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Gender Earnings Differentials in the Greek Labour Market[1]

Abstract

The paper analyses gender differences in hourly earnings in Greece using three Household Budget Surveys (1988, 1994, 1999). During this period the aggregate gender earnings gap remained almost stable, amounting to less than a fifth of male earnings in the public sector and around a quarter of male earnings in the private sector of the economy. In most cases, women have better educational qualifications but men more years of potential experience. Using a number of decomposition techniques, it is shown that in the more competitive private sector of the economy, where wages are more likely to be determined by productivity, around three quarters of the observed gap should be attributed to discrimination. This finding, combined with the substantially higher incidences of unemployment and involuntary labour force non-participation rates of females, implies that despite the legislative progress in promoting equality of opportunity in recent decades, there is still a long way to go before true gender equality is established in the Greek labour market.

Keywords: Discrimination, wage gap, Greece

JEL Numbers: J31, J71

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I. Introduction

In recent decades, male-female earnings differentials have been examined in detailed in many developed and developing countries around the world, including Greece.[2] The existence and persistence of such differentials is usually associated with discrimination against women in the labour market. Discrimination exists when supplied labour of equal quality and quantity is compensated differently. It is an important economic issue since, besides the obvious distributional consequences, it leads to distortions in the operation of the labour market and inefficient allocation of resources. Beyond the economic sphere, discrimination has important social as well as political consequences that call for corrective political action.

The political will of the EU member-states to deal with the issue of discrimination against women was manifested in the founding treaty of the EC (Treaty of Rome). According to the Treaty of Rome and the subsequent Treaties, the EU aims at eliminating inequalities and promoting equality between sexes, achieving equality among sexes when it comes to employment opportunities and at eliminating discrimination against females within and out of the labour market (Pliakos, 2003). Within this framework, the European Commission, that is the body responsible for the implementation of the corresponding articles, has issued a number of regulations and directives towards member-states aiming at fighting gender earnings inequality in the labour market and promoting equal opportunities of employment and occupational advancement. The culmination of this effort was, probably, the inclusion of the objective of "equal opportunities for men and women" as one of the four pillars of the National Action Plans for Employment, that were introduced in the late 1990s and are now regularly carried out in all EU member-states.

Until the mid-1970s earnings discrimination against women in Greece was institutionalised, with separate wage rates negotiated and implemented for males (higher) and females (lower). The abolition of these explicitly discriminatory practices came with the implementation of the Constitution of 1975 that called for generalized equality among individuals and equal pay for equal work. The Constitution was followed by the law on mandatory independent women's insurance policy (Law 1287/1982), the integration of International Labour

[2] See Cholezas (2005, chapter 4) for a detailed survey.

Organisation's (ILO) decisions to the Greek law (Law 1302/1982), the reform of the Greek Family Law (Law 1329/1983), the law fighting sex discrimination (Law 1342/1983), the law that reformed the structure of the tax system in order to make it more equalitarian (Law 1438/1984) and the law on the protection and relief of working parents (Law 1483/1984). The effort was concluded when law 1414/1984 was enacted, which integrated E.U. (then E.E.C.) legislation on gender earnings equality and the elimination of any kind of discrimination in the labour market (Tzannatos, 1987). A number of subsequent pieces of legislation and court decisions in the 1980s and the 1990s strengthened this framework. In fact, the Constitution of 2001 goes as far as stating explicitly that "Positive measures to promote equality between men and women are not considered as discriminatory. The state aims at abolishing inequalities that exist in practice, mainly against women." (Giannakourou and Soumeli, 2002).

II. A partial glimpse in the Greek labour market

Did these measures succeed in narrowing male-female earnings differentials? A partial answer is provided in Table 1, using the evidence of five successive Household Budget Surveys, carried out by the National Statistical Service of Greece, covering the last quarter of the 20th century. The table reports monthly earnings from paid employment for men and women (men aged 16-65; women aged 16-60) in constant 1994 euros. According to the evidence of Table 1, the ratio of female to male monthly earnings declined by fifteen percentage points during the period under examination. However, the entire decline took place in the first sub-period (1974-1988), while in the second sub-period (1988-1999) the changes were quite small.

The figures of Table 1 refer to monthly earnings that are not necessarily the most appropriate for the investigation of the existence of discrimination, since they mix prices (hourly rates), that are clearly beyond the control of individual agents, with quantities (hours worked per month) that can be influenced, at least to some extent, by the individual. Moreover, in this table there is no distinction between private and public sector employees. For a number of reasons we would anticipate the differential to be smaller in the less flexible public sector, where wages are set after negotiations between the government and the powerful public sector unions that, at least in the public discourse, appear to care strongly about issues of gender equality.

Table 1. Inter-temporal changes in monthly earnings differentials

Year	Males (W_m)	Females (W_f)	Ratio of earnings (W_f/W_mx100)
1974	512.3	317.0	61.9%
1982	705.5	507.2	71.9%
1988	583.4	449.8	77.1%
1994	544.0	403.0	74.1%
1999	595.2	454.3	76.3%

Source: Kanellopoulos, Mavromaras and Mitrakos (2003), table 3.13

Table 2 reports mean hourly earnings in constant 1995 euros disaggregated by sector of employment. The samples are drawn from the Household Budget Surveys of 1988, 1994 and 1999.[3] They consist of full-time employees (more than 30 hours per week), working less than 84 hours weekly (i.e. 12 hours daily, seven days a week), aged between 16-64, employed outside the agricultural sector of the economy and not receiving any income from self-employment. Irrespective of the survey year, the gap is wider in the private sector. Between 1988 and 1994 the gap widened and then narrowed marginally in the public sector, while in the private sector it remained largely constant.[4] Moreover, it can be noted that in all years employees in the public sector are better compensated, perhaps due to their higher qualifications (Kioulafas et al, 1991, Kanellopoulos, 1997, Cholezas, 2005).

The differences across sectors and gender reported in Table 2 may be attributed to differences in the human capital characteristics of males and females employed in the

[3] In the Household Budget Survey of 1974 no information on sector of employment (public/private) was collected, whereas the corresponding survey of 1982 did not contain information on hours worked. Therefore, we restrict our analysis to the three most recent Household Budget Surveys.

[4] Since it the following analysis we decompose earnings differentials around the geometric mean, the estimates reported in Table 2 refer to geometric means. The inter-temporal trend of the gender earnings gap in the public sector does not change if arithmetic means are used instead of geometric means. However, if such means are used in the private sector, the gap would appear to decline by four percentage points in the first sub-period and remain unchanged in the second sub-period. Further, all earnings estimates would appear to be a little higher.

corresponding sectors. This should apply at least in the more competitive private sector, where employees' earnings are supposed to be determined by their productivity. According to Human Capital Theory,[5] productivity is determined by the stock of human capital embodied in a person; namely the total stock of one's knowledge, skills, competences and other attributes that are relevant to economic activity (OECD, 1998). Hence, the higher earnings of male workers should be attributed to their superior endowments in human capital; unless, of course, they are the result of discrimination.

Table 2. Hourly earnings disaggregated by gender and sector of employment)*

Year	Public Sector		Ratio of earnings (W_f/W_m)	Private Sector		Ratio of earnings (W_f/W_m)
	Males (W_m)	Females (W_f)		Males (W_m)	Females (W_f)	
1988	4.16	3.60	86.5%	3.27	2.45	75.0%
1994	4.23	3.48	82.1%	2.82	2.13	75.4%
1999	4.89	4.05	82.9%	3.01	2.24	74.5%

* Geometric means in constant 1995 euros
Source: Cholezas (2005)

Table 3 reports descriptive statistics for the two variables most widely associated with human capital: years of education and years of potential experience.[6] The evidence does not seem to provide clear support to the postulates of Human Capital Theory, since in both sectors female employees appear to be better educated (at least as far as average years of education are concerned). On the other hand, men have more years of potential experience (between 2.5 and 5.5 depending on the year and

[5] The studies by Mincer (1958, 1974), Schultz (1961), Becker (1964) and Ben-Porath (1967) are considered pioneering in Human Capital Theory, although its seeds can be found much earlier in the work of Adam Smith's *Wealth of Nations*.

[6] Due to lack of data for the employees' actual years of working experience, following the literature, we use years of potential experience, which is defined as age minus years of education minus starting age of compulsory education (minus years of national service for male workers). Potential experience may overstate or, less often, understate actual experience and its use as a proxy for actual experience may have implications for the results of the paper that are discussed below.

the sector). Yet, it is highly unlikely that the few years of males' higher potential experience can be totally responsible for their substantially higher earnings. Further, it should be noted that in both sectors and for both sexes the average educational qualifications improved over time, whereas public sector employees appear to be better educated, probably as a result of strict entry rules requiring formal educational qualifications in particular public sector jobs.

Table 3. Human capital characteristics of private and public sector employees

Year	Average years of education				Average years of potential experience			
	Public sector		Private sector		Public sector		Private sector	
	Males	Females	Males	Females	Males	Females	Males	Females
1988	11.1	12.0	9.2	9.0	22.9	17.4	20.6	18.1
1994	11.6	12.3	9.5	10.1	23.5	19.7	21.1	18.0
1999	11.8	12.8	10.6	11.1	25.1	21.5	21.1	18.0

In view of the fact that the human capital characteristics of male and female employees do not seem to be that different, we turn to the examination of their rewards in the labour market, using the standard Mincerian earnings function. This correlates the natural logarithm of earnings with years of education, years of potential (or actual) experience and their square. This semi-logarithmic earnings function is widely used to calculate returns to an additional year of education or potential experience. A variant of this function uses dummies for levels of education, thus making it possible to test for non-linearities in returns to education and, further, allowing the calculation of annualised (marginal) rates of return to each educational level. Many studies add numerous other variables considered important in the earnings determination process such as marital status, seniority, tenure, sector of economic activity, place of residence etc.[7]

[7] The Mincerian equation is probably one of the most widely used functions in empirical economics. For compilations of estimates for various countries and time periods see Psacharopoulos (1973, 1985, 1994) and Psacharopoulos and Patrinos (2004). For a survey of studies applying the Mincerian equation to Greek data see Cholezas and Tsakloglou (1999).

Table 4. Annual rates of return to education (%)

Year	All				Upper Secondary* (marginal per year)				Tertiary** (marginal per year)			
	Public sector		Private sector		Public sector		Private sector		Public sector		Private sector	
	M	F	M	F	M	F	M	F	M	F	M	F
1988	4.4	5.7	5.2	5.0	5.0	14.2	2.9	9.4	6.4	6.9	9.5	9.8
1994	5.6	5.3	6.2	6.6	3.8/3.3	*1.9/0.8*	5.6/7.5	9.0/9.6	5.9/6.4	3.1/6.6	5.5/8.8	4.6/3.6
1999	5.7	5.8	6.2	7.4	5.2/6.3	*1.8/-1.2*	6.1/5.3	3.8/8.3	4.9/5.8	5.4/5.8	7.1/9.5	12.4/9.5

M: Males. F: Females

* The slash separates returns to technical or vocational and general upper secondary education. In the 1988 Household Budget Survey there is no distinction between the two types of upper secondary education.

** The slash separates returns to Technological Institutes (TEI) and Universities (AEI). In the 1988 Household Budget Survey there is no distinction between the two types of tertiary education.

Figures in italics denote estimates derived from statistically not significant coefficients

Table 4 reports annual rates of return to education derived from the Mincerian equation using years (first set of estimates) and levels (second and third sets of estimates), for upper secondary and tertiary education, separately for males and females for each of the three survey years under consideration. In most cases, they are higher in the private rather than the public sector of the economy and for males rather than females – especially in the private sector. Therefore, neither this factor seems, at first sight, to be a good candidate for explaining the observed lower hourly earnings of female workers.

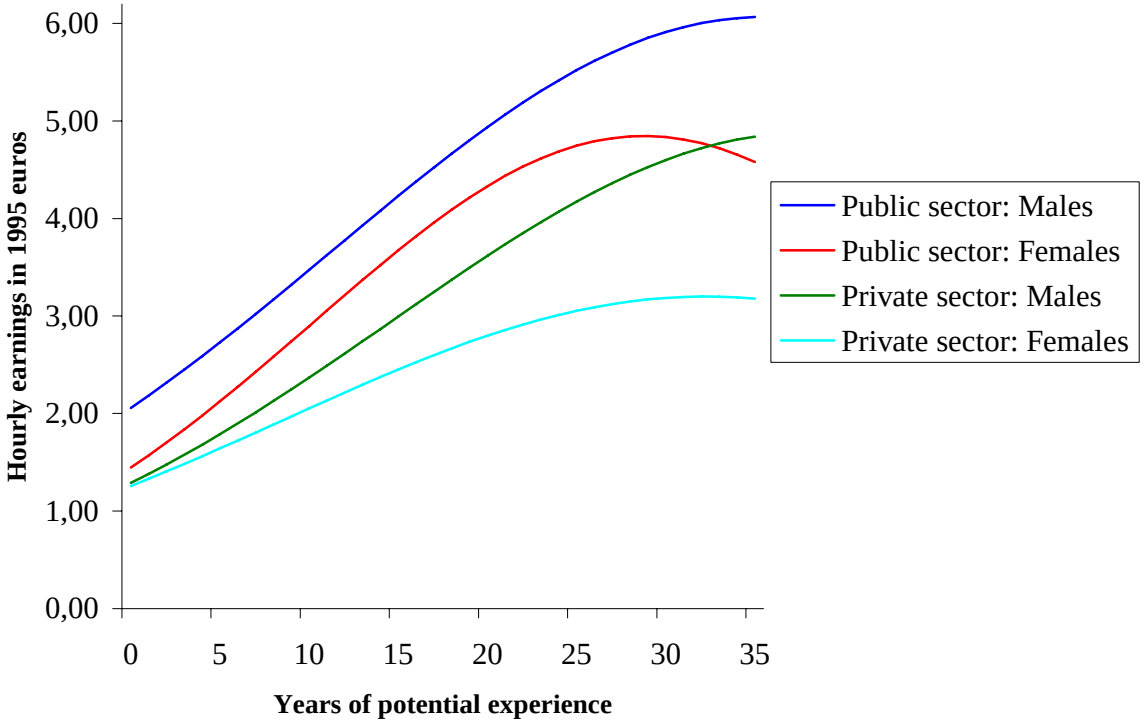
Using the Mincerian equation we can also derive experience-earnings profiles for particular groups of workers and, thus, get an idea of the rewards that the labour market attaches to the experience of these groups, as well as their starting points. Graph 1 presents (potential) experience-earnings profiles for both sexes and sectors of employment in 1999 using a simple Mincerian equation, for persons with twelve years of education[8]. The graph reveals some startling differences across sexes and

For a critique of the Mincerian equation and its assumptions see Heckman, Lochner and Todd (2005).

[8] Results are similar in 1988 and 1994 or for other reference educational groups.

sectors. As anticipated from Table 2, on average, at almost any given level of experience, public sector employees receive higher earnings than private sector workers, irrespective of their gender. Further, the evolution of earnings is faster in the private sector (steeper profiles), which seems to be consistent with the assumption that this sector is more competitive and, hence, values more the accumulation of working experience. However, in both sectors the starting salaries are higher for males (marginally so in the case of the private sector) and the experience-earnings profiles of males and females are diverging (especially in the private sector). Therefore, in the sector where earnings are likely to be determined by productivity, men are better paid and their earnings evolve faster. This is likely to be a good starting point for the decomposition of the gender earnings gap and the testing for discrimination against women in the Greek labour market.

Graph 1. Experience-earnings profiles (1999)



A number of studies have shown that gender discrimination is responsible for lower women's earnings in Greece since the 1960s. After controlling for sectoral and

occupational factors as well as human capital characteristics, Kanellopoulos (1982) reports that in the mid-1960s, when women's hourly earnings were 37.3% lower than those of male workers, discrimination accounted for 60% of the observed gender earnings gap. Psacharopoulos (1983) shows that in the mid-1970s women's annual earnings were 35% lower than men's and 89% of the observed gap could be attributed to discrimination. According to Patrinos and Lambropoulos (1993), who use selective samples that are not representative of the workers employed in the Greek labour market in 1981 and 1985 where the average monthly earnings of women are only slightly lower than those of men (6% and 3%, respectively), the entire earnings gap is attributed to discrimination. Female workers included in the samples of Kanellopoulos and Mavromaras (2002) earn 21.5% and 25.1% less compared to male workers in 1988 and 1994, respectively. According to their estimates, discrimination was the main factor behind the observed differences, even though the share of the gap attributed to discrimination declined substantially between 1988 and 1994 (from 72% to 54%). Using a particularly rich data set, Karamesini and Ioakimoglou (2003) show that in the mid-1990s the gender earnings gap was slightly higher in industry, 28.5%, than in services, 25%. According to the authors, the gap was primarily due to the occupational and sectoral segregation of women. After controlling for sector, occupation and tenure, they report that discrimination was found to account for 27% of the observed gap in industry and for 24% in services. The most recent study is that of Papapetrou (2004) who uses data from the late 1990s and decomposes the earnings differential along the earnings distribution, by applying quantile regression techniques. The average earnings gap in her reference year (1998) was 28.8% – but, naturally, varied along the earnings distribution – and her results show that discrimination accounts for 61% close to the lower end and 66% close to the top end of the distribution.

III. Gender earnings gap decomposition

In this section we combine the effects of the factors mentioned in the previous section and attempt to provide an answer to the question "Why are women paid less than men in Greek labour market?". In order to do that, we employ three methods of decomposition. All of them rely on estimating semi-logarithmic earnings functions for each gender separately and then subtracting by parts. This way, we are able to

identify the proportion of the average earnings difference that can be attributed to particular factors. Since we are estimating earnings function based on Human Capital Theory and, therefore, assume a competitive labour market, we limit our analysis to those employed in the private sector of the economy (where, incidentally, the observed differences across gender lines appear to be larger). We start by estimating semi-logarithmic earnings functions for each gender separately. The dependent variable is hourly earnings in euros expressed in constant 1995 prices. Since, as shown earlier, returns to education appear to be highly non-linear, the explanatory variables include four dummies for levels of education, years of potential experience and its square, as well as a dummy for marriage. Given that the concentration of women in particular sectors and occupations may well be part of the discrimination process, we decided to avoid including sectoral and occupational dummies in the earnings function.[9] Naturally, since we employ a semi-logarithmic function, the decompositions are performed around the geometric mean of the distribution.

The first method of decomposition (Blinder, 1973, and Oaxaca, 1973) is the simplest one. By subtracting the earnings functions by parts, we are able to decompose the earnings gap into two distinct components. The first component, usually labelled "differences in characteristics", is the part of the gap that can be attributed to the differences in mean human capital characteristics of the two groups. The second component, usually labelled "discrimination", is the part of the gap that can be attributed to differences in the estimated parameters of the earnings functions of men and women (since there is no obvious reason of why identical characteristics should be valued differently by the labour market on account of gender).

The second method of decomposition (Neuman and Oaxaca, 2004) is a little more sophisticated. The fact that some people have chosen to work as employees in the private (public) sector could be a random incident. However, problems arise when private (public) sector employees have some common traits that are responsible for their particular choice. In this case, they no longer comprise a random sample (i.e. they are self-selected). In order to account for the effect this has on the earnings function, we apply the two stage selectivity correction method (Heckman, 1979).

[9] Inclusion of such variables would make the proportion of the aggregate gap attributed to discrimination appear "artificially" low.

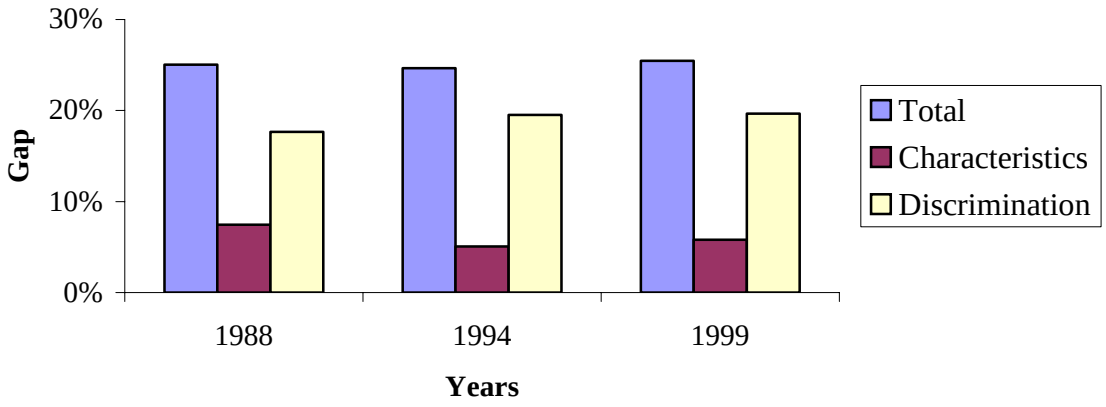
According to this method, we first estimate for each gender separately a selection equation using a probit model of the probability of employment in the private sector. The explanatory variables are years of education, four dummy variables for age, dummies for residence in Athens and marriage and household non-employment income per capita. From this equation we, then, calculate the Inverse Mill's Ratio (IMR) for each individual, that is used as an independent variable in the earnings function. Finally, we re-estimate earnings functions separately for men and women and subtract by parts to get the new decomposition of the gender earnings gap that includes a third component, corresponding to selectivity.

The third method of decomposition (Yun, 2005) goes a step further and attributes the aggregate gap to particular variables. Using standard techniques, we can attribute parts of the aggregate gap to particular variables, so long as these variables are continuous. However, in general, in the case of dummy variables this is not possible, since the share of the gap attributed to a dummy variable is affected by the reference group chosen. Yun (2005) proposes an averaging approach to overcome this impediment that is usually referred to as "the identification problem". Thus, the earnings function is transformed using deviations from the means of the estimated parameters for each group of dummies. Then, the earnings gap can be decomposed using standard techniques to differences in every average characteristic, each discriminatory factor (deviations) and, if we wish so, selectivity. Although Yun's averaging approach can be applied to both decomposition methods described above – Blinder (1973) and Oaxaca (1973) and Neuman and Oaxaca (2004) – since selectivity turns out to be a problem, we apply it only on the latter.

The results of the decompositions are summarized in Graph 2, 3 and 4. The overall gap is calculated as a proportion of men's mean hourly geometric earnings. As noted in Table 2, the earnings advantage of males remained almost constant throughout the period under examination (25.0% in 1988, 24.6% in 1994 and 25.5% in 1999). Graph 2 reports the results of the Blinder (1973) and Oaxaca (1973) decomposition. In all survey years between 70% and 80% of the overall gap is attributed to discrimination. Although females have more years of education, the fact that males have higher potential experience makes them better endowed in terms of overall human capital characteristics, given the rewards awarded to these characteristics in the labour market. As a result, Graph 2 suggests that even if there

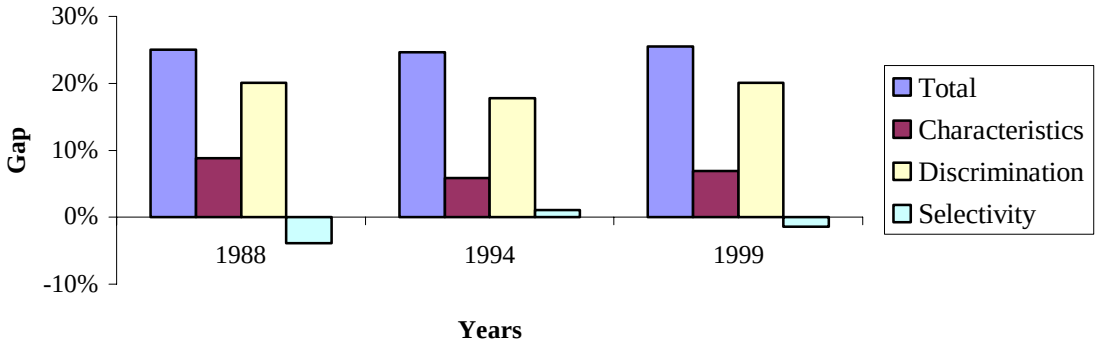
was no discrimination, female earnings would still be lower than male earnings by 7.5%, 5.1% and 5.8% in 1988, 1994 and 1999, respectively.

Graph 2. Blinder-Oaxaca earnings decomposition



The results reported in Graph 3 take into account the issue of selectivity in the private/public sector jobs, using the Neuman and Oaxaca (2004) method of decomposition. Although statistically significant, the effect of selectivity is always quite small. In two of the three years under examination (1988 and 1999) it tends to reduce the gender gap. For example, without selectivity in 1988 the earning gap as a proportion of the average male wage would be 3.9% higher; the corresponding figures for 1994 and 1999 are -1.0% and 1.4%. Once again, the bulk of the observed earnings differences – between 72% and 81% – are attributed to discrimination, while differences in human capital characteristics also tend to increase the earnings gap.

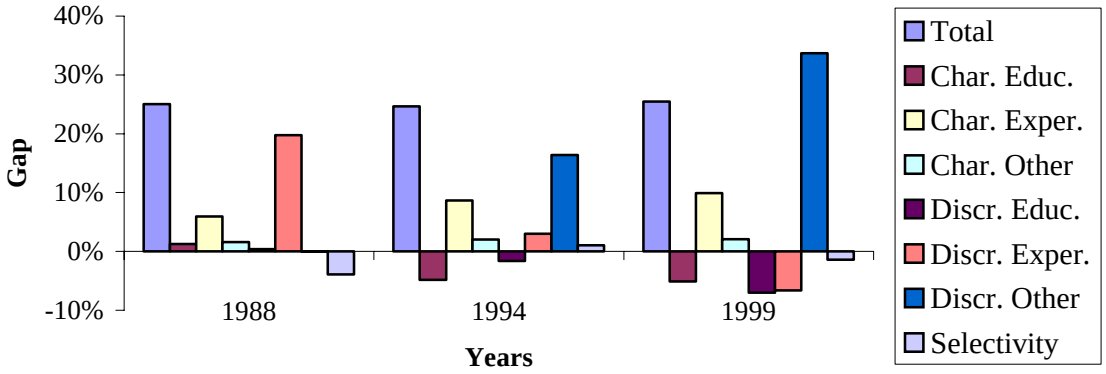
Graph 3. Neuman&Oaxaca earnings decomposition



Finally, Graph 4 presents the results of Yun (2005) decomposition, accounting for selectivity. Naturally, the aggregate effects of differences in characteristics, discrimination and selectivity are identical to those reported in Graph 3. Due to the

fact that, as the evidence of Table 3 shows, women's educational characteristics are better than those of men in the two most recent surveys, in the corresponding years differences in these characteristics tend to reduce the gap by an amount equal to around 5.0% of the average male earnings. On the contrary, the effect of male workers' longer potential experience boosts the gap by an amount equal to an increasing proportion of male earnings over time (5.9%, 8.6% and 9.9% of mean male workers' earnings). The fact that more males than females in the samples are married leads to a marginal increase in the gap, equal to 1%-2% of male earnings, in all years. The decomposition of the discrimination component produces some rather unexpected results. In all surveys apart from the first, female educational qualifications appear to be better rewarded than male educational qualifications, thus leading to a reduction in the observed gap. Even though male potential experience appears to be better rewarded in the second and, especially, the first survey, the opposite is observed in the third survey. In the two most recent surveys, the single most important factor for the determination of the gender earnings gap appears to be "Other discrimination". This, in turn, is attributed to two factors; differences in the constant terms of the two equations (starting salaries for unqualified workers) and rewards to "marriage" which can partly be attributed to the fact that until recently family benefits incorporated in wages and salaries were paid to one of the two spouses only – usually the male.

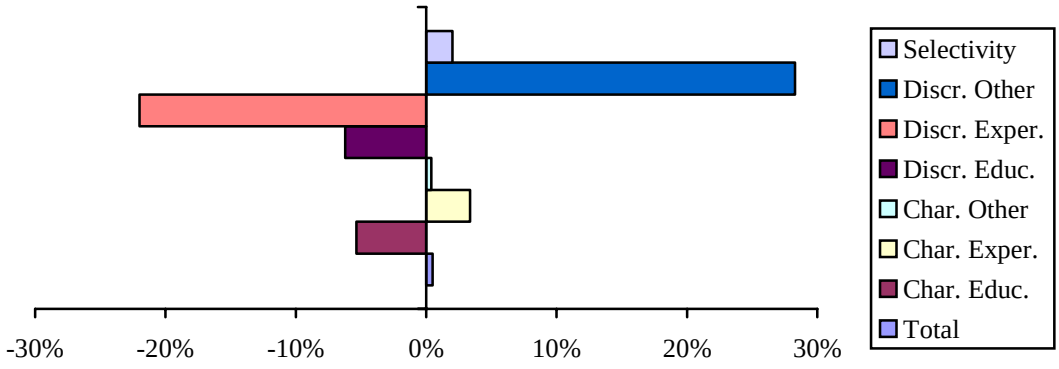
Graph 4. Yun earnings decomposition



Although the aggregate gender earnings gap hardly changed in the 1990s – it rose by 0.5% of average male earnings – it may nevertheless be interesting to examine the factors behind this change. Graph 5 depicts the results of this trend decomposition

for the period 1988-1999. It appears that the main factor that contributed to the increase in the gap was "Other discrimination", while the most important changes that contributed to a reduction in the gap were those in discrimination related to potential experience. Ceteris paribus, changes in the educational qualifications of females vis-à-vis those of males, as well as in their relative rewards in the labour market led to a decline in the gap, whereas changes in the average potential experience of male in comparison to female workers as well as changes in the effects of selectivity led to a modest increase in the aggregate earnings gap.

Graph 5. Trend decomposition of the earnings gap (1988-1999)



IV. Conclusions

The issue of gender earnings differentials has attracted a lot of attention in the Greek public discourse in recent decades. Despite several legislative initiatives and even though women's labour force participation has risen steadily since the early 1980s,[10] female workers' earnings are still lagging seriously behind the earnings of male employees. Our evidence shows that during the period 1988-1999 the gap in hourly earnings was narrower in the public sector of the economy and wider in the private sector, where it remained constant at around a quarter of average male earnings. Even though on average female workers have slightly more years of education than male workers, the latter are more experienced and – given the rewards to human

[10] According to OECD's "Labour Force Statistics" database, between 1983 and 2004 female labour force participation among those aged 15-64 rose from 39.2% to 54.1%, while the corresponding figure for men declined marginally from 82.1% to 79.1%.

capital characteristics in the labour market – they appear have better overall human capital endowments that contribute to the observed gap. Nevertheless, our decomposition results show that the main factor behind the observed gap is discrimination. Irrespective of the method of decomposition used – i.e. controlling or not for selectivity in participation in the private rather than the public sector of the economy – discrimination is found to account for around three quarters of the observed gap.

For a number of reasons, our results may overstate the "true" discrimination experienced by women in the private sector of the Greek labour market. First, due to lack of data, we used potential rather than actual working experience. However, taking into account that unemployment spells as well as spells out of the labour market related to family reasons – mostly child bearing – are more common among female workers,[11] it is likely that the difference in the actual experience of males and females is larger than that of potential experience. Therefore, the "true" difference of human capital endowments across genders is likely to be larger than that used in our analysis and part of the earnings gap that we attributed to discrimination should have been attributed to differences in labour market characteristics.[12] Second, there is evidence that, at least in the years under examination, female labour force participants who were tertiary education graduates, were concentrated in less rewarding disciplines, such as disciplines of Humanities and Social Sciences, while males were over-represented in the more rewarding disciplines of Science, Engineering and Medicine (Ministry of Education, 1995. Gouvias, 1998). Further, it is not unlikely that proportionally more males than females were holding highly remunerated post-graduate degrees. Due to lack of detailed information in the Household Budget Surveys, we adopted an "averaging" approach assigning to each tertiary education graduate the same years of education and, further, ignored

[11] No detailed study of male and female spells out of the labour market can be found in Greece. However, the corresponding evidence for other countries is quite compelling – see, for example, Stewart and Greenhalgh (1984) who report that 2/3 of women in the UK in the late 1970s had at least one interruption during their working life and that the more interruptions they had the less likely it was for their career to advance, while only half of those who returned to the labour force took back their old jobs.

[12] See Regan and Oaxaca (2006) for the effect of using potential instead of actual experience in the earnings function and the implications for the earnings decomposition. In their sample discrimination declines almost by half when potential is replaced by actual experience in the estimated equations.

differences in disciplines. It is likely that if such differences were controlled for, the earnings gap could have shrank further. Finally, it is not implausible that part of the gender earnings gap could be attributed to the more hazardous working conditions of a higher proportion of males than females in our sample; something that can hardly be described as "discrimination".

Despite the above qualifications, taking into account the large size of the observed earnings gap, we speculate that even if detailed information was available and we were able to control for the aforementioned factors, the gender earnings gap would have still remained an important issue of concern. Moreover, combining the earnings gap with the fact that, firstly, female unemployment rates are substantially higher than male unemployment rates[13] and, secondly, a very substantial proportion of females report that they would have liked to participate in the labour market or work more hours but they are prevented from doing so due the need to look after children or other persons,[14] can easily lead to the conclusion that despite the legislative progress in promoting equality of opportunity in the Greek labour market, we still have a long way to go before we can speak of true gender equality in this field.

[13] According to OECD's "Labour Force Statistics" database, in 2004 the unemployment rate was more than twice as high for females than for males (16.0% versus 6.5%). In fact, Tsakloglou and Cholezas (2001) report that the difference in the rates of return to education in favour of females reported in Table 2 decline considerably when they are weighted by the probability of employment.

[14] According to the ECHP, in 2000 the corresponding percentages were 13.7% for females and 1.0% for males aged 15-64.

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Appendix. Earnings differentials and discrimination in the EU

How does Greece compare with other EU member-states regarding male-female earnings differentials and levels of earnings discrimination against women? An answer to this question can be provided using the data of the European Community Household Panel (ECHP). The ECHP is an ambitious effort at collecting information on the living standards of the households of the EU member-states using common definitions, information collection methods and editing procedures (Eurostat, 1996; Peracchi, 2002). It contains detailed information on incomes, socio-economic characteristics, housing amenities, consumer durables, social relations, employment conditions, health status, subjective evaluation of well-being, etc.

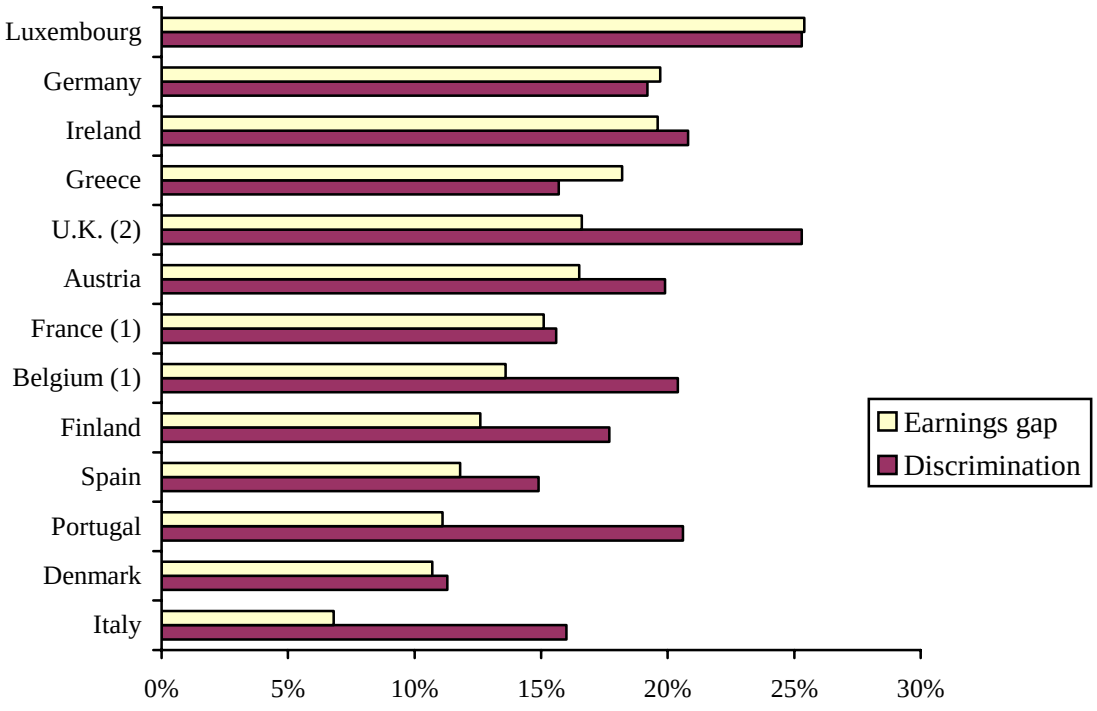
In this Appendix we aim to compare Greece with twelve other EU countries, using the information of the last wave of the ECHP (2001). The income information refers to 2000, but it should be noted that the earnings information of the ECHP for Greece is not strictly comparable with the income information of the Household Budget Surveys used in the main body of the paper. Although the income information in both datasets refers to earnings net of taxes and social insurance contributions, the main difference between them is related to the fact that the earnings information in the Household Budget Surveys is monthly whereas in the ECHP it is annual (with information on months worked, thus enabling the calculation of monthly earnings). As a result, the ECHP earnings are likely to be more "smooth" and, further, are probably subject to higher recall errors than the earnings estimates of the Household Budget Surveys. In addition, the ECHP contains information on three educational levels only (lower secondary or less, upper secondary and tertiary).

The corresponding estimates are reported in Graph A1. Due to fact that there were doubts regarding the reliability of the sectoral information of some countries, no distinction is made between private and public sector employees. For each country there are two bars. The first bar expresses the (geometric) mean hourly earnings gap as a proportion the (geometric) mean male earnings. The largest gap is recorded in Luxembourg and the smallest in Italy. Greece's gap is the fourth largest among 13 countries.

The second bar expresses discrimination as defined – with all the qualification - earlier, as a proportion of the mean geometric male earnings. In ten out of thirteen countries, the second bar is longer than the first. This implies that the human capital

endowments of female employees in these countries are better than those of male employees and, thus, they contribute to a decline in the earnings gap. In other words, if females and males had equal human capital attributes, the observed earnings gap would be larger than that observed in the labour market. Greece is one of the three countries where discrimination is smaller than the earning gap (the other two are Germany and, marginally, Luxembourg). If we turn our attention to the size of discrimination as a proportion of average male earnings, Greece does not seem to fare that badly, since it is ranked ninth among thirteen countries.

Graph A1. Earnings gap across Europe (2000)



Source: Cholezas (2005),
Notes: (1) 1998, (2) 1997.