the reduction of the birth rate (as is the case in Portugal, Spain, Italy and Greece) or a combination of all three.

Policy solutions designed to improve women's involvement in the labour market have predominantly assumed this status quo by aiming at providing more means to allow women to reconcile the labour market with family life. By this means and in most cases they in fact contributed to reinforce the idea that reconciliation of work and family life is a female issue, so signalling to firms that for identical individual characteristics it is more risky for them to recruit women. The social effects both on the waste of human resources and on the low levels of natural population increase are very important and represent critical social handicaps.

It is nowadays consensual that increase in employment rates cannot be sustained by reducing birth rates. These two processes cannot be antagonistic. Measures to promote reconciliation between work and family life for both women and men appear to be at the centre of the changes needing to be implemented to dispel this contradiction. The lessons of Denmark and Portugal seem to point in that direction. The high and rising female employment rates of both countries went hand in hand with stabilization, followed by an increase in the gender pay gap linked to high part-time female employment in Denmark, while there was a slight reduction in the pay gap and a huge decrease in the birth rate in Portugal. In both countries no effective solution seems to have been found to reduce the gender pay gap. This could be because the core of the issue, the redefinition of care and reconciliation policies targeting both males and females, has not been fully achieved. Moreover, integration of gender equality as a central issue of social dialogue seems to be far from being fully achieved. Thus, it appears that the welfare state will have to set ambitious targets in this area. Recent orientations of EU policy are pointing in this direction.

Conclusion

Since Portugal joined the EU, the gender pay gap has persisted, being today only slightly lower than it was in 1985. Within the context of small changes in the gap, the contribution of discrimination to its explanation has changed in a significant way: in 2005, discrimination explained 67 per cent of the total gender pay gap, while in 1985 it only accounted for 52 per cent. This happened despite the high participation rate of women in the Portuguese labour market as compared to other European countries and despite the substantial increase in the average years of schooling of Portuguese workers of both sexes.

So the experience of the last twenty years shows that the closing of the gender educational gap had no similar effect on the gender pay gap. Could this be a question of time? Partially it could, as there is a clear tendency to higher investment of female workers in education accompanied by higher tenure of this group. The high activity rate of Portuguese women will tend to increase the potential work experience of women and, in so doing, reduce

the gap in all the components of the average human capital stock of the two groups.

Nevertheless, decomposition of the gender pay gap shows that the problem of closing the gap will not be solved solely through improvement in the productive characteristics of workers. In fact, the main component of the part of the gap that can be explained by worker and job attributes relates to the characteristics of jobs more than to the characteristics of workers. Also, we noted that the main characteristic of jobs in explaining the persistence of the pay gap is the different way that men and women are distributed among the industry sectors.

Will workers tend to be allocated differently to firms through time? In other words, can we predict a future change in the allocation of men and women? Our results do not suggest such an evolution, pointing to a prevailing rigidity in the sectors that male and female workers tend to occupy and neutralizing the effect of the increased gap in education (favouring women) that is observable.

Moreover, it is clear from our results that discrimination remains the major part of the explanation of the pay gap. This seems to point to the fact that, in average terms, women have to do more, namely, in education, to reach identical wages. However, even with this investment, equality in pay is not being reached. Thus two problems require to be solved: better allocation of workers and jobs and prevention of discriminatory practices, either direct or indirect.

An important question then emerges that deserves further analysis: why do more educated women concentrate in the same industries? Is it mainly a question of individual choice or is it mainly because of other dimensions of discrimination that the techniques used in this study do not allow identification of, such as discrimination in recruitment practices? This remains an open question. However, the persistence of discriminatory practices against workers with the same individual characteristics has been proved to exist and persists in the Portuguese labour market.

Compliance with EES requests appears to be one element lying behind the reduction in the gender pay gap visible in the last fifteen years, either directly by emphasizing the need to reduce gender gaps, or indirectly by the recommendations made by the CEC on (i) the importance of improving education and training in Portugal; (ii) the importance of developing a care system (underlining the link between employment participation and the provision of care and so highlighting the issue of reconciliation of work and private life); and (iii) the highlighting of the links that exist among the decisions about participation in the labour market and the reduction in births, thus contributing to a linking of the discussion on labour market issues with demographic trends.

Experience from other EU countries, particularly Denmark, seems to stress two important dimensions: (i) statistical discrimination relating to the prevalent model of care leave seems to play a relevant role in firms' wage practices; and (ii) reconciliation of work and family (or private) life policies needs to be targeted at both men and women to challenge the dominant models of family organization and their potential *boomerang* effects on firms' recruitment and pay practices.

The closing of the wage gap will not be achieved by individual action only. It requires incorporation into the social partners' agenda, which has not

really occurred in Portugal before now. To include this issue in social agreements would highlight the importance of promoting measures aiming at reconciling work and family life. Workers, both men and women, have to discuss the present dominant model of family organization in detail, and the costs and benefits of a different arrangement; employers have to consider the possibility that equal opportunities and family-friendly policies can be a mechanism to promote efficiency of workers as often higher wages do.

Appendix

Table A1

Participation rate in the EU member states in 2005 (%)

Countries	Total	Women	Men	M-W (p.p.)
Sweden	78.7	76.3	80.9	4.6
Denmark	79.8	75.9	83.6	7.7
Finland	74.7	72.8	76.6	3.8
Netherlands	76.9	70.0	83.7	13.7
United Kingdom	75.3	68.8	81.9	13.1
Portugal	73.4	67.9	79.0	11.1
Germany	73.8	66.9	80.6	13.7
Estonia	70.1	66.9	73.6	6.7
Slovenia	70.7	66.1	75.1	9.0
Austria	72.4	65.6	79.3	13.7
Latvia	69.6	65.1	74.4	9.3
Lithuania	68.4	64.9	72.1	7.2
France	69.5	64.1	75.1	11.0
Cyprus	72.4	62.5	82.9	20.4
Czech Republic	70.4	62.4	78.4	16.0
Slovak Republic	68.9	61.5	76.5	15.0
Ireland	70.8	60.8	80.6	19.8
Belgium	66.7	59.5	73.9	14.4
Spain	69.7	58.3	80.9	22.6
Poland	64.4	58.1	70.8	12.7
Luxembourg	66.6	57.0	76.0	19.0
Hungary	61.3	55.1	67.9	12.8
Greece	66.8	54.5	79.2	24.7
Italy	62.5	50.4	74.6	24.2
Malta	58.1	36.9	79.1	42.2
<i>EU25</i>	<i>70.2</i>	<i>62.5</i>	<i>77.8</i>	<i>15.3</i>
<i>EU15</i>	<i>71.0</i>	<i>63.2</i>	<i>78.9</i>	<i>15.7</i>

Notes: (1) Participation rate = Labour force/Population aged 15 to 64; (2) countries are ranked from highest to lowest female participation rate; (3) p.p. refers to percentage points.

Source: European Commission (2006).

Table A2

Participation rates in the EU15 and in Portugal (%)

Year	Total	Women	Men	M-W (p.p.)
EU15				
1975	66.7	46.4	87.6	41.2
1985	66.4	50.9	82.2	31.3
1995	67.2	56.6	77.8	21.2
2005	71.0	63.2	78.9	15.7
Portugal				
1975	68.7	50.7	88.1	37.4
1985	69.5	54.7	85.5	30.8
1995	68.4	59.7	77.3	17.6
2005	73.4	67.9	79.0	11.1

Source: European Commission (2006).

Table A3

Full-time equivalent (FTE) employment rate in the EU, 2005 (%)

Countries	Total	Women	Men	M-W (p.p.)
Finland	65.5	62.3	68.7	6.4
Estonia	63.4	61.2	66.0	4.8
Denmark	68.1	61.1	75.6	14.5
Sweden	66.0	60.8	71.4	10.6
Slovenia	64.1	58.9	69.1	10.2
Portugal	65.9	58.5	73.6	15.1
Latvia	62.3	58.1	66.7	8.6
Lithuania	62.4	58.1	66.9	8.8
Cyprus	66.9	55.0	79.7	24.7
Czech Republic	63.9	54.6	73.3	18.7
United Kingdom	61.9	51.5	73.3	21.8
France	58.5	50.8	66.9	16.1
Austria	60.7	50.0	72.0	22.0
Hungary	56.6	49.9	63.5	13.6
Slovak Republic	56.7	49.6	63.9	14.3
Ireland	62.5	49.0	76.1	27.1
Belgium	56.3	45.5	67.4	21.9
Germany	56.7	45.2	68.5	23.3
Spain	59.2	44.9	73.5	28.6
Poland	51.1	44.5	57.9	13.4
Greece	59.5	44.5	74.8	30.3
Luxembourg	59.2	44.4	73.7	29.3
Netherlands	56.4	41.7	71.7	30.0
Italy	54.4	40.3	69.0	28.7
Malta	51.1	30.1	72.0	41.9

Table A3

(Continued)

Countries	Total	Women	Men	M-W (p.p.)
<i>EU25</i>	<i>58.1</i>	<i>47.6</i>	<i>69.1</i>	<i>21.5</i>
<i>EU15</i>	<i>58.7</i>	<i>47.4</i>	<i>70.4</i>	<i>23.0</i>

Notes: (1) FTE employment rate = Total hours worked divided by the average annual working time (hourly) of full-time employees as a percentage of the population aged 15 to 64;

(2) countries are ranked from highest to lowest female FTE employment rate.

Source: European Commission (2006).

Table A4

Male and female hourly wage rate (in euros) and the gender pay gap in EU25 in 2002

Countries	Males	Females	Gender pay gap (%)
Sweden	15.82	13.40	15
Denmark	21.42	17.13	20
Finland	14.80	12.13	18
Netherlands	15.50	11.84	24
United Kingdom	20.01	13.95	30
Portugal	5.71	4.59	20
Germany	16.91	12.58	26
Estonia	2.43	1.78	27
Slovenia	5.34	4.75	11
Austria	13.26	9.76	26
Latvia	1.69	1.34	21
Lithuania	1.91	1.58	17
France	15.26	12.66	17
Cyprus	10.80	7.76	28
Czech Republic	3.12	2.35	25
Slovak Republic	2.40	1.70	29
Ireland	18.29	13.47	26
Belgium	14.54	12.05	17
Spain	9.09	6.82	25
Poland	3.35	2.88	14
Luxembourg	16.94	13.73	19
Hungary	2.67	2.28	15
Greece	7.97	5.94	25
Italy	11.06	8.97	19
Malta	—	—	—
<i>EU25</i>	<i>13.79</i>	<i>10.40</i>	<i>25</i>
<i>EU15</i>	<i>15.46</i>	<i>11.87</i>	<i>23</i>

Note: The gender pay gap is calculated as: [(average male hourly wage – average female hourly wage)/average male hourly wage].

Source: Plantenga and Remery (2006: 60).

Notes

1. Directive 75/117/EEC, issued on 10 February 1975.
2. Country comparative analysis, especially through time, is particularly difficult on this topic because of problems of the availability and reliability of the data. For general comparative purposes the more commonly used data in the EU are the Structure of Earnings Survey (SES). For a deeper discussion see Plantenga and Remery (2006), Rubery *et al.* (2002) and Plasman *et al.* (2001).
3. For information on the allocation of time by women and men in the EU, see Aliaga (2006). For data on Portugal see Instituto Nacional de Estatística (2000).
4. We use data from the Personnel Records database (*Quadros de Pessoal*), an administrative data set collected annually by the Portuguese Ministry of Employment. Response to the questionnaire is mandatory for all private-sector firms with at least one employee. This data set provides information on workers' attributes such as gender, age, education, occupation, qualification level, years with the firm, hours worked and earnings, and job-related attributes such as type of industry, geographic location and plant size. Information about employees in public administration, the self-employed and military personnel is not included in the data set.
5. The decomposition model specification, the list of the variables used in the estimations of wage equations, the sample means referring to the different years and the regression coefficient estimates of the model used to decompose the gender wage gap are available on request.
6. Data are not available for the year 1990.
7. So, agreeing with most of the argumentation of Rubery *et al.* (2005), we do not follow their radical critical evaluation towards this type of decomposition technique. In fact, we think that their criticism applies to all general indicators. They are oversimplifications of reality but could be important tools for analysis if we are aware of their limitations.
8. For our purposes, we considered industry and occupation at a relatively highly aggregated level. An illustrative discussion on the effects of using higher or lower levels of aggregation of these variables can be found in Bayard *et al.* (1999).
9. Namely, resulting from EU obligations, as for Denmark, which joined the EU in 1973, thirteen years before Portugal did.
10. That they argue to be also visible in Sweden.
11. According to Aliaga (2006: 9), in Denmark in 2001, among the population aged 20 to 74, women dedicated 1 hour and 8 minutes more than men of their daily time to domestic work (including care) while men dedicated daily 1 hour and 1 minute more than women to gainful work and study.

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