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Public-Private Wage Differentials in Greece

by

C. KANELLOPOULOS

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Costas Kanellopoulos
Research Fellow

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CENTRE OF PLANNING AND ECONOMIC RESEARCH

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C. KANELLOPOULOS

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ABSTRACT

Separate earnings functions for public and private sector by gender are estimated for Greece with appropriate correction for selectivity bias, using Family Expenditure Survey data for 1988. Then a comparison of the average pay, that would be received by public and private sector employees if they were paid according to the same pay structure, is undertaken. The empirical evidence suggests that, while the observed pay advantage of male public sector employees is rather explained by higher qualifications, in the case of women qualification differences explain the observed public-private wage differential partly.

1. INTRODUCTION

Over the past two decades the public sector in Greece has experienced a rapid increase in employment.[1] This among others reflects a movement towards an active public policy, stemming from the widespread notion that the state should intervene in the country's economic life, while a western type welfare state should be established. Examples of these movements are the takeover by the state of some relatively large firms in the services and industrial sector, the expansion of free education at all levels starting from pre-school children up to universities, free hospitalization and medicines, the loosening of pension requirements and the expansion of unemployment insurance.

At the same period, especially during the 1980s, repeated cycles of fiscal expansion, not accompanied by equivalent tax growth, led to two digit-public sector deficits, to an explosive growth in its debt and to unsustainable external deficits. Greece, even though being among the poor southern EEC countries, displays a public expenditure share in GDP around the EEC average. Moreover, its tax burden is remarkably lower than the average (Oxley and Martin, 1991). In 1990s Greek governments designed a policy for drastic fiscal consolidation and structural reform endeavouring at reducing public deficits and restoring macroeconomic stability. A discussion has been under way regarding the means to tackle these problems and the traditional measures like tax cuts, privatization of public entities and reduction of public employment have been on the table. However, one non analyzed alternative is the role of the government as the employer of a remarkable percentage of the labour force, in the sense that through its wage policy it might influence public finance, without necessarily worsening public services.

Greece is a European country for which evidence on the comparison between public and private sector pay is rather scanty.[2] Yet this comparison can be useful in a number of ways, for example to evaluate the public sector incomes and recruitment policy, to explain private behaviour, or to answer policy questions regarding public sector deficit management.

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[1]. Between 1977 and 1991 the number of employees of the central government, local authorities and other budgetary organizations increased by 27.8 per cent. In 1990 these employees represented 15 per cent of the total employment, while for the whole public sector this percentage amounts to 21.1.

[2]. Exceptions are the papers by Lambropoulos and Psacharopoulos (1992) and Kioulafas et al. (1991), where, using the same data set, separate Mincerian earnings functions for public and private sector are reported for 1975 and 1985.

This paper considers public and private sector pay determination and compares them using individual data. More specifically it examines whether in broadly defined jobs public-private sector wage earners get comparable pay when certain other factors are held constant. This involves the estimation of separate wage functions for the public and private sectors with appropriate correction for selectivity bias and then the comparison of the average pay that would be received by public and private sector workers if they were paid according to the same pay structure. The theoretical background for wage determination is the human capital theory, which predicts that individual pay differentials are the outcome of labour productivity differences due to the human capital they posses (Becker, 1964; Mincer, 1974).

Section 2 presents the method adopted to decompose the gross public private sector pay differential into that part due to qualification differences and that due to unobserved factors taking into account sample selection bias. Section 3 presents the data used and the resulting estimates, while Section 4 summarizes the conclusions.

2. THE STATISTICAL MODEL

As the main purpose of the paper is the public-private pay differential it seems appropriate to allow all coefficients of individual characteristics to vary between public and private sector. Thus we assume that there are two labour markets, public (g) and private (p). The wage a worker faces in each labour market is given by

$$\ln W^g_i = X^g_i \beta^g + e^g_i \qquad [1]$$

$$\ln W^p_i = X^p_i \beta^p + e^p_i \qquad [2]$$

where W stands for wages, X is a matrix of individual productive characteristics and other exogenous socioeconomic variables, β a vector of unknown parameters and e the error terms displaying the usual properties. Wages, however, are observed only for those within each sector, thus the expected value of observed wages in the public sector is given by

$$E[W^g_i / X^g_i, \text{ in public sector}] = X^g_i \beta^g + E[e^g_i/\text{in public}]$$

A similar form holds for those working in the private sector. Thus the sector choice mechanism should be incorporated into the wage equations. As such equation [3] is postulated.[1]

$$P^*_i = Z_i\alpha + u_i \qquad [3]$$

where P^* is an unobserved variable reflecting individual's utility working in the public sector, Z is a matrix of variables determining the worker's choice between the sectors, α is an unknown parameters vector and u_i is a random error term. The observable counterpart of P^* is a binary variable P which is equal to 1 if P^* is positive and thus the public sector is chosen and 0 otherwise.

The well known correction for sample selection, as proposed by Heckman (1979) or Lee (1979), is adopted to estimate this model. It is done by performing a probit estimation of [3], using the estimated probit coefficients to calculate the public and private sector

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[1]. For similar approach to this issue see Gyourko and Tracy (1988), Belman and Heywood (1989) for USA, Asplund (1993) for Finland, and, using the traditional OLS approach, Smith (1977), Mouton (1990).

selectivity variable, i.e. the inverse Mill's ratio $\lambda_i = \phi(Z_i\alpha)/[1-\Phi(Z_i\alpha)]$ and $\lambda_i = \phi(-Z_i\alpha)/[1-\Phi\ (Z_i\alpha)]$ respectively (where Φ is the cumulative distribution of a standard normal distribution and ϕ its density function) and including them in [1] and [2] respectively as independent variable. Thus the wage equations become

$$\ln W^g_i = X_i \beta^g + \rho\sigma\lambda i + v^g_i \qquad [1a]$$

$$\ln W^p_i = X_i \beta^p + \rho\sigma\lambda i + v^p_i \qquad [2a]$$

where ρ is the covariance between the errors in the probit and the wage equations, σ the standard error of the wage equation and v the error term.

Having estimated the wage determination in both sectors the next step is to decompose the observed pay differential into a component representing recognised qualification differences of public and private sector workers, the unexplained part of the wage differential and that due to selectivity bias. The most usual technique used, proposed by Oaxaca (1973), is to compare the average pay which would be received by public and private sector workers if they were paid according to the same pay structure. Given that

$\ln \hat{W}^g = \bar{X}^g \hat{\beta}^g + \hat{c}_g\bar{\lambda}_g$ (where $\hat{c}_g = \hat{\rho}_g\hat{\sigma}_g$) equation [4] holds

$\ln \hat{W}^g - \ln \hat{W}^p = (\bar{X}^g - \bar{X}^p)\hat{\beta}^p + (\hat{\beta}^g - \hat{\beta}^p)\bar{X}^g + (\hat{c}_g\bar{\lambda}_g - \hat{c}_p\bar{\lambda}_p)$ or

$$\ln \hat{W}^g - \ln \hat{W}^p = (\bar{X}^g - \bar{X}^p)\hat{\beta}^g + (\hat{\beta}^g - \hat{\beta}^p)\bar{X}^p + (\hat{c}_g\bar{\lambda}_g - \hat{c}_p\bar{\lambda}_p) \qquad [4]$$

where $\bar{X}$ denotes the mean of corresponding explanatory variables. The fist term of the right hand side is the difference in explanatory variables representing compensating pay differentials, the second term is the unexplained pay difference, while the last term is the effect of potential selectivity bias.

To estimate this model it is critical which factors should be considered as determinants of sector choice and pay determination, i.e. which variables should be included in Z and X respectively. It is clear that personal and other characteristics should be present in both matrixes. However, as the sector choice equation resembles a 'labour supply' function additional factors should be included which would serve as identifiers in the estimation of the model. As such the following have been considered. Individual unearned income i.e. the rental and interest incomes (rent, interest rates, share holding and imputed rent) measured in thousand drachmas. Two cohort dummy variables for the 30-39 and 40-49 age groups,

intending to capture the public sector employment expansion in the 1980s and 1970s respectively. A dummy variable showing whether the wage earner lives in an urban area[1] and a dummy variable indicating whether or not the household stays in its owned house, which seems to capture the difference in assets between wage earners. Finally, the household size is included in the sector choice equation. The other explanatory variables that are common to all equations are as follows.

Experience is computed as age minus the number of school years minus the pre school life span. It is included in linear and quadratic term to capture the concavity of the age earnings profile (Mincer, 1974). To examine the differential effect of education, six levels of schooling are included starting from those who have not completed the elementary education to those with a university degree. These levels are represented by five dummy variables, where the excluded category is those without any educational qualification. To account for family status differences a dummy variable indicating whether the individual worker is married or otherwise, as well as whether he/she has children under the age of 6 and 13 are included. Seven dummy variables indicating the occupation and eight the industry of the individual wage earner (at one digit classification) are included to account for differences in these distributions between the public and private sector.

[1]. As public sector generally follows uniform nominal wages countrywide and does not allow any regional adjustment, this variable was not included in the wage equations.

3. DATA AND EMPIRICAL RESULTS

The data used in this paper comes from the 1988 countrywide family expenditure survey of Greece conducted by the National Statistical Service between November 1987 and October 1988. In the analysis wage earners aged between 21 (the minimum required age to join the public sector) and 64 (the normal retirement age) are included. Furthermore the analysis is confined only to those who have reported a wage at least from their main job. The earnings variable is monthly earnings (drachmas per month) and includes both take home cash (from the main, secondary and overtime job as well) and in- kind payments. Since the households were interviewed at different months throughout November 1987-October 1988, during which the annual rate of inflation was about 17 per cent, the earnings are deflated by the monthly consumer price index. Monthly earnings seems to be an appropriate measure of the transaction of a well defined quantity of labour, as these are usually the outcome of collective bargaining, while part time jobs are rare in Greece and at the time of the survey it was illegal to employ someone on a hourly basis. Even if the working hours were less than the normal, the whole social security contribution was paid.

Table 1 provides the mean values for the variables used in the analysis by sector and sex. The public sector is broadly defined and includes central government, local authorities, public utilities and enterprises. Public sector male employees earn on average about 19 per cent more than private sector employees.[1] In the case of women this percentage amounts to 42 per cent.[2] It is also evident from the same table that public sector employees for both sexes are on the average more educated and their family variables take higher values than those in the private sector. These differences by sex indicate that separate estimations for men and women is appropriate.

Table 2 presents estimates of the sector choice probit model and the earnings equations in the public and private sectors for men. The marginal effects of each variable on the probability of joining public sector calculated at the mean values of the variables are displayed in the second column of this table. The results indicate that the educational level is a significant determinant of joining the public sector. The higher the educational level the higher the probability of being a public sector employee. Years of experience (and their

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[1]. Remarkably higher average wages in the public than in the private sector are observed by Kioulafas et al. (1991) Table 1.

[2]. This percentage is defined as $(\bar{W}_g - \bar{W}_p)/\bar{W}_p$ where the average wage $\bar{W}$ is computed as geometric mean, i.e.
$W = \exp \sum^{N}_{i=1} (\ln(W_i))/N$

quadratic term) turn out to be a highly significant determinant of being in the public sector. For our reference worker (i.e. a non married, urban labourer, without any educational qualification, working in the transport without an owned home and with the average family variables) each additional year of experience increases this probability by 3.3 per cent. The coefficients on industry and occupation have the expected signs and capture the existing industrial and occupational employment differences between the public and private sector.

In Greece, a country with a relatively high self employed labour force in rural areas, for the wage earners living in urban regions it is less likely to be in the public sector than it is for wage earners residing in rural areas. The individual unearned income reduces the probability of being in the public sector, while having their own house increases it. However, these coefficients, as well as those of the cohort dummies and the household size, are not individually significant, although the identifiers as a set are highly significant.

The estimated logarithmic wage equations show that returns to education for the more educated are higher in the public than in the private sector, while the opposite holds for the low educational levels. The incremental returns from one schooling group to the next show that an additional year of secondary education gives 5.0 per cent extra pay to public sector employees, while a year at tertiary education gives 4.3 - 5.4 per cent.[1] The corresponding figures for the private sector are 2.6% and 2.4 - 3.0%. These figures show that returns to higher education are not higher than those to secondary education as was estimated for Greece for the 1960s (Kanellopoulos, 1980, ch. 2). Increases in the relative abundance of higher education graduates through time, combined with the slowdown of the demand for their services, seem to explain the loss of their earlier advantage.[2]

Labour market experience is highly significant in its linear and quadratic terms and turns out to be more valued in the private than in the public sector. An additional year of experience increases earnings by 3.5 per cent in the public (i.e. 10 per cent within three years) and by 4.3 per cent in the private sector. For public employees earnings peak at 33 years of experience, while for the private sector at almost 31 years of experience.

Even though the industry and occupation coefficients are jointly significant, there appear interesting differences between the two sectors. While a public sector wage earner working in energy production gets almost 19 per cent more than a wage earner in transportation and communication (the omitted group), a worker in trade and restaurants gets almost half of the latter. Occupation dummies, which to a certain extent reflect work

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[1]. Incidentally estimated returns to higher education in the public sector coincide to the so called 5 per cent per year of higher education allowance in the sector.

[2]. For similar analysis see (Glytsos, 1990; Lambropoulos and Psacharopoulos, 1992).

responsibilities, turn out more significant in the private than in the public sector. Being an administrative in the private sector implies an almost 40 per cent extra pay as compared to the pay of unskilled workers. In the public sector this advantage is imprecise and limited to about 10 per cent.

An interesting conclusion seems to be that pay differences between branches, controlling for other variables, are rather wide in the public sector, while responsibilities are more relevant in the private sector. In the former sector it pays where someone works, while in the latter the work duties do matter (compensating differences). Thus there is minimal evidence that the public sector labour market is competitive.

There is evidence that marriage and children increase pay in both sectors. However, their effect turns out larger and more robust in the public than in the private sector.

Finally, the selection variable is significant for the public sector, but insignificant for the private. The positive selection bias for the public sector and negative one for the private imply that wage earners with certain characteristics have better opportunities in the former than in the latter sector and thus it is less likely to be found in the private sector. Moreover, the results indicate that the public- private wage difference corrected for selection bias, i.e. the wage offer differential, is 14.5 per cent and narrower than the 17.3 per cent observed differential.[1]

As there is a non- random sorting of wage earners between public and private sectors, estimating the log earnings functions using ordinary least squares (OLS) would produce biased estimates, as would the analysis of public-private pay differentials. To ascertain the bias, the OLS estimates of the earnings function of each sector are presented in Table 4. It appears that the OLS coefficients on the explanatory variables show little changes in the private sector but remarkable ones in the public sector. In particular, for the public sector selection correction raises returns to post-compulsory education, widens coefficients on occupation and reduces the effect of labour market experience.

The probability of joining the public sector and the earnings equations for women are presented in Table 3. Due to the small number of observations in some occupations and industries they are included into the corresponding reference groups. For women the probability of public sector employment increases significantly with their level of education and years of experience. The age cohort variables are significant and increase the probability

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[1] .The wage offer is defined as the observed wage net of the selection bias. The selection bias calculated at the mean is given by $c_j\lambda_j$. The wage offer for public sector is given by $W_g - c_g\lambda_g = 11.286 - 0.1259 * 0.286 = 11.250$. In the case of private sector the figure is $11.113 - 0.0202 * 0.063 = 11.114$. The difference in log wage offers between public and private sector is 0.1359, the exponent of which is 14.5 per cent.

of joining the public sector, while living in an owned house decreases it. The other identifying variables are insignificant in the probit equation for women.

The effect of the linear and quadratic terms of the experience variable on women's pay are significant and with the expected signs. However in the private sector this effect is almost two times (4.1 per cent) that in the public sector (2.1 per cent). Even though the effects of higher educational levels upon women's pay increase, with the exception of tertiary education, they are not significant for the public sector. On the contrary in the private sector educational level turns out to be more relevant for female pay. As in the case of males, industry seems to be consistently significant for the public but not for the private sector. Marriage and children are not significant in female pay determination in both sectors. The estimate of the selection variable (sigma rho) is negative for the public and positive for the private sector but insignificant in both cases suggesting that the selectivity corrected estimates of the earnings functions should not be very different from those of the OLS estimates of Table 4.

Attention now focuses on Table 5 and the reported estimates of public private sector pay differentials are compiled for male and female workers using equation [4]. This table decomposes the observed wage differential into that part due to differences in parameters, to that due to differences in variables and that representing selection bias. As equation [4] shows, wage decomposition can be carried out by evaluating the predicted wage for a worker of given characteristics at both the public and private estimated wage structure. However, it is more interesting to examine what the average public employee would earn in the private sector and not the opposite, as public sector employment opportunities do not exist for workers in many private sector jobs and locations. This is done in Table 5 which shows that, based on the results of Table 2, the wage difference due to differences in qualifications amounts to 0.208 and is greater than the observed difference (0.173) defined as the difference ($\ln \bar{W}^g - \ln \bar{W}^p$). On the other hand the wage difference representing differences in the estimated coefficients is negative and with a lower value (-0.180) than the former. Using the OLS earnings equation differences in males' qualifications explain a large part of the observed wage difference (i.e. 0.144 out of the 0.173).

These figures imply that even though public sector male employees earn on the average more than those in the private, this advantage is due rather exclusively to their qualifications and there is minimal evidence of any economic rent. On the contrary, it seems

that the average male public employee would earn more if paid according to the private sector pay structure.[1]

In the case of women things are considerably different. First the observed public-private sector pay difference is remarkably higher (0.332) and female public sector employees would be worse off if paid according to private sector pay structure, irrespectively of the wage equation used. The wage difference due to the variables is 0.101 (0.103 using the OLS equation) and that due to differences in the parameters amounts to 0.315 while the effect of selection bias is small and negative (-0.082). The same happens when the public sector pay structure is applied to private female employees. Thus one can argue that, to the extent that private sector does not discriminate against women, public female employees are overpaid compared to those in the private sector.

[1]. Similar conclusion is derived if the public sector male pay structure is applied to the private sector male employees.

4. CONCLUSIONS

In this paper we have attempted to analyze the determinants of male and female pay determination in the public and private sector in Greece using FES data for 1988. The results suggest that there exist significant differences between the public and private earnings structures. For higher educational levels educational returns for males are higher in the public sector than in the private sector, while the opposite holds for lower educational levels. An interesting finding is that, with the exception of university graduates, educational qualifications are not significant in female pay determination in the public sector. Moreover, as the industry variables turn out more relevant for both sexes in the public than in the private sector pay determination, it seems that within the public sector pay differences do not necessarily reflect human capital differences.

While the observed pay advantage of public male employees can be explained readily by differences in their qualifications, for female employees qualifications account for a rather small part of the observed pay differential. A final point of caution must be made: The dependent variable used ignores nonwage benefits and nonpecuniary forms of compensation, which are rather higher in the public sector, and thus tend to bias the public-private pay differential downward. On the other hand the strict incomes policy applied in the public sector since 1990 probably has restricted the public-private pay differential.

TABLE 1

Means of variables used

	Men		Women	
	Public	Private	Public	Private
Dependent variables				
In public sector	.415	.585	.436	.564
Log monthly earnings	11.286	11.113	11.094	10.762
Level of education				
Tertiary	.341	.102	.463	.110
Some tertiary	.048	.036	.042	.035
Secondary	.285	.239	.313	.318
Gymnasium	.076	.138	.023	.079
Primary	.219	.421	.140	.370
Non-graduate	.030	.064	.019	.087
Economic activity branch				
Primary sector	.001	.026	0.0	.013
Manufacture	.042	.431	.026	.410
Electricity	.057	.003	.011	.000
Construction	.028	.176	.002	.003
Trade	.012	.174	.011	.248
Transportation	.152	.081	.045	.041
Banking	.057	.043	.055	.079
Services	.642	.065	.848	.205
Occupation				
Scientists	.259	.077	.432	.079
Administrative	.022	.024	.006	.003
Office clerks	.270	.125	.370	.257
Trade & salesmen	.002	.065	.000	.100
Services	.170	.081	.142	.199

TABLE 1 (Continued)

Means of variables used

Farmers	.002	.018	.000	.013
Labourers	.277	.609	.048	.348
Personal variables				
Experience	22.940	23.000	17.48	20.10
Experience sq	661.650	699.49	412.05	575.33
Married	.852	.755	.732	.623
Unearned income(.000)	19.798	15.269	6.172	4.810
Age 30-39	.352	.300	.463	.292
Age 40-49	.280	.212	.235	.194
Family variables				
Children under 6	.361	.309	.343	.186
Children under 13	.585	.441	.527	.355
Owned house	.653	.639	.576	.621
Urban residence	.765	.752	.863	.821
Household size	3.67	3.70	3.40	3.41
IMR	.440	-.323	.444	-.383
N of observations	998	1405	527	681

TABLE 2

Probability of joining public sector and Ln monthly earnings (men)

	Probit sector choice	Marginal effect	Earnings equation	
			Public	Privatae
Constant	-.861 (.298)	-.326	10.313 (.134)	10.384 (.117)
Level of education				
Higher	.922 (253)	.349	.546 (.074)	.408 (.087)
Some university	.794 (.278)	.301	.402 (.080)	.359 (.092)
Secondary	.428 (.219)	.162	.329 (.064)	.287 (.067)
Gymnasium	.052 (.220)	.020	.198 (.065)	.263 (.065)
Elementary	-.107 (.191)	-.041	.029 (056)	.133 (.056)
Experience	.086 (.018)	.033	.033 (.004)	.043 (.005)
Experience sq	-0015 (0003)	-.001	-.0005 (.0001)	-.0007 (.0001)
Economic activity branch				
Agriculture	-.810 (.286)	-.307	-.346 (.097)	.122 (.121)
Manufacture	-1.630 (.115)	-.617	-.451 (.123)	-.079 (.109)
Electricity	1.339 (.272)	.507	.188 (.072)	.043 (.251)
Construction	-1.374 (.141)	-.520	-.457 (.101)	-.209 (.103)
Trade, hotels & restaurants	-1.727 (.176)	-.654	-.499 (.135)	-.072 (.115)

TABLE 2 (Continued)

Probability of joining public sector and Ln monthly earnings (men)

Banking	-.336 (.158)	-.127	-.111 (.044)	-.109 (.077)
Services	.981 (.112)	.371	-.077 (.050)	-.068 (.109)
Occupation				
Scientists	-.495 (.161)	-.187	-.025 (.042)	.220 (.628)
Administrative	-.827 (.264)	-.313	.112 (.077)	.387 (.093)
Office clerks	.065 (.117)	.024	.004 (.030)	.071 (.044)
Trade & salesmen	-.815 (.347)	-.309	.165 (.171)	-.022 (.063)
Services	-.004 (.133)	.002	.113 (.032)	.108 (.051)
Farm workers	-.712 (.349)	-.270	-.323 (.119)	-.498 (.134)
Family characteristics				
Married	.264 (.122)	.100	.148 (.034)	.086 (.039)
Children under 6	.007 (.072)	.002	.017 (.017)	.026 (.023)
Children under 13	.067 (.058)	.025	.038 (.013)	.017 (.017)
Age 30-39	-.170 (.109)	-.064		
Age 40-49	-.221 (.121)	-.083		
Urban area	-.261 (091)	-.099		

Household size	-.023 (.036)	-.009		
Unearned income	-.0024 (.0015)	-.0009		
Owned house	.075 (.085)	.028		
Lambda			.286 (.097)	.063 (.137)
-Log Likelihood	797.07			
Corrected predictions/ R^2	86.0%		.314	.235
Sample size	2403		998	1405

TABLE 3

Probability of joining public sector and Ln monthly earnings (women)

	Probit sector choice	Marginal effect	Earnings equation	
			Public	Private
Constant	-2.277 (.413)	-.865	10.738 (.292)	10.105 (.111)
Level of education				
Higher	1.058 (.344)	.402	.379 (.138)	.495 (.119)
Some university	.611 (.390)	.232	.220 (.146)	.333 (.131)
Secondary	.717 (.329)	.272	.185 (.131)	.340 (.096)
Gymnasium	.391 (.380)	.148	.161 (.150)	.193 (.102)
Elementary	.577 (.276)	.219	.041 (.117)	.167 (.078)
Experience	.016 (.022)	.006	.021 (.006)	.036 (.007)
Experience sq	-.00001 (.0005)	-.0000	-.0002 (.0001)	-.0006 (.0001)
Economic activity branch				
Manufacture	-0.561 (.186)	-.213	-.061 (.121)	.029 (.049)
Construction	-.102 (.841)	-.038	-.303 (.323)	-.042 (.304)
Banking	.422 (.191)	-.160	-.185 (.086)	-.029 (.072)
Services	1.597 (.139)	.607	-.291 (.116)	-.181 (.108)
Occupation				
Scientists	.661 (.236)	.251	.191 (.107)	.198 (.099)

Administrative	.798 (.722)	.304	.252 (.219)	.275 (.305)
Office clerks	.712 (.199)	.271	.170 (.106)	.184 (.604)
Trade & salesmen	-.1024 (.841)	-.063	.044 (.082)	.054 (.061)
Family characteristics				
Married	.010 (.119)	.004	.008 (.037)	-.003 (.039)
Children under 6	.269 (.106)	.102	.003 (.028)	.061 (.041)
Children under 13	.086 (.083)	.032	-.019 (.021)	-.070 (.027)
Age 30-39	.572 (.152)	.572		
Age 40-49	.723 (.179)	.723		
Urban area	-.242 (.144)	-.242		
Household size	-.060 (.046)	-.060		
Unearned income	-.002 (.003)	-.002		
Owned house	-.212 (.103)	-.211		
Lambda			-.164 (.109)	-.013 (.122)
-Log Likelihood	448.32			
Corrected predictions/R^2	84.6%		.252	.171
Sample size	1208		527	681

TABLE 4

Ordinary least squares estimates of Ln earnings

	Men		Women	
	Public	Private	Public	Private
Constant	10.634 (.074)	10.356 (.0845)	10.376 (.168)	10.100 (.104)
Level of education				
Higher	.468 (.070)	.381 (.080)	.441 (.137)	.500 (.109)
Some university	.326 (.078)	.335 (.884)	.247 (.151)	.336 (.131)
Secondary	.287 (.065)	.272 (.065)	.222 (.135)	.343 (.094)
Gymnasium	.199 (.069)	.259 (.065)	.162 (.157)	.195 (.103)
Elementary	.046 (.060)	.132 (.056)	.079 (.120)	.168 (.078)
Experience	.026 (.004)	.042 (.005)	.027 (.005)	.037 (.006)
Experience sq	-.0003 (.0001)	-.0007 (.0001)	-.0003 (.0001)	-.0006 (.0001)
Economic activity branch				
Agriculture	-.223 (.111)	.145 (.112)		
Manufacture	-0.103 (.052)	-.034 (.044)	-.149 (.113)	.027 (.045)
Electricity	0.030 (.045)	-.016 (.218)		
Construction	-0.192 (.061)	-.168 (.051)	-.277 (.338)	-.043 (.308)
Trade	-0.158 (.095)	-.025 (.054)		

Banking	-.068 (.047)	-.096 (.072)	-.135 (.083)	-.028 (.071)
Services	-.198 (.028)	-.109 (.063)	-.139 (.059)	-.171 (.055)
Occupation				
Scientists	.014 (.039)	.230 (.060)	.246 (.105)	.202 (.091)
Administrative	.201 (.073)	.404 (.086)	.323 (.218)	.278 (.308)
Office clerks	-.008 (.030)	.069 (.044)	.233 (.102)	.187 (.054)
Trade & salesmen	.363 (.225)	-.013 (.060)		
Services	.108 (.033)	.108 (.052)	.029 (.085)	.052 (.058)
Farm workers	-.195 (.138)	-.476 (.127)		
Family characteristics				
Married	.119 (.033)	.083 (.034)	.010 (.039)	-.002 (.040)
Children under 6	.018 (.017)	.026 (.023)	-.019 (.026)	.062 (.040)
Children under 13	.034 (.013)	.016 (.017)	-.013 (.021)	-.069 (.027)
Durbin Watson	1.907	1.886	1.964	1.947
F(K,N-K)	18.904	17.800	9.364	7.616
R^2	.309	.235	.249	.171
Sample size	998	1405	527	681

TABLE 5

Decomposition of public-private wage differentials

Observed wage difference	Wage differences due to		
	Differences in variables	Differences in parameters	Selection bias
Males			
Equation corrected for selection bias			
0.173	0.208	-0.180	0.146
OLS equation			
0.173	0.145	0.028	-
Females			
Equation corrected for selection bias			
0.332	0.101	0.315	-0.082
OLS equation			
0.332	0.103	0.227	-

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