DO WORKERS PAY FOR SOCIAL PROTECTION ? AN ANALYSIS OF WAGE DIFFERENTIALS IN THE EGYPTIAN PRIVATE SECTOR

Ragui Assaad

Working Paper 9610

Please address correspondence to: Ragui Assaad, Humphrey Institute of Public Affairs, University of Minnesota, 301 19th Avenue S, Minneapolis, MN 55455, USA. Fax: +(612) 625 3513. E-mail: RASSAAD @ HHH. UMN. EDU

Do Workers Pay for Social Protection?
An Analysis of Wage Differentials in the Egyptian Private Sector*

Ragui Assaad

Revised September, 1995.

* An earlier version of this paper was presented at the Second ERF Workshop on Labor Markets and Human Resources held in Cairo, June 30-July 2, 1995.

Abstract

This paper examines whether private employers are able to pass the cost of protective social regulations to their workers in the form of lower wages. I answer this question by decomposing wage differentials between protected and unprotected workers into componenets explained by differences in observable characteristics and unobserved heterogeneity and an unexplained component. I conclude that, while there are positive compensating differentials for employment instability and work outside fixed establishments, unprotected workers are not compensated for the lack of social protection. In fact, protected workers appear to receive positive wage premia, primarily in the form of higher returns on their human capital. I also find that the additional cost of female-specific protections is not passed on to protected female workers in the form of lower wages, suggesting that it may instead limit female employment in that sector.

ملخص

تبحث هذه الورقة ما إذا كان بإمكان أصحاب العمل في القطاع الخاص نقل أعباء التكاليف الناجمة عن قوانين الحماية الاجتماعية إلى العاملين لديهم وذلك في صورة أجور أكثر انخفاضاً. وأجيب عن هذا السؤال عن طريق تجزئة الفرق في أجور العاملين المحميين والعاملين غير المحميين إلى أجزاء تعكس الفروق في الخواص الظاهرة والتباين غير الظاهر وعنصر غير مفسر. واستنتج أنه في حين أن هناك فروق ايجابية للتعويض عن عدم الاستقرار في العمل والعمل خارج منشآت ثابتة، فإن العاملين غير المحميين لا يتم تعويضهم عن عدم توفر الحماية الاجتماعية. بل أنه من الواضح أن العاملين المحميين يحصلون على مكافآت أجر ايجابية، في صورة عوائد أعلى على رأس مالهم البشري في الدرجة الأولى. كما أوضح أنه لا يتم نقل أعباء التكاليف الاضافية الناجمة عن اجراءات حماية خاصة بالمرأة إلى العاملات المحميات في شكل أجور أكثر انخفاضاً، مما يشير إلى أنها قد تؤدي إلى الحد من توظيف المرأة في هذا القطاع.

INTRODUCTION

Although the standard competitive labor market model suggests that mandating benefits, just like other government interventions, introduces inefficiencies in the labor market, a number of arguments have been made to justify, on efficiency grounds, such government interventions (See Summers, 1989). While much of the economics literature considers mandated benefits just a hidden tax, with the same efficiency and incidence implications as a tax, Summers (1989) argues that mandated benefits can in fact be more efficient than tax-financed public provision of the benefits if the workers value the benefits they receive as a result of the mandate. He concludes that the allocational effects on employment of mandated benefits are equivalent to those of a tax at a rate equal to the difference between the employer's cost of providing the benefit and the employee's valuation of it, and not to the entire cost of the mandate. At the limit, if employees fully value the benefit, wages will fall to offset the cost of the benefit and there will be no disemployment effect and no efficiency loss.

Several empirical studies have concluded that the costs of mandates are largely shifted to wages with little effect on employment (Gruber and Krueger, 1991, Gruber, 1994a, 1994b). If part of the cost of the benefits mandated by Egyptian labor law were passed on to employees in the form of wage reductions, we would expect to find negative wage premia for workers in the protected sector after correcting for observed and unobserved heterogeneity.

To determine whether such wage premia are present, I decompose the mean wage differential between workers whose employment is subject to social protection and those who are not into a component explained by differences in characteristics and an unexplained component. There is a long tradition in labor economics of testing for sex and other forms of discrimination in the labor market by decomposing wage differentials in this way.[1] There is also an extensive literature that analyzes public-private wage differentials in this way for both developed and developing countries.[2] Among other things, this literature has demonstrated the importance of correcting for selectivity bias in estimating wage differentials when selection into the various subsamples is endogenous, as is the case here. In this paper, I decompose the mean wage differential between the protected and unprotected segments of the non-agricultural private sector to determine whether there is a measurable differential in favor of unprotected workers that cannot be attributed to differences in productive characteristics or to compensating differentials that are unrelateted to the presence or absence of social protection.[3]

---

[1] The pioneering articles are Oaxaca(1973) and Blinder (1973), but there is a long literature that followed including applications to developing countries, see for e.g. Birdsall and Fox (1985), Gindling (1993), Ashraf and Ashraf (1993).

[2] Recent work on developing countries includes Lindauer and Sabot (1983), Van der Gaag and Vijverberg (1988), Al-Qudsi (1989), Terrell (1993).

[3] Marcoulier, Castilla, and Woodruff (1995) undertake a similar analysis of the formal-informal wage gap in Mexico, El Salvador, and Peru. They use social security coverage and a size criterion as alternative definitions of the informal sector. They find a positive unexplained mean wage differential in favor of the formal sector in both Peru and El Salvador and a negative wage differential in the case of Mexico. To avoid the confusion surrounding the definition of the informal sector, I stick to the protected/unprotected nomenclature in this paper.

I begin by estimating wage equations for the protected and unprotected segments of the non-agricultural private sector that are corrected for endogenous selection into each of the two segments. I then use these estimates to decompose the protected-unprotected mean wage differential into an explained and an unexplained component. The explained component is composed of a part that is due to differences in observed characteristics and another due to unobserved heterogeneity. The latter is obtained from the sample selection correction terms and is, therefore, only relevant if endogenous selection is established. Along a different dimension, it is also useful to distinguish between the differentials due to differences in the intercept of the two equations and those due to differences in the returns to various subsets of the observed characteristics (the βs), such as human capital and regional differences. The difference in the intercepts can be interpreted as the premium or pure rent for being in a given sector (Terrell, 1993). In our case, a negative premium would indicate that protected workers pay for their social protection while a positive premium would indicate that they receive a rent associated with quantity rationing of protected jobs. Since the cost of social protection is presumably invariant to observed worker characteristics (with the exception of sex), systematic differences in returns to these characteristics are assumed to be unrelated to the cost of social protection.

To see if the protected-unprotected mean wage differential varies by gender, I decompose the unexplained component of the female mean wage differential into the differential that would result if women received the same returns as men in each of the two sectors and a residual which captures differences in return that result from female-specific factors. A negative residual would indicate that women in the protected sector pay a premium for the additional protection they receive from female-specific employer mandates. A positive residual, on the other hand, would indicate that women receive even higher rents than men for being in the protected sector.

Since this paper is concerned exclusively with wage employment in the private non-agricultural sector, I will use "protected sector" in the sequel to refer exclusively to the protected component of that sector. I use two indicators of social protection: (i) whether the employment relationship is governed by a legal employment contract and (ii) whether the worker has social insurance coverage. Because these indicators are measured with some error, I use the presence of either one or the other in the worker's main job during the reference year to classify him or her as protected.

According to Egyptian labor law, an employment contract is required for all wage workers, with the exception of those employed on "temporary," "provisional" or "seasonal" jobs.[4] An employment contract guarantees the worker certain rights and benefits, such as job security, paid leaves, and cost of living adjustments. Female-specific benefits include a 50-day paid maternity leave and, for employers with more than 50 workers, a one-year unpaid leave to care for a newborn child. These leaves can be obtained up to a maximum of three times during the employee's tenure with the employer (Articles 154-156 of Law 137 of 1981). Employers with more than one hundred female employees must also have a nursery on the premises.

---

[4] Article 1 of the Egyptian Labor Law (Law 137 of 1981) defines the terms "provisional", "temporary", and "seasonal " as follows. A *provisional* job is a job that by its nature is not normally included in the usual activity of the employer and does not last for more than six months. A *temporary* job is a job requiring a specified period of time to achieve a specific goal and has a recognizable end point. A *seasonal* job is performed in regular seasonal intervals (article 1).

Social insurance coverage is compulsory for all wage workers 18 years and older who have a "regular" employment relationship with their employer, except for contracting and loading and unloading workers, who are covered by special provisions.[5] Social insurance coverage guarantees pension, disability, death, and work injury benefits and health insurance.[6]

As is the case in many developing countries, non-compliance with labor and social insurance regulations is widespread. According to the October 1988 Labor Force Sample Survey, only 25 percent of private non-agricultural wage workers between the ages of 18 and 59 had an employment contract and 40 percent had social insurance coverage.[7] Forty two percent have either one or the other.

1. THEORETICAL BACKGROUND

Much of the labor economics literature is concerned with explaining systematic wage differentials that are not attributable to differences in productive characteristics. The theory of compensating differentials (or equalizing differences), which dates back to Adam Smith's *Wealth of Nations*, considers these differentials to be compensating workers for differences in the non-monetary aspects of different work activities, such as working conditions, risk of unemployment, health risks, fringe benefits, etc.[8] In this paper, I am concerned with a specific non-monetary aspect of employment, namely social protection in the form of government-mandated job security and leave provisions and social insurance coverage.

Another set of theories, going back to John Elliot Cairnes (1874), advances the view that the labor market is divided into non-competing groups of workers, among which mobility is limited by social and institutional factors. These theories, which can be grouped under the rubrics of "labor market segmentation" or "labor market dualism," stress quantity rationing of the more desirable jobs, which leads to unequal wages for equally productive workers.[9] Among the central claims of dual labor market theories is that there is a distinct low-wage labor market in which there are no returns to schooling and limited on-the-job training (Dickens and Lang, 1985).

One explanation for the presence of such segmentation advanced by Lindbeck and Snower (1988) is the "insider-outsider" model. This approach attributes wage differentials and barriers to entry to rent-seeking insiders who are able to impose costs that protect them from competition by outsiders. The extent to which insiders can organize to extract these rents will clearly depend on whether there are rents to be had, which, in turn, is a function of the structure of the product market and other demand-side variables.

A third set of theorists accept the presence of persistent wage differentials that cannot be attributed to worker or job characteristics, but attribute these differentials to competitive profit-maximizing behavior on the part of employers. According to these theories, which can be

---

[5] The law does not define the term "regular".

[6] See Assaad (1995) for a more detailed description of Egypt's labor regulations and social insurance system.

[7] Sixty is the official age of retirement in Egypt.

[8] This literature is surveyed in Rosen(1986).

[9] See the review by Taubman and Wachter (1986) and the seminal article by Dickens and Lang (1985).

grouped under the rubric of "efficiency wage" theories, profit-maximizing employers will pay their workers higher than the market clearing wage if the wage is positively linked to the workers' productivity. Such a relationship can arise when monitoring the effort of workers is costly, so that paying a wage premium is used to discourage shirking (Stiglitz, 1976). It can also arise in poorer countries, where nutritional adequacy is an issue and a worker's productivity is linked to his or her consumption level (Mirrlees, 1975; Rodgers, 1975). One explanation that is not directly linked to productivity attributes higher than market-clearing wages levels to a desire on the part of employers to reduce labor turnover when high turnover imposes significant costs on the employer (Stiglitz, 1974).[10]

The various types of efficiency wages described above are generally associated with more permanent jobs, where employers can reap the benefit of improved nutrition or where labor turnover is costly (Basu, 1984: 105). They are also likely to be associated with firms where the scale of operations and the nature of the technology make it difficult to accurately monitor worker effort. Similarly, segmented labor market theories imply that wages would be higher in jobs involving institutionalized labor markets and where on-the-job training in firm-specific skills is important -- conditions that are usually associated with large firms. Because of the nature of enforcement, there is, in turn, a strong association between firm size and compliance with labor and social insurance laws. We would therefore expect that if efficiency-wage or labor market segmentation effects are present, they would result in a wage premium in favor of the protected sector. Therefore, if a wage premium is observed for the unprotected sector, one can safely attribute it to compensating differentials.

The remaining challenge is to distinguish differentials that compensate workers for the absence of social protection from those that compensate them for other non-wage aspects of the job. I attempt to do so by correcting the wage equation estimates for job-related attributes for which compensating differentials may be obtained, such as intermittent employment and work outside fixed establishments. Any remaining compensating differential is asumed to be related to the absence of social protection.

2. THE MODEL

Private non-agricultural wage workers choose between work in the protected and unprotected sector according to the following selection rule:

$$D = \begin{cases} 1 & \text{work in a protected job} \quad \text{iff } I^* > 0 \\ 0 & \text{work in an unprotected job} \quad \text{iff } I^* \leq 0 \end{cases}$$

where I^* is a latent variables indicating the difference in the worker's utility between protected and unprotected work.[11] The worker's utility takes into account both pecuniary and non-

[10] See Akerlof and Yellen (1986) and Weiss (1990) for reviews of efficiency wage models.

[11] Clearly, a randomly chosen individual from the population has several other choices. The results in this paper should therefore be interpreted as conditional on being in the non-agricultural private sector.

pecuniary aspects of participation in each sector as well as non-competitive barriers to entry, which can take the form of waiting queues or other costs of entry.

Omitting subscripts indicating a particular individual, the latent variables can be written as a linear function of observable characteristics and an error term as follows:

$$I^* = \gamma' \mathbf{Z} + \varepsilon \tag{1}$$

where $\mathbf{Z}$ is a vector of individual characteristics, γ is a vector of unknown parameters, and ε is a zero-mean disturbance term.

The wage equations in the protected and unprotected sectors are specified according to the standard Mincerian human capital model, where log wages are assumed to be depend on human capital characteristics and regional labor market and cost of living differences as follows:

$$y_U = \beta_P' \mathbf{X}_P + \nu_P \tag{2}$$

$$y_U = \beta_U' \mathbf{X}_U + \nu_U \tag{3}$$

where $\mathbf{X}_P$ and $\mathbf{X}_U$ are vectors of characteristics for workers in the protected and unprotected sectors, respectively and β_P and β_U are the corresponding vectors of unknown parameters. The vector of disturbances $\mathbf{U} = (\varepsilon, \nu_P, \nu_U)$ is assumed to have a trivariate normal distribution with zero means and covariance matrix Σ. With the usual standardization of the unidentifiable variances of the dichotomous dependent variable models, Σ is given by:

$$\Sigma = \begin{bmatrix} 1 & \rho_{\varepsilon P}\sigma_P & \rho_{\varepsilon U}\sigma_{UP} \\ \rho_{\varepsilon P}\sigma_P & \sigma_P^2 & \rho_{UP}\sigma_P\sigma_U \\ \rho_{\varepsilon U}\sigma_{UP} & \rho_{UP}\sigma_P\sigma_U & \sigma_U^2 \end{bmatrix}$$

The expected value of log wages in the protected and unprotected sectors are given by:

$$\begin{aligned} E(y_j) &= \beta_j' \mathbf{X}_j + E(\nu_j | D = 1) \\ &= \beta_j' \mathbf{X}_j + \rho_{\varepsilon j}\sigma_j \lambda_j \end{aligned} \quad \text{where } j = P, U. \tag{4}$$

and $$\lambda_P = \frac{\phi(\gamma'\mathbf{Z})}{\Phi(\gamma'\mathbf{Z})}, \quad \lambda_U = -\frac{\phi(\gamma'\mathbf{Z})}{[1-\Phi(\gamma'\mathbf{Z})]}$$

$\phi(.)$ and $\Phi(.)$ denote the standard univariate normal density and distribution functions, respectively.[12] A consistent estimate of (4) can be obtained by a two-stage method. In the first stage, equation (1) is estimated as a probit model. The resulting estimates (γ) are used to obtain estimates of the λ's, which are then added as regressors to the wage equations and estimated by OLS.[13]

---

[12] This result is derived in Heckman (1979).

[13] Because the λ's generated regressor, OLS estimation of the second stage results in incorrect estimates of the standard errors. The expression for the asymptotically correct variance matrix is provided in Greene (1993: 712). These are the ones reported here.

The Oaxaca (1973) decomposition of the mean wage differential between the protected and unprotected sectors can be extended to include selectivity bias as follows:[14]

$$\bar{y}_P - \bar{y}_U = 0.5(\beta'_P + \beta'_U)(\bar{X}_P - \bar{X}_U) + 0.5(\beta'_P - \beta'_U)(\bar{X}_P + \bar{X}_U) + [\rho_{\varepsilon P}\sigma_P\bar{\lambda}_P - \rho_{\varepsilon R}\sigma_U\bar{\lambda}_U]$$

$$= \qquad \bar{e} \qquad + \qquad \bar{u} \qquad + \qquad \bar{d} \qquad (5)$$

The first component ($\bar{e}$) is the differential explained by differences in observed worker and job characteristics between the two sectors, the second component ($\bar{u}$) is the unexplained differential or the differential due to unequal returns to given characteristics, and the third ($\bar{d}$) is the differential explained by unobserved heterogeneity and is obtained from the sample selection correction.

To isolate the component due to female-specific factors from that due to factors that apply to both sexes, I decompose the unexplained differential for females into two parts: a part that males would experience if they had the mean characteristics of female workers and a residual part that can then be attributed to female-specific factors:

$$\bar{u}_f = 0.5(\beta'_{Pm} - \beta'_{Um})(\bar{X}_{Pf} + \bar{X}_{Uf}) + 0.5[(\beta'_{Pf} - \beta'_{Uf}) - (\beta'_{Pm} - \beta'_{Um})](\bar{X}_{Pf} + \bar{X}_{Uf})$$

$$= \qquad \bar{u}_{fm} \qquad + \qquad \bar{u}_{ff} \qquad (6)$$

where the subscripts m and f are used to indicate the male and female parameters and variables, respectively.

A negative $\bar{u}_{ff}$ would indicate that female workers in the protected sector pay for female-specific employer mandates through lower wages and would be consistent with a competitive labor market model. A positive $\bar{u}_{ff}$ would indicate that the female wage premium for being in the protected sector is larger than the male wage premium. This finding can either mean that females are more likely to receive efficiency wages than males or, more probably, that barriers to entry into the protected sector for females are higher than for males. If employers are unable to pass on to the female workers the additional costs of social protection by lowering their wages, they are likely to hire fewer of them and thus ration entry into protected jobs. The resulting crowding in the unprotected sector may lower wages there below their market clearing level.

While it is common practice in studies that decompose wage differentials to include the coefficient on the constant term together with the other β's in calculating differences in "returns", Terrell (1993) argues that this disguises valuable information on the premium, or pure rent, from being in a given sector, as distinct from the difference in returns on observed characteristics. Moreover, since I use more than just human capital characteristics in the wage equations, I decompose $\bar{e}$ and $\bar{u}$ into four components each: one for the constant terms, one for human capital variables (experience and education), one for the regional dummy variables, and one for the job-related variables (irregular work and work outside fixed establishments).

---

[14] See for example Terrell (1993) and Idson and Feaster (1990). I assume here that in the absence of a labor market distortion, the returns to worker characteristics would be equal to the average of the protected and unprotected sectors. Technically, this should be a weighted average of the returns in the two sectors (See Cotton, 1988), but since the proportion of protected workers is approximately

3. THE DATA

The data are obtained from the Fourth Quarter 1988 round of the Egyptian Labor Force Sample Survey. This special round of the survey used a much more detailed set of questions to inquire about earnings than is usual in similar surveys in Egypt.[15] The earnings data are therefore likely to be of considerably higher quality than those obtained through other household surveys. While the survey attempted to get data on earnings in kind, the quality of that data is poor. I therefore use monetary net earnings and divide by the number of hours worked per year to compute the hourly wage. The most important exclusions from net earnings are the value of retirement and death benefits for workers who are covered by social insurance and the value of job security for those who possess legal employment contracts.

According to my definition of protected workers, which consists of either the presence of legal employment contracts, social insurance coverage, or both, 42 percent of males and 44 percent of female private, non-agricultural workers were protected. Among those 89 percent of males and 81 percent of females had social insurance coverage and 47 percent of males and 71 percent of females had legal employment contracts.

Summary statistics for the variables used in the wage and selection equations are shown in Table 1. Since social insurance regulations only apply to individuals between the ages of 18 and 59, the sample is limited to individuals in this age range. Moreover, as indicated above, the analysis is limited to private non-agricultural wage workers.[16]

As shown in Table 1, average hourly wages are 0.49 log points higher in the protected sector for females and 0.21 log points higher for males. The average male-female wage gap is 0.44 log points, but is smaller in the protected sector (0.28 log points) than in the unprotected sector (0.57 log points).

As expected, protected sector workers are more educated than unprotected sector workers, but the contrast is sharper in the case of females. For example, nearly 31 percent of females in the protected sector have university degrees, compared to 7 percent in the unprotected sector. Among males the proportion of university graduates are 14 percent and 3 percent respectively.

More than half of male unprotected sector workers are intermittent workers, meaning that they are not continuously employed by a single employer and a similar number do not work in fixed establishments. Intermittent workers and those who work outside establishments are also strongly represented among unprotected female workers, but constitute on about a quarter of these workers.

---

45 percent, a simple average gives a very good approximation. A bar denotes a variable's average for the appropriate subsample.

[15] The earnings module of the survey was designed by Dr. Mohaya Zaytoun and is reported on in some detail in Zaytoun (1990).

[16] In addition, the male sample is limited to a randomly selected subsample of approximately one half of the overall sample for which the data on parent's characteristics used in the selection equation were available.

4. EMPIRICAL RESULTS

(a) Selection Equations

I estimate reduced-from selection equations for participation in protected and unprotected jobs. Since the probability of participation depends in part on the relative wages facing an individual in both sectors, all the variables that show up in the wage equation will also show up in the selection equation. Identification of the selectivity-corrected wage equations is ensured by adding additional variables to the selection equation that relate to an individual's taste or ease of access to either of the two sectors. These include family background variables, such as parents' education, and the employment status of other members of their household.

In the male selection equation, I include variables that indicate whether the father and mother are educated, with the presumption that educated parents would increase the probability of joining the protected sector. Since the employment status of other household members is probably endogenous for males, especially if they are the household head, I avoid including these variables in the male selection equation. However, since in the Egyptian context, it is unlikely that husbands, brothers, or fathers decide their labor force status in function of that of their wives, sisters, or daughters, I include in the female equation variables that indicate whether there are other members of the household in the private protected or unprotected sectors. Since a woman's insertion into a particular segment of the labor market in a world of imperfect information would be made easier by the presence of one her relatives there, I would expect that there would be a positive correlation between the probability of selection into the protected sector and presence of other members of the household in that sector and a negative correlation with the presence of other household members in the unprotected sector, *ceteris paribus*.[17]

The parameter estimates for the selection equation for males and females are shown in the last column of Tables 2 and 3, respectively. For both males and females, there is a concave dependence on age, but the profile is much steeper for females, who are more likely to exit the formal labor force early to begin their child-bearing. There is also a strong positive association between educational attainment and the probability of joining the protected sector, again with somewhat stronger effects for females.

I now turn to the household and family background variables. Being married is positively associated with work in the protected sector, but the effect is not statistically significant for females. Educated parents also have the expected positive effect for males and the presence of other protected sector workers in the household has the expected positive effect for females.

(b) Wage Equations

I start with a standard Mincerian specification of the wage equations where log wages are assumed depend on experience and education, with controls for regional differences in labor markets. To account for compensating differentials other than those resulting from social protection, I augment this specification with variables that indicate whether the employment is

[17] Since the female selection equation is well identified, there is no need to include family background variables, which are only available for half the sample.

intermittent and whether it takes place outside a fixed establishment. Since both of these are undesirable job attributes, they are expected to have positive coefficients.

Experience is calculated as the total number of years since entry into the labor force, thus neglecting any time spent outside the labor force since entry. This may overstate experience somewhat for married females. Since the number of years of schooling is not available from the survey, education is specified as the attainment of particular educational credentials.[18]

The wage equation estimates are shown in Table 2 and 3 for males and females, respectively. I present both the OLS and selectivity-corrected estimates for separate wage equations in the protected and unprotected sectors. Chow tests confirm that two equations fit the data better than one, even if the intercepts for protected and unprotected workers is allowed to differ in the single equation model.[19]

It should also be noted that the specified model does a much better job explaining the variation of wages in the protected than in the unprotected sector, as indicated by the higher R^2's. This shows that the wage determination process in the protected sector is more systematic and relies to a much greater extent on observable human capital characteristics. In fact, the returns to experience and education are significantly higher in the protected sector. The main factors affecting wages in the unprotected sector for males are experience and the compensating differentials for intermittent employment and work outside establishments. For females, there are important regional wage differences as well, with wages lowest in Upper Egypt, the most socially conservative region of the country.

The negative and significant selectivity term for males in the protected sector indicates that there is adverse selection into that sector. Since a competitive labor market model would imply positive selection, this could be an indication of the presence of rationing of entry into that sector along the lines of segmented labor market theories. The insignificant selection terms for females suggests that there is no non-random selection in their case and that OLS provides consistent estimates of the wage equations.

(c) Wage Differentials

In this section I present the decomposition of the mean wage differential laid out in section 3 above. Results from both the OLS and the selectivity-corrected versions of the wage equations for males and females are shown in Tables 4 and 5, respectively. Since endogenous sample selection was established for males but not for females, I will focus the discussion on the selectivity-corrected results for males and the OLS results for females.

As shown in Table 4, there is a mean wage differential of approximately 0.21 log point in favor of the protected sector for males. Since there is negative selection into the protected sector, however, the selectivity corrected differential is even larger at 0.539 log points. Most of this differential is due to unexplained factors ($\bar{u}$). The explained component ($\bar{e}$) is made up of two

[18] The "read and write" variable is clearly an exception to this rule. See van der Gaag and Vijverberg (1989) for an comparison of the credentials approach and the years of schooling approach.

[19] Based on the selectivity-corrected model, F(18, 998)=4.26 for males, and F(19, 283)=2.37 for females. The critical value at the 1 percent level of significance is 1.9.

counteracting effects: protected sector workers are paid more because they have greater human capital endowments and are more concentrated in higher wage regions, but they receive lower compensating differentials because they have more stable employment and better working conditions than unprotected workers.

The largest component of the unexplained portion of the wage differential is due to differences in the constant. While the difference is not significant at conventional levels (t-score=1.61), it suggests that male protected sector workers receive a rent rather than pay premium in return for the social protections they receive. According to the OLS estimates, they neither receive a rent of pay a premium. The remainder of the unexplained column shows that the returns to human capital are somewhat higher in the protected sector and that there is a greater variation of wages by region in that sector.

Turning to the OLS results for females, it appears that two thirds of the large differential in favor the protected sector can be attributed to the unexplained component. As is the case for males, the explained component is due to greater human capital endowments and greater concentrations in higher paying regions for protected females. These positive effects are partially counteracted by negative compensating differentials for more stable employment and a higher proportion of employment in fixed establishments.

The unexplained differential is due primarily to differences in returns to observed characteristics in the two sectors. While protected sector females do not get a pure rent for being in that sector, like their male counterparts, they do get significantly higher returns to their human capital, as predicted by dual labor market theory. Since the difference in the intercepts is not significantly different from zero, there is no evidence that protected female workers pay for the social protection they receive in the form of lower wages.

I now turn to the part of the unexplained differential that can be attributed to female-specific factors (π_{ff}). Overall, this component of the female differential is not significantly different from zero, indicating that female do not pay an additional premium for the female-specific social protections they receive. The only component of this female-specific differential that appears to be significant is due to the regional variables. This is due to the fact that unprotected females in non-metropolitan regions of the country, and in particular in Upper Egypt, the most socially conservative part of the country, are paid considerably less than observationally equivalent workers in other regions. Thus women in the protected sector appear to be facing less wage discrimination than their unprotected counterparts, which may be due in part to the more systematic wage-setting rules in that sector.

CONCLUSIONS

The decomposition of the mean wage differentials between the protected and unprotected segments of the Egyptian private non-agricultural sector revealed that workers whose employment complies with social protection legislation do not pay for this protection through lower wages. On the contrary, they appear to receive a rent for being in the protected sector, primarily in the form of higher returns on their human capital.

I go a step further in the case of female workers by decomposing the unexplained component of the mean wage differential into a part that males would also apply to male workers and a part that is due to female-specific factors. Even though women in the protected sector receive female-specific benefits in the form of generous maternity leave provisions, they neither face additional negative wage premia to pay for these benefits nor do they receive any additional rents. Only regional variables contribute a significant female-specific differential in favor of the protected sector. I attribute this to the fact that unprotected female workers face greater wage discrimination in non-Metropolitan regions, especially in Upper Egypt. It appears that protected sector employers are prevented from passing on the cost of additional protections onto their workers by the need to maintain fairly transparent wage setting rules. Unable to discriminate on the basis of wages, these employers are likely to be resorting instead to entry discrimination. The significantly lower wages for women in the unprotected sector could therefore be the result of greater wage discrimination there as well as excessive crowding of women due to the presence of barriers to entry into protected jobs.

Overall, the results are not supportive of a competitive labor market model where competition among workers and employers is sufficient to equalize the monetary and non-monetary aspects of employment across jobs for equally productive workers. While workers receive positive differentials for employment instability and work outside fixed establishments, as predicted by the theory of compensating differentials, there is no evidence of the presence of wage differentials to compensate unprotected workers for the absence of social protection. The presence of higher returns to human capital in the protected sector is compatible instead with dual or segmented labor market theories. The significant negative selection of males into the protected sector suggests that workers are unable to freely choose the sector that maximizes their earnings, lending further support to the notion that protected sector jobs are rationed. Whether such rationing is due to the payment of efficiency wages in the protected sector or to non-competitive market structures is still an open question, however.

REFERENCES

Al-Qudsi, S. (1989). "Returns to Education, Sectoral Pay Differentials and Determinants in Kuwait." *Economics of Education Review.* 8, 3, 263-276.

Ashraf, J and B. Ashraf (1993). "Estimating the gender wage gap in Rawalpindi City." *Journal of Development Studies*, 29, 2:365-376.

Assaad, R. (1995). ""Structural Adjustment and Labor Market Reform in Egypt." *Near East and North African Studies*, 1 (forthcoming).

Basu, K. (1984). *The Less Developed Economy: A Critique of Contemporary Theory.* Oxford: Basil Blackwell.

Birdsall, N. and M.L. Fox (1985). "Why males earn more: Location and training of Brazilian schoolteachers." *Economic Development and Cultural Change*, 33 (April): 533-566.

Blinder, A. (1973). "Wage discrimination: Reduced form and structural estimates." *The Journal of Human Resources*, 8, 4: 436-455.

Cotton, J. (1988). "On the decomposition of wage differentials." *Review of Economics and Statistics*, 70, 2: 236-243.

Dickens, W. and K. Lang, (1985). "A test of the dual labor market theory," *American Economic Review* 75: 792-805.

Gindling, T. (1991). "Labor market segmentation and the determination of wages in the public, private-formal, and informal sectors in San Jose, Costa Rica." *Economic Development and Cultural Change*, 39 (April): 585-605.

Gindling, T. (1993). "Women's wages and economic crisis in Costa Rica." *Economic Development and Cultural Change*, 41 (January): 277-297.

Greene, W.H. (1993). *Econometric Analysis.* Second Edition. New York: Macmillan.

Gruber, J. (1994a). "The incidence of mandated maternity benefits," *American Economic Review*, 84: 622-641.

_____ (1994b). "The incidence of payroll taxation: Evidence from Chile." Paper presented at the Labor Markets Workshop, World Bank, July 6-8, 1994.

Gruber, J. and A. B. Krueger (1991). "The incidence of mandated employer-provided insurance: Lessons from workers' compensation insurance." In *Tax Policy and the Economy 5.* Edited by David Bradford. Cambridge, MA: MIT Press.

Heckman, J.J. (1979). "Sample Selection Bias as a Specification Error." *Econometrica* 47: 153-161.

Idson, T. and D. Feaster (1990). "A selectivity model of employer-size wage differentials." *Journal of Labor Economics*, 8, 1: 99-122.

Lindauer, D. and R. Sabot (1983). "The Public/Private Wage Differential in a Poor Urban Economy" *Journal of Development Economics*, 12 (Feb./Apr.): 137-152.

Lindbeck, A. and D. Snower (1988). *The Insider-Outsider Theory of Labor Markets.* Cambridge, Mass.: The MIT Press.

Marcoulier, D., V. Castilla, and C. Woodruff (1995). "Formal measures of the informal sector wage gap in Mexico, El Salvador, and Peru." Paper presented at the 1995 Meeting of the Allied Social Sciences Associations, Washington D.C.

Mirrless, J. A. (1975). "Pure theory of underdeveloped economies." In *Agriculture in Development Theory*. Edited by L.G. Reynolds. New Haven: Yale University Press.

Oaxaca, R. (1973). "Male-female wage differentials in urban labor markets." *International Economic Review*, 14 (October): 693-709.

Rodgers, G. B. (1975). "Nutritionally based wage determination in the low-income market." *Oxford Economic Papers*, 27.

Rosen, S. (1986). "The theory of equalizing differences." In *Handbook of Labor Economics, Volume I.* Edited by O. Ashenfelter and R. Layard. Amsterdam: Elsevier Science Publishers, pp. 641-692.

Stiglitz, J. (1974). "Alternative theories of wage determination and unemployment in LDCs: The labor turnover model." *Quarterly Journal of Economics*, 88, 2: 194-227.

_____ (1976). "The efficiency wage hypothesis, surplus labor and the distribution of labor in LDCs." *Oxford Economic Papers,* 28, 2: 185-207.

Summers, L. (1989). "Some simple economics of mandated benefits." *American Economic Review Papers and Proceedings*, 79, 2: 177-183.

Taubman, P. and M. Wachter (1986). "Segmented labor markets." In *Handbook of Labor Economics, Volume II.* Edited by O. Ashenfelter and R. Layard. Amsterdam: Elsevier Science Publishers, pp. 1183-1217.

Terrell, K. (1993). "Public-private wage differentials in Haiti: Do public servants earn a rent?" *Journal of Development Economics*, 42 (December): 293-314.

Van der Gaag, J. and W. Vijverberg (1988). "A Switching Regression Model for Wage Determinants in the Public and Private Sector of a Developing Country" *Review of Economics and Statistics* 70, no. 2 (May): 244-252.

_____ (1989). "Wage Determinants in Côte d'Ivoire: Experience, Credentials, and Human Capital." *Economic Development and Cultural Change* 37, 2: 371-381.

Weiss, A. (1990). *Efficiency Wages: Models of Unemployment, Layoffs and Wage Dispersion.* Princeton: Princeton University Press.

Zaytoun, Mohaya A. (1990). *Earnings.* Preliminary Report I/3. Labor Information System Project. CAPMAS, Cairo Egypt.

Table 1 - Means and Standard Deviations of Variables for Private, Non-Agricultural Wage Workers
(Standard Deviations are in parentheses)

Variable	Males			Females		
	Protected	Unprotected	All	Protected	Unprotected	All
log hourly wage	-0.374	-0.582	-0.495	-0.657	-1.150	-0.935
	(0.717)	(0.613)	(0.666)	(0.709)	(0.638)	(0.712)
age	32.9	27.0	29.5	28.4	27.4	27.8
	(9.5)	(8.8)	(9.6)	(7.5)	(10.1)	(9.0)
experience	15.8	12.2	13.7	6.1	6.7	6.4
	(10.4)	(9.7)	(10.2)	(6.8)	(8.5)	(7.8)
Educational Attainment:						
illiterate (reference)	0.219	0.367	0.305	0.086	0.409	0.268
	(0.414)	(0.482)	(0.460)	(0.280)	(0.492)	(0.443)
read and write	0.222	0.172	0.193	0.043	0.083	0.065
	(0.416)	(0.378)	(0.395)	(0.203)	(0.276)	(0.248)
primary	0.099	0.075	0.085	0.057	0.033	0.044
	(0.299)	(0.263)	(0.279)	(0.233)	(0.180)	(0.205)
preparatory	0.079	0.116	0.100	0.071	0.094	0.084
	(0.269)	(0.321)	(0.301)	(0.258)	(0.293)	(0.278)
general secondary	0.025	0.061	0.046	0.043	0.022	0.031
	(0.158)	(0.240)	(0.210)	(0.203)	(0.147)	(0.174)
vocational secondary, all	0.187	0.159	0.171	0.343	0.249	0.290
	(0.390)	(0.366)	(0.377)	(0.476)	(0.433)	(0.454)
vocational secondary, blue collar	0.111	0.116	0.114	0.093	0.066	0.078
	(0.314)	(0.321)	(0.318)	(0.291)	(0.249)	(0.268)
vocational secondary, white collar	0.076	0.043	0.057	0.250	0.182	0.212
	(0.266)	(0.203)	(0.232)	(0.435)	(0.387)	(0.409)
technical institute	0.030	0.020	0.024	0.043	0.039	0.040
	(0.171)	(0.140)	(0.154)	(0.203)	(0.193)	(0.197)
university and above	0.139	0.030	0.075	0.314	0.072	0.178
	(0.346)	(0.170)	(0.264)	(0.466)	(0.259)	(0.383)
Region of Residence:						
Greater Cairo (reference)	0.434	0.338	0.378	0.643	0.464	0.542
	(0.496)	(0.473)	(0.485)	(0.479)	(0.499)	(0.498)
Alexandria and Suez Canal	0.136	0.114	0.124	0.157	0.149	0.153
	(0.343)	(0.319)	(0.329)	(0.365)	(0.357)	(0.360)
Urban Lower Egypt	0.139	0.151	0.146	0.093	0.122	0.109
	(0.346)	(0.358)	(0.353)	(0.291)	(0.328)	(0.312)
Urban Upper Egypt	0.051	0.109	0.085	0.050	0.077	0.065
	(0.220)	(0.312)	(0.279)	(0.219)	(0.268)	(0.248)
Rural Lower Egypt	0.173	0.176	0.175	0.036	0.155	0.103
	(0.379)	(0.381)	(0.380)	(0.186)	(0.363)	(0.304)
Rural Upper Egypt	0.067	0.111	0.093	0.021	0.033	0.028
	(0.250)	(0.315)	(0.290)	(0.145)	(0.180)	(0.165)
Job-related Variables:						
intermittent employment	0.150	0.542	0.378	0.014	0.227	0.134
	(0.358)	(0.499)	(0.485)	(0.119)	(0.420)	(0.341)
work outside establishments	0.245	0.491	0.388	0.007	0.298	0.171
	(0.430)	(0.500)	(0.488)	(0.085)	(0.459)	(0.377)
Household-Related Variables:						
currently married	0.630	0.391	0.491	0.414	0.227	0.308
	(0.483)	(0.488)	(0.500)	(0.494)	(0.420)	(0.463)
other protected private, non-agricultural workers in household				0.221	0.099	0.153
				(0.417)	(0.300)	(0.360)
other unprotected private, non-agricultural workers in household				0.143	0.293	0.227
				(0.351)	(0.456)	(0.420)
Parents' Educational Background:						
father educated	0.196	0.108	0.145			
	(0.398)	(0.310)	(0.352)			
mother educated	0.069	0.032	0.047			
	(0.254)	(0.175)	(0.212)			
Number of Observations	433	603	1,036	140	181	321

Table 2 - Wage Equation Estimates for Private, Non-Agricultural Wage Workers , Males.

Dependent Variable: log-hourly wage.

Variable	OLS Wage Equations		Selectivity-Corrected Wage Equations		Selection Model[1]
	Protected	Unprotected	Protected	Unprotected	
constant	-1.191 ***	-1.127 ***	-0.676 ***	-1.128 ***	-3.925 ***
	(-9.07)	(-11.79)	(-2.57)	(-11.88)	(-7.30)
age					0.159 ***
					(4.93)
age²/100					-0.168 ***
					(-3.87)
experience	0.065 ***	0.041 ***	0.053 ***	0.035 ***	
	(6.43)	(5.12)	(4.67)	(3.76)	
experience²/100	-0.125 ***	-0.075 ***	-0.111 ***	-0.070 ***	
	(-5.22)	(-3.81)	(-4.55)	(-3.50)	
Educational Attainment:					
read and write	0.047	0.095	-0.063	0.052	0.466 ***
	(0.53)	(1.39)	(-0.62)	(0.68)	(3.81)
primary	0.226 *	0.148	0.073	0.086	0.767 ***
	(1.93)	(1.51)	(0.54)	(0.80)	(4.54)
preparatory	0.075	0.036	-0.056	-0.010	0.470 ***
	(0.59)	(0.40)	(-0.41)	(-0.10)	(2.80)
general secondary	0.477 **	-0.068	0.373 *	-0.097	0.167
	(2.36)	(-0.61)	(1.81)	(-0.84)	(0.67)
vocational secondary					0.815 ***
					(5.86)
voc. sec., blue collar	0.446 ***	0.237 ***	0.239	0.157	
	(3.58)	(2.64)	(1.55)	(1.44)	
voc. sec., white collar	0.555 ***	0.029	0.348 **	-0.061	
	(4.19)	(0.23)	(2.17)	(-0.43)	
technical institute	0.429 **	0.407 **	0.226	0.296	0.663 **
	(2.24)	(2.32)	(1.06)	(1.52)	(2.37)
university and above	1.054 ***	0.143	0.740 ***	-0.027	1.149 ***
	(8.98)	(0.96)	(4.05)	(-0.14)	(5.46)
Region of Residence:					
Alexandria and Suez Canal	-0.083	0.099	-0.081	0.095	0.026
	(-0.89)	(1.23)	(-0.87)	(1.19)	(0.19)
Urban Lower Egypt	-0.167 **	-0.037	-0.189 **	-0.039	0.057
	(-1.77)	(-0.51)	(-1.99)	(-0.53)	(0.43)
Urban Upper Egypt	-0.478 ***	-0.168 **	-0.425 ***	-0.139	-0.367 **
	(-3.30)	(-2.04)	(-2.92)	(-1.62)	(-2.11)
Rural Lower Egypt	-0.359 ***	-0.052	-0.370 ***	-0.048	0.037
	(-4.02)	(-0.75)	(-4.12)	(-0.69)	(0.29)
Rural Upper Egypt	-0.293 **	-0.160 *	-0.247 *	-0.147 *	-0.175
	(-2.31)	(-1.93)	(-1.91)	(-1.76)	(-1.08)
Job-Related Variables:					
intermittent employment	0.087	0.225 ***	0.103	0.228 ***	
	(0.86)	(4.00)	(1.05)	(4.12)	
work outside establishments	0.250 ***	0.154 ***	0.244 ***	0.150 ***	
	(2.83)	(2.71)	(2.85)	(2.68)	
Currently married					0.278 **
					(2.24)
Parents' Educational Background:					
father educated					0.272 *
					(1.83)
mother educated					0.322
					(1.36)
Selectivity Correction (λ)			-0.302 **	-0.180	
			(-2.24)	(-1.29)	
R^2	0.307	0.168	0.315	0.170	
Log-likelihood	-390.2	-504.3	-377.9	-493.8	-585.9
Number of Observations	433	633	433	633	1,036

[1] Dependent variable =1 if protected, 0 if unprotected.

Statistical significance at the 1% level (***), the 5% level (**), and the 10% level (*) is marked.

Table 3 - Wage Equation Estimates for Private, Non-Agricultural Wage Workers , Females.

Dependent Variable: log-hourly wage.

Variable	OLS Wage Equations		Selectivity-Corrected Wage Equations		Selection Model[1]
	Protected	Unprotected	Protected	Unprotected	
constant	-1.348 ***	-1.264 ***	-1.162 ***	-1.337 ***	-6.527 ***
	(-6.93)	(-9.33)	(-2.94)	(-9.53)	(-5.08)
age					0.305 ***
					(3.96)
age²/100					-0.395 ***
					(-3.59)
experience	0.021	0.028 *	0.016	0.022	
	(1.10)	(1.67)	(0.78)	(1.31)	
experience²/100	0.007	-0.076	0.022	-0.061	
	(0.10)	(-1.49)	(0.30)	(-1.23)	
Educational Attainment:					
read and write	0.223	0.032	0.194	-0.032	0.623 *
	(0.76)	(0.19)	(0.69)	(-0.18)	(1.70)
primary	0.315	0.417 *	0.195	0.305	1.552 ***
	(1.12)	(1.66)	(0.56)	(1.19)	(3.54)
preparatory	0.266	-0.070	0.176	-0.094	1.241 ***
	(1.03)	(-0.39)	(0.60)	(-0.54)	(3.40)
general secondary	0.939 ***	0.051	0.808 **	-0.038	1.812 ***
	(3.10)	(0.15)	(2.15)	(-0.11)	(3.46)
vocational secondary					1.838 ***
					(6.43)
voc. sec., blue collar	0.434 *	0.310	0.334	0.198	
	(1.78)	(1.56)	(1.13)	(0.97)	
voc. sec., white collar	0.382 *	-0.037	0.271	-0.157	
	(1.88)	(-0.24)	(0.96)	(-0.92)	
technical institute	0.232	0.062	0.130	-0.047	1.630 ***
	(0.77)	(0.25)	(0.38)	(-0.19)	(3.72)
university and above	1.184 ***	0.391 **	1.055 ***	0.169	1.851 ***
	(6.12)	(2.00)	(3.47)	(0.70)	(6.29)
Region of Residence:					
Alexandria and Suez Canal	-0.045	-0.228 *	-0.039	-0.215	-0.040
	(-0.32)	(-1.67)	(-0.30)	(-1.63)	(-0.17)
Urban Lower Egypt	-0.143	-0.460 ***	-0.127	-0.411 ***	-0.322
	(-0.79)	(-3.21)	(-0.73)	(-2.88)	(-1.23)
Urban Upper Egypt	-0.374	-0.729 ***	-0.379 *	-0.698 ***	0.062
	(-1.52)	(-3.97)	(-1.64)	(-3.90)	(0.16)
Rural Lower Egypt	-0.074	-0.354 ***	-0.027	-0.257 *	-0.800 **
	(-0.27)	(-2.64)	(-0.10)	(-1.74)	(-2.36)
Rural Upper Egypt	-0.257	-1.043 ***	-0.266	-0.991 ***	-0.220
	(-0.76)	(-3.80)	(-0.83)	(-3.68)	(-0.32)
Job-Related Variables:					
intermittent employment	-0.506	0.426 ***	-0.458	0.430 ***	
	(-1.16)	(3.11)	(-1.10)	(3.30)	
work outside establishments	0.410	0.333 **	0.402	0.364 ***	
	(0.64)	(2.30)	(0.68)	(2.60)	
Household-related Variables:					
currently married					0.195
					(0.85)
other protected private, non-agricultural workers in household					0.660 ***
					(2.94)
other unprotected private, non-agricultural workers in household					-0.260
					(-1.26)
Selectivity Correction (λ)			-0.107	-0.257	
			(-0.53)	(-1.42)	
R^2	0.435	0.265	0.436	0.273	
Log-likelihood	-110.1	-147.0	-99.8	-136.0	-156.0
Number of Observations	140	181	140	181	321

[1] Dependent variable =1 if protected, 0 if unprotected.

Statistical significance at the 1% level (***), the 5% level (**), and the 10% level (*) is marked.

Table 4 - Decomposition of Mean Protected/Unprotected Wage Differentials, Males.

A- Results from OLS Estimates of Wage Equations

	$\bar{e}$	$\bar{u}$	$\bar{y}_P - \bar{y}_U$
Constant	0.000	-0.064	-0.064
		(0.162)	(0.162)
Human Capital Variables	0.152	0.344	0.496
	(0.024)	(0.139)	(0.142)
Regional Variables	0.031	-0.132	-0.101
	(0.009)	(0.050)	(0.049)
Job-related Variables	-0.111	-0.013	-0.123
	(0.028)	(0.039)	(0.035)
All Variables	0.072	0.136	0.208
	(0.034)	(0.044)	(0.041)

B- Results from Selectivity-Corrected Wage Equation Estimates.

	$\bar{e}$	$\bar{u}$	$\bar{e} + \bar{u}$	$\bar{d}$	$\bar{y}_P - \bar{y}_U$
Constant	0.000	0.451	0.451		
		(0.279)	(0.279)		
Human Capital Variables	0.097	0.216	0.314		
	(0.039)	(0.200)	(0.205)		
Regional Variables	0.027	-0.132	-0.104		
	(0.009)	(0.050)	(0.049)		
Job-related Variables	-0.113	-0.009	-0.122		
	(0.027)	(0.038)	(0.034)		
All Variables	0.011	0.528	0.539	-0.331	0.208
	(0.047)	(0.159)	(0.135)	(0.129)	(0.041)

Note: Symbols are defined in the body of the paper.
Standard errors are in parentheses.

Table 5 - Decomposition of Mean Protected/Unprotected Wage Differentials, Females.

A- Results from OLS Estimates of Wage Equations

	$\bar{e}$	$\bar{u}$	$\bar{u}_{fm}$	$\bar{u}_{ff}$	$\bar{y}_P - \bar{y}_U$
Constant	0.000	-0.084	-0.064	-0.020	-0.084
		(0.237)	(0.162)	(0.287)	(0.237)
Human Capital Variables	0.222	0.365	0.433	-0.067	0.588
	(0.061)	(0.203)	(0.118)	(0.234)	(0.215)
Regional Variables	0.056	0.133	-0.094	0.227	0.188
	(0.028)	(0.065)	(0.037)	(0.075)	(0.063)
Job-related Variables	-0.100	-0.101	-0.002	-0.099	-0.200
	(0.149)	(0.112)	(0.015)	(0.113)	(0.042)
All Variables	0.179	0.314	0.273	0.041	0.492
	(0.149)	(0.123)	(0.068)	(0.141)	(0.075)

B- Results from Selectivity-Corrected Wage Equation Estimates.

	$\bar{e}$	$\bar{u}$	$\bar{u}_{fm}$	$\bar{u}_{ff}$	$\bar{e}+\bar{u}$	$\bar{d}$	$\bar{y}_P - \bar{y}_U$
Constant	0.000	0.175	0.451	-0.276	0.175		
		(0.419)	(0.279)	(0.504)	(0.419)		
Human Capital Variables	0.165	0.388	0.318	0.069	0.553		
	(0.091)	(0.282)	(0.174)	(0.331)	(0.314)		
Regional Variables	0.046	0.119	-0.095	0.214	0.165		
	(0.029)	(0.064)	(0.037)	(0.074)	(0.064)		
Job-related Variables	-0.109	-0.101	-0.001	-0.100	-0.210		
	(0.139)	(0.104)	(0.014)	(0.106)	(0.041)		
All Variables	0.102	0.581	0.674	-0.093	0.683	-0.191	0.492
	(0.167)	(0.249)	(0.169)	(0.301)	(0.167)	(0.154)	(0.075)

Note: Symbols are defined in the body of the paper.
Standard errors are in parentheses.

The Economic Research Forum for the Arab Countries, Iran and Turkey (ERF) was established in June 1993 as an independent, non-profitmaking regional networking organization. Its mission is to promote policy-relevant economic research with a broad representation of views, and to help activate the policy-formulation debate in the region - by encouraging and funding quality research, and disseminating results of research activities to economists and policy-makers.

The ERF *Working Papers Series* disseminates the findings of research work in progress to promote the exchange of ideas, and encourage discussion and comment among researchers for timely revision and application by the author(s).

The *Working Papers* are a prepublication outlet intended to make preliminary research results available with the least possible delay. They are therefore subject to light editing *only* when strictly necessary, and ERF accepts no responsibility for errors.

ECONOMIC
RESEARCH
FORUM
FOR THE ARAB COUNTRIES, IRAN & TURKEY

7 Boulos Hanna Street, Dokki, Cairo, Egypt
Tel : (202) 3370810 - (202) 3485553 - (202) 3602882. Fax : (202) 3616042 or (202) 3602882
E-mail : HANDOUSA @ AUC-ACS.EUN.EG or ERF @ IDSC.GOV.EG