Research Department **Bank of Israel**

Testing Self-Selection in Transitions between the Public Sector and the Business Sector

Yuval Mazar*

Discussion Paper No. 2008.07

July 2008

* I am indebted to Gould Eric for advices; Frish Roni for remarks; Yehuda Porat for help and participants of seminars at the Bank of Israel and the Hebrew University for useful comments.
Bank of Israel, Research Department. Phone: 972-2-655-2695; E-mail YuvalM@boi.gov.il

מחלקת המחקר, בנק ישראל ת"ד 780 ירושלים 91007
Research Department, Bank of Israel, POB 780, 91007 Jerusalem, Israel

בחינת המיון העצמי של עובדים על ידי המעברים בין המגזר הציבורי למגזר העסקי

תקציר

נראה שהשכר בשירותים הציבוריים רגיש פחות לתפוקות ולמיומנות האישית של העובדים בהשוואה למגזר העסקי, שכן האחרון מטבעו בנוי מהשאת רווח ופועל בעיקר על סמך שיקולים כספיים. מאמר זה בוחן האם שכר שפחות רגיש לתפוקה או למיומנות מושך עובדים מוכשרים פחות, ולהיפך: האם שכר רגיש יותר מושך עובדים מוכשרים יותר. בעזרת המפקד המשולב של 83-95 בוחן המאמר האם העובדים שעזבו את השירותים הציבוריים לטובת המגזר העסקי במהלך השנים הללו היו מוכשרים יותר בהשוואה לאלו שנשארו בשירותים הציבוריים – משמע סלקטיביות חיובית בעזיבת השירותים הציבוריים; והאם העובדים שעזבו את המגזר העסקי לטובת השירותים הציבוריים היו מוכשרים פחות בהשוואה לאלו שנשארו במגזר העסקי – משמע סלקטיביות שלילית. הממצאים האמפיריים מאשרים שאלות אלו: העובדים שעזבו את המגזר הציבורי מיונו חיובית, בעיקר גברים; לעומתם, העובדים שעזבו את המגזר העסקי מיונו שלילית. בראייה כוללת יותר, הממצאים מחזקים את ההיפותזה של Borjas לפיה הסלקטיביות של מהגרים תלויה באי-שוויון בשכר בארץ מוצאם וביעדם.

Testing Self-Selection in Transitions between the Public Sector and the Business Sector

Yuval Mazar

Abstract

This paper tests the Incentive Theory predictions that wages which are less sensitive to performance or skill attract lower quality workers, and wages which are more sensitive attract higher quality workers. A longitudinal dataset of individuals moving from the Israeli public sector to the Israeli business sector or vice versa, is used to test whether and to what extent relative equal-sharing discourages participation of productive individuals. The findings provide evidence of a negative selection among those switching from the business sector to the public sector, and a positive selection among those moving in the opposite direction, especially among men. Entrants to the public sector from the business sector were negatively selected in their conditional pre-entry earnings – identified as skills – compared to non-leavers. Individuals who left the public sector were positively selected by their skills compared to the workers who stayed. At the broader level, these findings provide micro level empirical support for Borjas' hypothesis that migrants' self-selection depends on the difference in earnings inequality between the origin and the destination.

1. Introduction

The public sector (PS) is more equal sharing comparing to the business sector (BS, commonly called the private sector). This is reflected by a compressed wage structure and probably by less return for individual skill.

Two main predictions of Incentive Theory are that equal-sharing or team-based pay:

1) Encourages free-riders to stay (the incentive effect);

2) Discourages the entrance of high-ability individuals (the selection effect)[1]. Yet, there is little empirical work on the selection effect, mainly because of data limitations[2]. This paper contributes to the literature by empirically addressing the question of whether, and to what extent, equal-sharing discourages participation of high-ability individuals. Specifically, I ask: are individuals who leave equal-sharing arrangements, namely the public sector, positively selected in their ability? And, are entrants to equal-sharing arrangements negatively selected?

A unique panel data set of individuals exiting and entering equal-sharing arrangements is analyzed. These data on individuals linked across population censuses allow me to test for selection in both exit from and entry to PS positions which offer their members a relative equal-sharing, i.e. rank-based pay which is less sensitive to performance compared to BS.

I test the hypothesis thin PS-to-BS transitions are positively selected and BS-to-PS transitions are negatively selected. My empirical analysis partly supports the selection hypothesis. Specifically, male-movers from PS are more skilled than stayers, as they earn higher conditional wages upon exit than observably similar individuals. In contrast, entrants to the public sector earn lower conditional wages than individuals who have stayed in BS. Moreover, following the approach developed in Finkelstein and McGarry (2003) and Finkelstein and Poterba (2006), I rely on observable characteristics that are not used by the public sector in the application process. I then

[1] A classic reference to the incentive effect of equal-sharing is Holmstrom (1982). Lazear (1986, 2000a, 2000b) highlighted the selection effect of pay schemes.

[2] The (slight) evidence provides a mixed answer to this question. Weiss (1987) finds that, in the context of workers in a pharmaceutical company, both high-ability and low-ability workers are more likely to leave than medium-ability workers. Lazear (2000a) finds that the average quality of workers in an auto glass company increased after the introduction of piece-rate pay. See also Prendergast (1999) for a survey of the literature on the provision of incentives in firms.

document the presence of adverse selection attributable to asymmetric information between the applicant and the PS.

In addition, the selection pattern is vary across genders. I show that negative selection patterns in exit PS is driven typically by men.

I also examine transitions within the business sector itself as well as within the PS, and compare them to the transition between the two sectors. The assumption is that workers who changed their jobs expect to increase their wage significantly more than workers who haven't changed their jobs, otherwise they would have stayed. The empirical results reveal that the selection patterns remain after checking separately the workers who have changed their occupation and the workers who have not.

I then evaluate the hypothesis that individuals who plan to leave PS are not more able, but simply invest more in their human capital. In particular, older movers who arguably made their investment in human capital years ago were examined. Again, selection of movers in all age groups is found, especially for younger workers.

Apart from empirically testing the selection effect of compensation schemes, this paper contributes directly to the migration literature by addressing some of its main questions. Are migrants positively or negatively selected from their source country? How do migrants perform in terms of their earnings as compared to the native population? These questions have generated a great deal of attention and dispute over the last few decades (prominent contributions include Chiswick (1978), Borjas (1987) and Chiquiar and Hanson (2005)). The goal of this paper is to test a well-known and much-disputed hypothesis, according to which positive self-selection of migrants is expected when the place of origin has a more equal earnings distribution than the destination, while a negative self-selection is expected when the place of origin has a more unequal earnings distribution (Borjas (1987, 1991, 1994)).

Todaro (1969) and Harris and Todaro (1970) are the first to present a model in which the decision to migrate results from the rational comparison of the expected costs and benefits of migration. In both models, the difference on average expected earnings between countries or regions of destination and countries or regions of origin plays a key role and is predicted to have a positive effect on migration flows. However this kind of model is unable to explain key stylized facts, such as migration flows to and from particular regions or countries.

Borjas (1987) and, more recently, Dahl (2002) have adopted a rather different approach, based Roy's (1951) seminal paper. In Roy’s framework, workers select

themselves in income earning activities on the basis of their comparative advantage. Applied to residential choice, this model explains migration not by average expected earning differentials, but rather by differences in individual expected returns to skills that are either observed or unobserved by the econometrician. As a result, migration flows are not necessarily one-sided. Another conclusion of this literature is that migrants' self selection should be taken into account when estimating the returns to human capital in countries where the flow of migrants is significant. Dahl (2002) for instance, in a study of migration between states of the USA, estimates a Roy model and finds that correcting for selection bias substantially changes the estimated returns to education in a sense that supports the role of comparative advantage in mobility decisions. He also finds that migration flows depend positively on the differences in the corrected returns to education.

According to Borjas, positive (negative) selection occurs when individuals with high (low) skill levels leave the country of origin and outperform (underperform) the natives in the country of destination in terms of earnings. The basic idea is that a country with a low level of earnings inequality "insures" low-skilled individuals and "taxes" high-skilled individuals.

However, the empirical relevance of this conjecture has been questioned (Chiswick (1999), Chiswick (2000) Liebig and Sousa-Poza (2003) Chiquiar and Hanson (2005)). First, migrants are observed only at the destination, but self-selection of migrants should be compared to that of non-migrants[3]. Second, few studies have found evidence of the negative selection of migrants, regardless of whether the migrants come from origins with high or low income inequality.

The longitudinal data for individuals linked across the 1983 and 1995 Israeli population censuses allows us to test Borjas' hypothesis directly while avoiding the above-mentioned critiques. First, I observe 'migrants' in both the origin and the destination and, thus, can compare them to non-migrants[4]. Second, in the period of study (1983-1995), PS offered equal-sharing and, as such, they offered lower skill

[3] Chiswick (1978), Carliner (1980), Borjas (1987), Chiquiar and Hanson (2005), and the surveys by Borjas (1994), Chiswick (1999), Burda, Härdle, Müller, and Werwatz (1998) and Liebig and Sousa-Poza (2003) overcome these limitations by employing data on the intention to migrate.

[4] Gabriel and Schmitz (1995) also study internal migration and, thus, do not face policy restrictions. Their study, however, only observes individuals at one point in time.

premium than do Israeli BS. Thus, PS-to-BS movers are moving from an origin with low earnings inequality to a destination with high earnings inequality, and business to public movers are moving from high-inequality origin to low-inequality destination.
This paper provides empirical support, at the individual level, for Borjas' hypothesis. However, the analysis reveals that the type of selection is not necessarily the same for all movers and it may vary with age, education earning and gender.
This paper also contributes to an understanding of organizations that are subject to self selection. These include professional partnerships, cooperatives, and labor managed firms, which are often based on revenue-sharing.[5] The paper explicitly investigates the relative quality of partners in exit and entry.
The remainder of the paper is organized as follows: section 2 briefly sums the recent literature associated with the public sector and business sectors comparisons. Section 3 provides the theoretical framework based on Borjas' selection hypothesis for migrants as well as a simple model which demonstrates the differences in rewards between the two sectors. Section 4 describes the methodology, critical assumptions and hypotheses. The environment and data sources used in the analysis are described in Section 5. Section 6 presents a statistical description of the data. Section 7 tests the hypothesis thin PS-to-BS (BS-to-PS) movers are positively (negatively) selected compared to stayers and evaluates the hypothesis that equal-sharing encourages productive individuals to exit (against alternative hypotheses). The empirical section also examines differences in selection patterns across genders and education levels. Section 8 checks other model of self selection. Section 9 further investigates positive selection in exit by testing whether, upon exit; PS-to-BS (BS-to-PS) movers earned higher (lower) wage' increase than public (business) stayers. Section 10 discusses some critiques of the theoretical model and the empirical results and section 11 concludes.

[5] Theretical contributions include Ward (1958), Farrell and Scotchmer (1988), Kandel and Lazear (1992), Kremer (1997), and Levin and Tadelis (2005). The studies by Craig and Pencavel (1992), and Gaynor and Gertler (1995) focus on the effect of revenue sharing on productivity; Craig (1994) focuses on a cooperative's response to shocks compared to conventional firms; Lamoreaux (1995) studies the choice between partnerships and other forms of organization in early 19th century American business; Garicano and Hubbard (2005) study law firms' field boundaries.

2. Related Literature Review

The literature about the relationship and the differences between the two sectors employment is quite wide. This section briefly sums the recent findings. For a wide review of the wage differentials between the public and business sectors see Bender 1998, which summarizes articles that examine the development of those differentials post Nineties. The paper surveys the common techniques (such as like dummy variables or the Double Equation Technique), macro and micro analysis, and researches from developed as well as developing countries.

Burgess (2003) reviewed the important issues in performance pay in public sector as he summarized the main explanations for the infrequent use of explicit incentive in the public sector; among them: Multiple Principals, Intrinsic Motivation, Teamwork, Measurement and Monitoring, and finally Several Tasks.

Kruger and Kats (1991) find that the wage structure in the U.S. public sector responded slowly to significant changes in private sector wages during the 1970s and 1980s. Despite a large expansion in the college/high school wage differential during the 1980s in the private sector, the public sector college wage premium remained fairly stable. Regional pay levels in the Federal government appear unaffected by local economic conditions. Kruger and Kats point to several possible explanations to account for the rigidity of the government's internal wage structure, including employer size, unionization, and nonprofit status. None of these factors adequately explain the pay rigidity they observed in the government.

Employing data from the General Household Survey (GHS) for the years 1983, 1985, and 1987, Rees and Shah (1995) estimate the average wage gap for males, using a single equation model with a sector dummy, to be between 9.8 and 11.4 percent. The difference is even larger for females and lies between 22.3 and 26.3 percent. A simple Oaxaca decomposition into explained (differences in characteristics) and unexplained (returns to characteristics) parts shows that most of the male gap is due to differences in characteristics between public and private sector employees. Yet, for females their results suggest that the substantial earnings differential is solely due to a positive wage premium.

Disney and Gosling (1998) use data from both the GHS and the British Household Panel Survey (BHPS) for the years 1983 and the early 1990s. Simple OLS estimation, with a dummy for public sector employment and conditional on age and education, reveals that the pay differential for males has fallen from 5 to 1 per cent and increased

from 11 to 14 per cent for women from the mid-1980s to the early 1990s. Furthermore, applying quantile regressions on the wage distribution, the authors find an increase in the income dispersion. Interestingly, this increase is not confined to the public sector but occurs in both sectors. However, as one would expect, income inequality in the public sector is less pronounced than in the private.

Borjas (2002) uses data from the U.S. Decennial Census and the Current Population Surveys to document the differential shifts that occurred in the wage structures of the public and private sectors between 1960 and 2000. He finds that the wage gap between the typical public sector worker and a comparable private sector worker was relatively constant for men during this period, but declined substantially for women.

He reports further that wage dispersion in the public sector was increasing relative to wage dispersion in the private sector prior to 1970, at a time when public sector employment was rising rapidly. Since 1970 there has been a significant relative compression of the wage distribution in the public sector. He suggests that the different evolutions of the wage structures in the two sectors are an important determinant of the sorting of workers across sectors and as a result of the relative wage compression, the public sector found it increasingly more difficult to attract and retain high-skill workers.

Bender (2003) estimates separate wage equations for public and private sector distinguishing males and females. Furthermore, the author controls for possible sample selection due to the sector choice of employees. In addition to the usual decomposition of the average wages between the sectors, a decomposition technique based on Belman and Heywood is applied that takes differences in the wage distribution into account. Applying data from the British SCELI survey in 1986, Bender finds that males at the low end of the public sector pay distribution are better off than their private counterparts whilst high-paid private sector males earn more than high-paid public employees. Yet, there is no evidence for this "double imbalance" in the female wage distribution. Furthermore, the results of the simple Oaxaca decomposition show that much of the difference in average wages is due to differences in returns rather than characteristics.

Aysit (2004) examines the factors which explain the employment choice and the wage differentials in the public administration and the formal private wage sector in Turkey. He suggests that for men, when controlling for observed characteristics and sample selection, public administration wages are higher than private sector wages

except at the university level where the wages are similarity. Similar results are obtained for women. Further, while wages of men and women are at parity in the public administration, there is a large gender wage-gap in the private sector in favor of men. Private returns to schooling are found to be lower in the noncompetitive public rather than in the competitive private sector.

Heitmueller (2004) analyzes the public-private sector wage gap in Scotland in 2000 by using the extension sample of the British Household Panel Survey (BHPS). He states that the unadjusted wage gap is shown to be 10 per cent for males and 24 per cent for females. For males this is mainly due to differences in productive characteristics and selectivity. For females the picture is more ambiguous. Findings also suggest that there exists a substantial wage premium for male private sector employees. While there is no evidence of a sample selection bias for females, the sector choice of males is systematically correlated with unobservables. He also finds that expected wage differentials between sectors are an important driving force for sectoral assignment.

Lucifora and Meurs (2004) analyze public-private pay determination using French, British and Italian microdata. Unlike traditional methods which focus on parametric methods to estimate the public sector pay gap, they use both non-parametric (kernel) and quantile regression methods to analyze the distribution of wages across sectors. They show that the public-private (hourly) wage differential is sensitive to the choice of quantile and that the pattern of premium varies with both gender and skill. In all countries the public sector is found to employ more low skilled workers relative to the private sector, whilst the reverse is true for high skilled workers; they find that these effects are more pronounced for females.

Poutvaara and Wagener (2004) ask why the public sector is more labor-intensive than private companies. They suggest that a distortion of the tax structure provides some explanations to the puzzle.

Dell'Aringa et al (2005) investigate the regional public-private wage differentials in Italy, following the reforms that significantly changed wage setting and employment relations in both sectors – increasing decentralization in collective bargaining and enforcing a "privatization" of public sector employment contracts. They present estimates of the public-private wage gap by geographical location, and report both 'standardized' public-private wage differentials, as well as estimates obtained using geographically weighted regression methods. They show that significant differences

exist in public-private wage differentials across Italian regions, and that the latter can be partly explained by local labor market conditions affecting the private sector but only marginally affecting the public sector. They state that differences in public-private wage differentials across regions are expected to cause imbalances in terms of 'wait' unemployment and recruitment problems in the different areas.

Chatterji et al (2007) use new linked employee-workplace data for Britain in 2004, and find that the nature of the public private pay gap differs between genders and that of the gender pay gap differs between sectors. They show that little or none of the gender earnings gap in both the public and private sector can be explained by differences in observable characteristics, and revealed that the contribution of differences in workplace characteristics to the public private earnings gap is sizeable and significant. They also expose that the presence of performance related pay and company pension schemes is associated with higher relative earnings for those in the private sector, and an important workplace characteristic for the public private pay gap is the presence of family-friendly employment practices. Increased provision is especially associated with higher relative earnings in the public sector for women.

Chatterji and Mumford (2007) examine the public-private sector wage differential for full-time male employees in Britain, in a framework where relative employment conditions have changed across the public and private sectors in Britain over the last decade with the former becoming a more attractive earnings option. They use the same data of employee-employer for Britain in 2004, and report that, on average, full-time male public sector employees earn 11.7 log wage points more than their private sector counterparts, and expose that the majority of this pay premium is associated with public sector employees having individual characteristics associated with higher pay and to their working in higher paid occupations. They reveal some evidence of workplace segregation in the private sector and little indication that rates of return vary across the earnings distribution for either public or private sector employees. They find that it no longer appears to be the case that the public sector provides a refuge for the low skilled at the expense of the highly educated and that working conditions appear more uniform in the public sector and, unlike the private sector, there is no significant penalty associated with ethnic background.

Earle and Telegdy (2007) estimate public-private (and foreign-domestic) differentials by using linked employer-employee data from Hungary, 1986–2003. They find that ownership type is highly correlated with characteristics of both workers (education,

experience, gender, and occupation) and firms (size, industry, and productivity); suggesting ownership type is systematically selected along these dimensions. The large unconditional wage gaps in the data, 0.24 for public-private, are barely affected by conditioning on worker characteristics, but controlling for industry reduces the public premium to 0.16, and controlling for employment size further reduces it to 0.07. They exploit the presence of 3,700 switches of ownership type in the data to estimate firm fixed-effects and random trend models, accounting for unobserved firm characteristics affecting the average level and trend growth of wages. These controls have little effect on the conditional public-private gap. The results imply that the substantial unconditional wage differentials are mostly, but not entirely, a function of differences in worker and firm characteristics.

Blanchflower and Bryson (2007) looked at an increase in the size of the union membership wage premium in the UK public sector relative to the private sector and investigated the wage impact of trade unions in the UK public and private sectors. They find that the public sector membership wage premium is approximately double that of the private sector when controlling for a full range of individual, job and workplace characteristics. By using data from the LFS of 1993-2006 they note that the gap between the membership premium in the public and private sectors closes with the addition of three digit occupational controls, although significant wage premium remain in both sectors. On the other hand, by using data from the Workplace Employment Relations Survey of 2004, they estimate that the public sector union membership wage premium remains roughly twice the size of the private sector membership premium, having accounted for workplace fixed effects, workers' occupations, their job characteristics, qualifications and worker demographics. They finally state that the membership wage premium among workers covered by collective bargaining is only obvious in the public sector.

Researches in Israel

Abramitzky (2007) uses a longitudinal dataset of individuals entering and exiting Israeli Kibbutzim to test whether and to what extent equal-sharing discourages participation of productive individuals. He finds evidence for negative selection in entry to the equal-sharing communities and positive selection in exit.

Gould and Moav (2007) examine the rate of emigration from Israel in the years 1995 to 2004. They find that the probability of emigrating from Israel is 2.5 times higher

for educated individuals (individuals with a bachelor's degree or higher) than those with less education. They note that the group with the highest rate of emigration from Israel is senior faculty members – more than doctors, engineers, or any other profession.

Ben-David (2008) estimates the rate of academic emigration from Israel to the United States is unparalleled in the western world. He states that the number of Israelis in the top 40 American departments in physics, chemistry, philosophy, computer science and economics, as a percentage of their remaining colleagues in Israel, is over twice the overall academic emigration rates (at all levels) from European countries. The steady multi-decade per capita reduction in faculty positions, the constant erosion in salaries and the stagnation fed by an absence of strategic vision at the national level, combined with a pervasive culture of micro-management, are all part of a massive policy breakdown that has resulted in one of the greatest academic brain drains on record.

Shalev (2007, not published) and Kraus (1992) find that women and Arabs are overrepresented in the public sector; they explain this by lower level of pay discrimination and greater access to part-time jobs.

Neuman and Cardoso (2007) use a unique eight-year data set, merging population census and national insurance data, to examine and compare patterns of wage mobility in Israel. The public and the private sectors are compared, and then a distinction is made within each of these sectors between sub-sector groupings that exhibit a high level of concentration and those that are more diffuse and unregulated. The main finding of the paper is that the extent of wage mobility in a given economic sector is negatively related to the degree of concentration in that sector. Particularly they find that private sector wage mobility is substantially in excess of wage mobility in the public sector.

3. Theoretical Framework

The theoretical prediction that equal-sharing discourages participation of high-ability individuals is straight forward. High-ability workers are more likely to be attracted to pay-for-performance schemes and low-ability workers are more likely to be attracted to rank-based pay (more equal-sharing). This is a straight forward prediction of standard incentive theory.

The simple theoretical framework in this section is intended to illustrate how the migration literature uses this insight in the context of selection of workers to and from origins where sharing is more equal.

Borjas (1987), Chiquiar and Hanson (2005) and De Vreyer et al. (2007) show that migrants' selection depends on the differences in earnings inequality between the origin and the destination. Migrants from origins with low earnings inequality are expected to be positively selected (i.e. they have higher-than-average skill); migrants from origins with high returns to skill and earning inequality are negatively selected (they have lower-than-average skill).

To illustrate, assume that individuals from PS (indexed by 0) choose whether to move to BS (indexed by 1). Assume that the market involves earning equality:

1.

$$\ln(W_i) = Int_i + \delta_i S$$
$$i = 0,1$$
$$\delta_0 < \delta_1, Int_0 > Int_1$$

where S is the level of skill (informal one, talent or ability), and δ_i is the return to skill, i.e. BS is better pay for skill .Unlike Chiquiar and Hanson (2005), I focus mainly on movers' selection over unobservable skills (residual wage), that is, movers' unobservable (to the researcher) characteristics that are associated with a higher (or lower) level of earnings.

Incentive Theory predicts thin PS workers move to BS if

2.

$$W_1 = Int_1 + \delta_1 S > Int_0 + \delta_0 S + C = W_0 + C$$

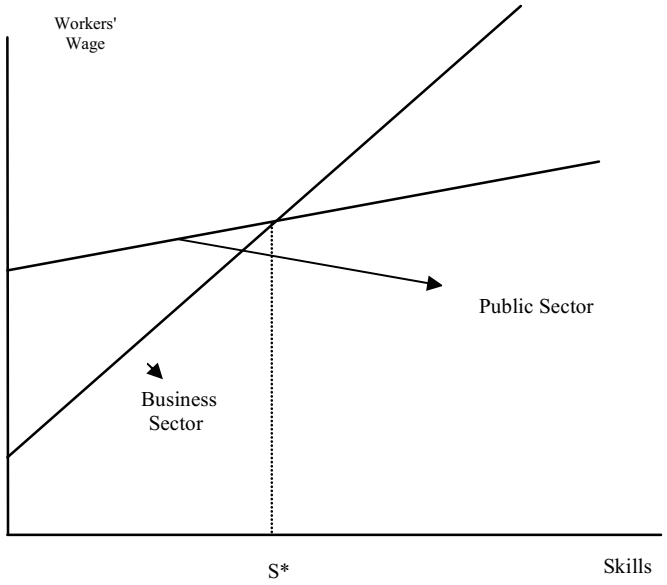
where C represents migration costs, it includes both direct costs and indirect costs. Here it represents the cost of changing work place framework and even occupation.

Equation 2 defines a cutoff skill level S^* above which workers would move to BS. That is, we expect PS-to-BS movers to be positively selected from PS population. This is illustrated in Figure 1, which shows the prediction that workers with a skill level below S^* remain in PS, and workers with a skill level above S^* move to BS.

The BS-to-PS transitions can be described similarly. Because PS offers lower returns to skill and higher earning equality, we expect BS-to-PS movers to be negatively selected from the business workers. A main difference here is that the public sector is

probably well-aware of the tendency of low-skilled individuals to attempt to enter and does not admit applicants with (observed) skill levels below e^*. However, individuals may have private information on their skills (unobserved by the employers) and enter if their privately observed skills are low (adverse selection). The census data used in this study contain information on pre-entry earnings that were unobserved or overlooked by employer in the public sector. Hence, I have information available only to the more informed party, which enables me to test for adverse selection in entering the public sector.

Figure 1



Beside the incentive effect, there is an opposite factor which can affect the decision to leave any job. On the one hand, a high comparative wage suggests high skill, which according to the theory and following the assumptions, should cause the worker to leave PS; but on the other hand, a high comparative wage may also suggest that the worker acquired specific knowledge or specific human capital, which increases the productivity only in his/her current job and which is not easily transferable. The latter case decreases the probability of separation[6]. For the rest of the paper this is defined as the job training effect. When the workers are employed in PS the two effects counter each other and the net influence of a high comparative wage is not clear. Possibly adding a quadratic phrase of the workers wages, which allows the correlation

[6] This is another way to interpret the negative correlation in [18] ($E(\upsilon_i|\varepsilon_i) < 0$), see below.

between the sector's transitions and the selection bias to not be monotonous across the workers' attributes, improves the assessment of the marginal effect. However, when the workers are employed in the business sector the two effects reinforce each other, thus adding a quadratic phrase to the empirical econometric models is to check whether the relationship is linear or non-linear.

To illustrate, return to [1], for worker *i*:

3.

$$W_{i,j} = Int_{j,1} + \gamma_j S_{s,i,j} + \delta_j S_{g,i}$$
$$j = 0,1$$

where S_s is for specific skill and S_g is for general skill, $\gamma_j > 0$.

A worker will move from PS to BS if and only if

$$Int_1 + \delta_1 S_{g,i} - (Int_0 + \gamma_0 S_{s,i,0} + \delta_0 S_{g,i}) - C > 0$$
$$\Delta Int + \Delta\delta \cdot S_{g,i} - \gamma_0 S_{s,i,0} - C > 0$$
$$or$$
$$\Delta\delta \cdot S_{g,i} > \gamma_0 S_{s,i,0} + C - \Delta Int$$
$$Benefit > Cost$$

where

$$\Delta\delta = \delta_1 - \delta_2 > 0,$$
$$\Delta Int = Int_1 - Int_0 < 0$$

Thus when workers are employed in PS, high specific skill affects the decision to leave in an opposite direction of high general skill. If so, the ratio $\frac{S_g}{S_S}$ or the gap $S_g - S_S$ are the effective parameters.

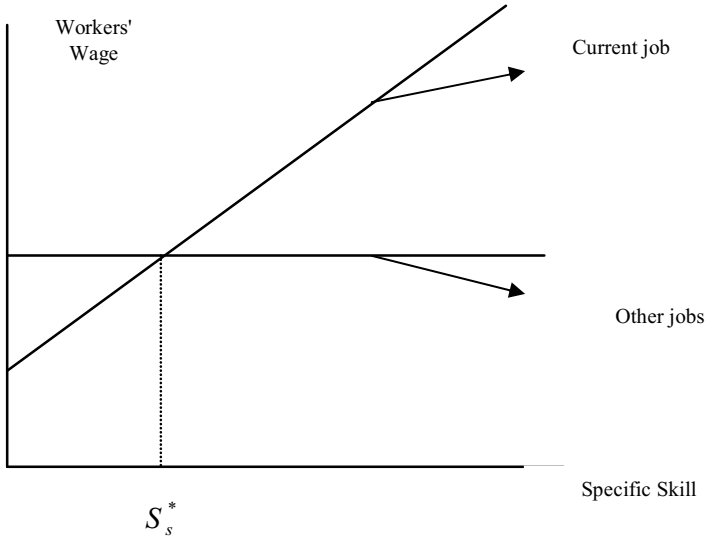
However, a worker will move from BS to PS if and only if

$$Int_0 + \delta_0 S_{g,i} - (Int_1 + \gamma_1 S_{s,i,1} + \delta_1 S_{g,i}) > 0$$
$$-\Delta Int - \Delta\delta \cdot S_{g,i} - \gamma_0 S_{s,i,0} - C > 0$$
$$Or$$
$$-\Delta Int > \Delta\delta \cdot S_{g,i} + \gamma_0 S_{s,i,0} + C$$

Thus when workers employed in BS, high specific skill affects the decision to leave in the same direction of high general skill – a negative influence.

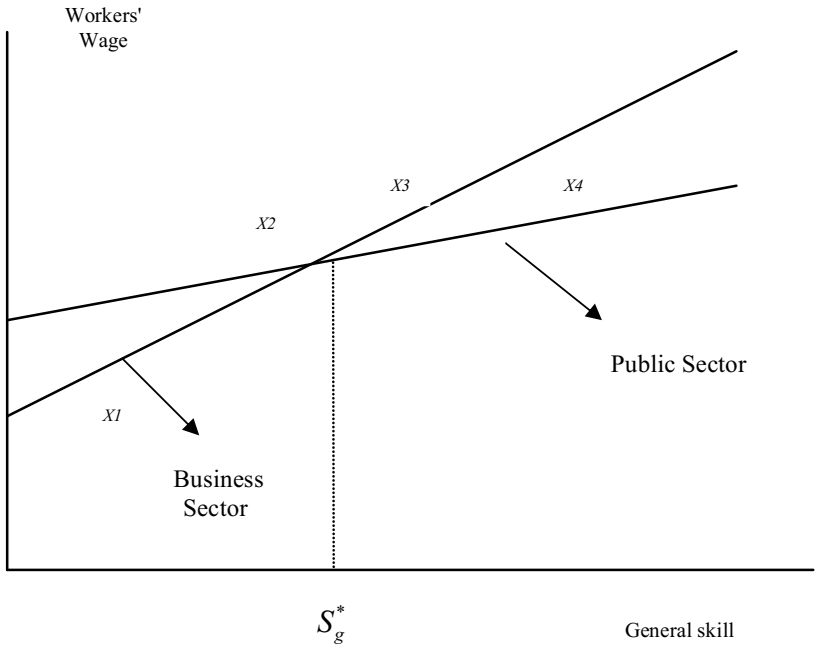
Figure 2 presents the worker's wage as a function of the worker's specific skill in the current job and other jobs.

Figure 2



The combination of the incentive effect and the job training effect is presented in figure 3. The *X*s in figure 3 represent the workers wage in PS.

Figure 3



Once the model reflects worker 1 specific skill, $S_{s,i}$, it is better for him/her to work in the business sector although his/her general skill is below S_g^* (because his/her specific skill is low); conversely, for worker *3* it is better to work in the public sector although

his/her general skill is above S_g^* (because his/her specific skill is high). Incorporating the idea that some skills are firm-specific into the model can generate a non monotonous correlation between the residual wage and the likelihood of leaving.

Employees in the public sector may enjoy fringe benefits such as longer holidays, greater job satisfaction or superior pension schemes compared with business sector employees. In Israel (like many other countries), in addition to the effect of the return on skills', there is another phenomenon which probably amplifies the negative and the positive selections. This phenomenon occurs when employers provide their workers with *tenure* - job protection. The PS, unlike the BS (in most cases), provides its workers with tenure after a probationary period which often lasts two-four years (in certain places the duration of the probationary period is longer, for example - the academic staff). Once a worker is granted tenure her employer can not fire her[7]. Being tenured increases the workers' benefit from work, because otherwise the worker initially would not decide to work in this job. The critical assumption which creates the selections is that the benefit from receiving tenure is a decreasing function of the worker's skill, since as the worker is more skilled her chances of being fired without tenure decreases. In other words, this kind of insurance is especially necessary for less skilled worker and it provides them with greater benefits. The intuition can be depicted by a simple model.

Assume the utility of the worker in his job is:

4.

$$V(e_{i,j}) = U(W_{i,j}) + \beta\left(Sp \cdot V(u'_i) + (1-Sp) \cdot V(e'_{i,j})\right)$$

Such that

$$V(u_i) = U(b_t) + \beta\left((1-f) \cdot V(u'_i) + f \cdot V(e'_i)\right)$$

[7] This assumption is just to simplify, without any loss of generality it is possible to assume that the probability for separation is lower in PS compared to BS and the qualitative results would be not changed. A large literature documents the importance of self-reported job security on individual's well-being; see for example Hans De Witte, 1999, Francis Green 2006. Simon et al. (2008) studies the influence of the unemployment rate on workers who are employed by exploiting sector-specific institutional difference in the exposure to economic shocks, public servants against business employees.

Where $V(e_{i,j})$ is the benefit to the worker *i* from being employed at firm *j*, $V(u_i)$ is the benefit from being unemployed, $U(W_{i,j})$ is the utility derived from the wage of employed worker *i* at firm *j*, b is the unemployment benefits, β is the time discount rate, Sp is the probability of separation and *f* is the probability to find a job. *x*' denotes the next period.

Once workers receive tenure their employer can not fire them. This norm is captured here by substituting $Sp = 0$. Define the utility of workers' who received tenure as $\overline{V(e_{i,j})}$. Given that the worker is employed by firm *j*, by revealed preference, $V(e_{i,j}) > V(u_i)$. Hence

$$V(e'_{i,j}) > Sp \cdot V(u'_i) + (1 - Sp) \cdot V(e'_{i,j})$$
$$\Rightarrow$$
$$\overline{V(e_{i,j})} > V(e_{i,j})$$

Define the worker' utility derived from tenure as $U_i(T)$

5.

$$U_i(T) = \overline{V(e_{i,j})} - V(e_{i,j}) = \beta \cdot Sp \cdot \left(V(e'_{i,j}) - V(u'_i)\right)$$

Since the worker is voluntary employed, the phrase in parenthesis is positive. Now assume that the probability for being fired for those without tenure decreases with the workers' skills:

6.

$$Sp = f(\bar{S}_i)$$

where S_i is the individual skill of the worker, general plus specific skill. This assumption is intuitive.

Thus $U_i(T)$ is a negative function of the workers' skill. The hidden assumption is that $V(e_{i,j})$, which includes the worker's wage, is less sensitive than Sp to worker's skill. This property of providing workers with tenure encourages the less skilled workers to be employed in PS and may create or amplify the negative and positive selections in the transitions between the two sectors.

The next part combines the two effects.

A worker will prefer moving to a different job which does not provide her tenure if and only if

7.

$$V(e_{i,k}) > \overline{V(e_{i,j})} \Leftrightarrow$$
$$V(e_{i,k}) - \overline{V(e_{i,j})} > 0 \Leftrightarrow$$
$$U(\widetilde{W}_{i,k}) + \beta\left(Sp \cdot V(u'_i) + (1-Sp) \cdot V(e'_{i,k})\right) - U(w_{i,j}) - \beta\overline{V(e'_{i,j})} > 0$$
$$U(\widetilde{W}_{i,k}) - U(W_{i,j}) - \beta\left(\overline{V(e'_{i,j})} - Sp \cdot V(u'_i) - (1-Sp) \cdot V(e'_{i,k})\right) > 0$$
$$U(\widetilde{W}_{i,k}) - U(W_{i,j}) - \beta\left(\overline{V(e'_{i,j})} - Sp \cdot \left(V(u'_i) - V(e'_{i,k})\right) - V(e'_{i,k})\right) > 0$$
$$U(\widetilde{W}_{i,k}) - U(W_{i,j}) - \beta\left(Sp \cdot \left(V(e'_{i,k}) - V(u'_i)\right) + \left(\overline{V(e'_{i,j})} - V(e'_{i,k})\right)\right) > 0$$
$$U(\widetilde{W}_{i,k}) - U(W_{i,j}) - \beta\left(Sp \cdot \left(V(e'_{i,k}) - V(u'_i)\right)\right) > \beta\left(V(e'_{i,k}) - \overline{V(e'_{i,j})}\right)$$
$$\ldots\left(\beta^{t \to \infty} = 0\right)$$
$$\sum \beta^{t-1}\left(U(\widetilde{W}_{i,k}) - U(W_{i,j})\right) - \sum \beta^t \left(Sp_t \cdot \left(V(e_{i,k,t}) - V(u_{i,t})\right)\right) > 0$$
$$\Leftrightarrow$$
$$\sum \beta^{t-1}\left(U(\widetilde{W}_{i,k}) - U(W_{i,j})\right) > \sum \beta^t \left(Sp_t \cdot \left(V(e_{i,k,t}) - V(u_{i,t})\right)\right)$$

Substitute [3] in [7] we get

8.

$$\sum \beta^{t-1}\left(U(Int_1 + \delta_1 S_{g,i}) - U(Int_0 + \delta_0 S_{g,i} + \gamma_0 S_{s,i})\right) - C > \sum \beta^t \left(Sp_t \cdot \left(V(e_{i,k,t}) - V(u_{i,t})\right)\right)$$

A worker will work in BS only if the LHS of 8 is greater than the RHS of 8.

The two components mentioned are complementary:

The LHS $U(Int_1 + \delta_1 S_i) - U(Int_0 + \delta_0 S_{g,i} + \gamma_0 S_{s,i})$ decreases (increases) the demand for less (more) skilled workers to work in BS;

Sp in the RHS increases (decreases) the supply of the less (more) skilled workers available to work in PS.

Alternatively, think about two workers where one worker is less skilled from the other ($S_{g,0} < S_{g,1}$). Hence $Sp_{S0} > Sp_{S1}$. Thus in order to leave PS and enter BS the less skilled worker has to be offered a higher wage $\widetilde{w}_{0,j} > \widetilde{w}_{1,j}$. Following the assumption of the greater return for skill in BS, the probability of getting this offer for the less skilled worker is smaller, and vice versa.

4. Methodology

To test for selection in leaving, I submit probit regressions for workers who were employed in 1983 in PS that take the value 1 when an individual left PS between 1983 and 1995 and entered BS, and another set of regressions for workers who were employed in 1983 in BS that take the value 1 when an individual left BS between 1983 and 1995 and entered PS. This is a reduced form of individuals' decisions whether to stay or leave. Specifically, assume that an individual chooses whether or not to leave (D_i^*) based on his or her individual characteristics (X_i). The individual leaves if the following unobservable criterion function is positive:

9.

$$D_i^* = \delta_1 X_i + U_i$$

where $E(U_i) = 0$ and $Var(U_i)$ is normalized to 1 without loss of generality. Because we do not observe D_i^*, we instead observe whether the individual moved or stayed (denote as D_i). It follows that,

10.

$$D_i = 1 \quad if\ D_i^* > 0$$
$$D_i = 0 \quad otherwise$$

The demand for educated and skilled workers is higher in PS than in BS. As a result the workers in PS have more years of schooling (13.8 and 11.8 in 1995, respectively, and 13.5 and 11.5 in 1983, respectively). For that reason, also, the average hourly wage in PS is also higher. The higher demand for education in PS may create a positive (negative) correlation between the level of education in 1983 or 1995 and the decision to leave BS (PS). Hence, the interesting variable is the ability or skill of the worker which is not explained by her observed human capital. The problem, if so, is that this variable is not observed econometrically.

In order to solve this problem one can think about a regular *Mincer's wage regression* where its residuals have positive correlation with the workers' unobserved skill (however, not unobserved by the current employer); in other words the unexplained part of the workers' wage is used as a proxy to the workers' skill (general or specific). The test is to check whether these residuals are correlated with the workers' transition, what the signs are and what the magnitude of this correlation is.

To illustrate the log-wage of the worker is a function of observed and unobserved characteristics:

11.

$$lW_i = \beta X_i + \tau_i$$

Where βX_i represents the intercept in equation 3.

The unobserved characteristic is a function of the worker's skill

12.

$$\tau_i = S_i + \varepsilon_i$$

where S_i is for both general and specific skills.

Incentive Theory:

13.

$$D_i = f(S_i)$$

The assumptions:

14.

$$E(\varepsilon_i) = 0,$$
$$E(\varepsilon_i | X_i, S_i) = 0$$

The result:

15.

$$D_i = \delta_1 X_i + U_i = \lambda_1 X_i + \lambda_2 \tau_i + \upsilon_i =$$
$$= \lambda_1 X_i + \lambda_2 (S_i + \varepsilon_i) + \upsilon_i = \lambda_1 X_i + \lambda_2 S_i + \lambda_2 \varepsilon_i + \upsilon_i$$

The final model which tested is the following:

16.

$$D_i = \lambda_1 (X_i) + \lambda_2 (\tau_i) + \lambda_3 (\tau_i^2) + \upsilon_i$$

The rest of the assumptions are necessary to eliminate a bias in λ_2:

17.

$$E(\upsilon_i) = 0,$$
$$E(\upsilon_i | S_i) = 0,$$
$$E(\upsilon_i | \varepsilon_i) = 0$$

The hypotheses are: (following the theory presented in section 2)

The *Positive Selection* (when the workers are employed in public sector)

$$\lambda_2 > 0 \qquad if \ D_i = 1 \ PS\_to\_BS$$

if the incentive effect is stronger than the job training effect and vice versa.

The *Negative Selection* (when the workers are employed in business sector)

$$\lambda_2 < 0 \qquad if\ D_i = 1\ BS\_to\_PS$$

where the incentive effect and the job training effect are predicted to affect in the same direction.

The possibility of negative correlation between the unexplained part of the worker's wage and the decision to leave the job can be observed without any relationship to the decision to leave from PS to BS or BS to PS specifically. One can charge that workers who decided to leave their jobs are workers who were initially badly matched with their jobs.
Formally:

18.

$$E(\upsilon_i|\varepsilon_i) < 0$$

This property amplifies a finding in which λ_2 is positive when workers decided to leave PS and enter BS; but weakens a finding in which λ_2 is negative when workers decided to leave BS and enter PS. A possible robustness test to the last argument is to check only the workers who have changed their occupation during the period.

The last test is a "result test". The question is whether the workers who decided to leave PS and enter BS benefited from a positive premium related to their wage increase relative to the workers who stayed; and on the other hand, whether the workers who decided to leave BS and enter PS suffered a negative premium related to their wage increase relative to the workers who stayed.
Formally the model is:
19.

$$\Delta W_i = \delta_1 X_i + \delta_2 (D_i) + \upsilon_i$$

where ΔW_i is the difference in the workers log wage between 1983 and 1995.

Two arguments have to be dealt with:

1. If the findings in the first section are that leaving PS is characterized by positive selection and leaving BS is characterized by negative selection; that is to say that those workers who were leaving PS earned, on average, high conditional wage compared to stayers, and those workers who were leaving BS earned, on average, low conditional wage compared to stayers. Additionally, the workers' wage may converge over time. Combining these two phenomena strengthens the negative coefficient of the dummy variable in leaving BS, but reduces the positive coefficient of the dummy variable in leaving PS. Adding the workers' wage as an explanatory variable is a bad solution because it is a part of the dependent variable. A better option is to estimate a model in which the dependent variable is the worker's wage in 1995 and the worker's wage in 1983 is used as another explanatory variable.

20.

$$lW_{i,95} = \delta_1 X_i + \delta_2 (D_i) + \delta_3 (lW_{i,83}) + \upsilon_i$$

This model could also be criticized because the workers' wage in 1983 is correlated with the workers' skill, which according to the model supposed to be captured only by the dummy variable of leaving. Consequently, the variable of leaving has an endogeneity problem and the estimate of the dummy variable as a counter effect is biased.

2. With the same intuition as the transition model, one can charge that every kind of transition is associated with an increasing wage, not only a sector transition; otherwise workers would not decide to leave their jobs (a simple search theory model). This argument amplifies a finding in which δ_2 is negative when the workers decide to leave BS and enter PS; but weakens a finding in which δ_2 is positive when the workers decide to leave PS and enter BS. Like the previous model, a robustness test can be to check only the workers who have changed their occupation during the period.

5. The Data

The dataset used here is a random representative sample of individuals linked between the 1983 and the 1995 Israeli Censuses of Population (the link was done by the Israeli Central Bureau of Statistics). The data include all Israeli citizens who answered the

"extensive questionnaire" in both years: it was given at each census to 20% of the households in a way that adequately represented the entire population. Thus, the matched sample accounts for a representative 4% of the Israeli population (including a representative 4% of Israeli workers). The Census of Population is the most comprehensive source of demographic and socio-economic data on the Israeli population. The data identify workers who employed in PS or BS by their economy branch (Standard Industrial Classification).

For this study, four main sub-samples were created:

(1) 1983 PS workers who were also there in 1995.

(2) 1983 PS workers who were employed in BS in 1995.

(3) 1983 BS workers who were also there in 1995.

(4) 1983 BS workers who were employed in PS in 1995.

These samples allow comparing PS-to-BS transitions with PS workers who stayed in PS, and comparing BS-to-PS transitions with BS workers who stayed in BS, i.e. for selection in exit[8].

To make these comparisons meaningful, I concentrate on individuals who were between the ages of 25 and 45 in 1983 (and thus between the ages of 37 and 57 in 1995). The sample excludes ,military workers and self-employed workers so the data on earned income is reliable.

6. Descriptive Statistics

Table 1 contains the means for the variables used throughout the analysis for both sectors in 1983.

[8] I didn't check the selection in entry: I didn't compare the workers who have entered to PS to the workers who were employed in PS in that time, and I didn't compare the workers who have entered to BS to the workers who were employed in BS in that time

Table 1 – a descriptive statistics

Gender	.	.	Men	Men	Women	Women
Sector	Public	Business	Public	Business	Public	Business
Observation	5,221	6,508	2,385	4,385	2,837	2,123
Monthly Wage	3,168	3,253	3,999	3,737	2,471	2,253
STD	3,536	3,113	3,706	3,186	3,225	2,697
HPW	38.49	43.20	45.02	46.55	32.99	36.28
Hourly Wage	20.10	17.88	21.44	19.20	18.99	15.18
STD	23.44	19.90	20.47	17.92	25.59	23.20
Age	33.94	33.03	34.02	33.21	33.87	32.66
Schooling	13.48	11.43	13.34	11.32	13.59	11.65
Skilled Occu.	0.30	0.21	0.42	0.31	0.23	0.09
Jew	0.93	0.91	0.88	0.87	0.97	0.98
Immigrant	0.05	0.05	0.04	0.04	0.05	0.06
Tsabar	0.54	0.53	0.56	0.54	0.54	0.51
family Size	4.12	4.23	4.22	4.38	4.04	3.93
Number BW	1.84	1.75	1.70	1.65	1.96	1.96
Number_WY	49.88	49.65	50.66	50.29	49.23	48.34
Partly	0.33	0.15	0.15	0.06	0.49	0.35
Married	0.86	0.86	0.88	0.89	0.84	0.81
Female	0.54	0.33				

HPW is the number of working hours per week, Skilled Occupations are management or academic occupations, BW is for bread winners, WY is the number of weeks of work per year and Partly is a dummy variable for workers who stated that they work fewer than 35 hours per weeks.

Some stylized facts are concluded: females are overrepresented in the public sector, probably because the wage premium for males and the number of hours of work in it are lower[9]. The average of years of schooling is much higher in the public sector. The monthly wage in BS and in PS is at parity but the hourly wage is lower in BS, a result of more hours of work per week in BS. The number of partly jobs in BS is lower. However, excluding the partly job's workers makes the difference of the hours of work per week between the sectors negligible.

The above facts, especially the hourly-wage-gap between the two sectors, are commonly observed in many of developed countries[10].

[9] The overrepresentation of females in the public sector is a known phenomenon for most of the developed countries.

[10] For example: Rees and Shah (1995) reported a positive wage gap in favor of the average public sector for both women and men in U.K., 22 to 26 per cent and 10 to 11.5 per cent, respectively, in years 1983 to 1987.

Figures A.1 (for 1983) and A.2 (for 1995)[11] depict the hourly wages and the adjusted hourly wages in each sectors for each group of occupations, for men and women separately. The adjusted wage was calculated by interacting the workers' characteristics in one sector with the rates of return for these characteristics in the other sector (the parameters). The rates of return for each sector were calculated by regular Mincer-like wage regressions, for men and women separately (the controlled variables include years of schooling, age, age squared, religion, immigration, marriage, family size, number of bread winners, number of hours of work per week, number of weeks of work per year, and dummies variables for each group of occupations). The figures reveal that even though the simple average of hourly wages is lower in the business sector, for both men and women, the adjusted wages are higher. The phenomenon is especially typified for men and for academic and scientific as for management occupations. These findings indicate that the rates of return for the observed characteristics are higher in BS and a statistically comparable worker would earn higher wage in BS. In 1995 the picture is quite different, while the adjusted wage is lower in BS, apart from the group of scientific and academic occupations[12].

[11] The calculations in 1983 were done by the unit census which made in 1983 and includes 20% of the whole population. For 1995 the calculations were done by the linked data, which includes only 4% of the whole population. The data include only workers who worked more then 30 hours per week.

[12] In years 1993 and 1994, large of wage agreements were signed in the public sector of Israel, as a result the real wage in the public sector was increased by 30 to 50 percent.

Table 2 presents the transition matrix in the sample.

Table 2 – the transition matrix

	Business Sector (1995)	Public Sector (1995)	Total
Business Sector (1983)	6,199 (87%)	939 (13%)	7,138 (100%)
Public Sector (1983)	1,426 (22%)	5,131 (78%)	6,577 (100%)
Total	7,625	6,070	13,695

Men

	Business Sector (1995)	Public Sector (1995)	Total
Business Sector (1983)	4,279 (91%)	438 (9%)	4,717 (100%)
Public Sector (1983)	939 (35%)	1,735 (65%)	2,674 (100%)
Total	5,238	2,173	7,391

Women

	Business Sector (1995)	Public Sector (1995)	Total
Business Sector (1983)	1,920 (79%)	501 (21%)	2,421 (100%)
Public Sector (1983)	487 (13%)	3,396 (87%)	3,883 (100%)
Total	2,403	3,897	6,304

Again, some stylized facts are concluded: 17 per cent of the workers moved from PS-to-BS or from BS-to-PS during the research period. Most of the transitions were made from PS-to-BS. Males tended to change their sector more compared to females (19 and 16 per cent, respectively), but the directions were different – males tend to leave PS toward BS unlike females, who tend to do the opposite.

In order to test the first assumption - that the return for unobserved skill is greater in BS, table 3 presents the appropriate mean-squared-errors of OLS Mincer-like wage regressions, i.e. I measured the returns to unobservable skill with residual inequality. The assumption is that higher *MSE*, which reveals higher variance of the residuals, reflects higher return on unobserved skill.

Table 3 - Root *MSE*s of *OLS* regressions
(the ratio public over business)

		Log hourly wage	Log monthly wage
All	Business	0.579	0.569
All	Public	0.575 (99%)	0.583 (102%)
Females	Business	0.608	0.603
Females	Public	0.588 (97%)	0.592 (98%)
Males	Business	0.550	0.541
Males	Public	0.548 (100%)	0.559 (103%)

The results suggest almost no different between the appropriate *MSE's.* Figure A.3 in the appendix presents the MSEs in PS and BS since 1997 for men and women separately. Overall the MSEs are larger for men in the business sector while for women they are approximately at parity.

Maybe the MSE measure does not entirely capture another possibility in which the wage in BS is more correlated with the worker's performance compared to PS, because the latter is harder to quantify in PS (Burgess (2003)). Furthermore the PS unlike the BS is not a profit-maximizer so it is less committed to efficiency; hence, the correlation between wage and performance or skill is weaker.

Another statistic is the 90-10 monthly wage ratio (figure A.4 in the appendix). In 1983, this ratio for males in BS was 4.9 compared to 4.2 in PS. For females in 1983 the ratio was 5.5 compared to 4.8 in PS. Examining the 90-10 hourly wage ratio instead, tells us the same story, beside that in 1983 the ratio in BS is higher particularly for males. Expanding the checks by using the annual income surveys for

each year follows 1995 reports that the gap of the 90-10 monthly wage ratio remains higher in the business sector compared to the public sector, especially for men.

Given the differences in the distribution and dispersion of pay between the sectors, the standard approach based on the analysis of the conditional mean of the distribution has been criticized in a number of studies. For the US, Poterba and Rueben (1994) report evidence suggesting that the wage distribution for the PS is much less dispersed and propose alternative methods to analyze pay differentials based on quantile regression. Mueller (1998) provides a decomposition of wage differentials at several quantiles of the densities, applied to workers in the public and business sectors in Canada. In the UK, Blackaby, Murphy and O'Leary (1999) and Disney and Gosling (1998) show that the public sector pay gap varies along the distribution, being higher for the lowest deciles relative to the top deciles. Melly (2002), in Germany, also finds that the differential decreases monotonically as one moves up the wage distribution.

Using quantile regression methods (QRM) allows the analysis of the entire wage distribution, while the (marginal) effect of the covariates on the dependent variable can differ at different points of the wage distribution. These outcomes may also be interpreted as the effect of a different distribution of unobserved determinants of wages, for a given set of workers characteristics, at various points of the wage distribution. The analytical framework which is adopted here for the estimation is based on the quantilic regression methodology developed by Koenker and Basset (1978) and applied, in the context of wage equations, by Chamberlain (1994), Poterba and Rueben (1994), and Buchinsky (1994, 1996, 1997).

To examine the effects of differences in characteristics on the public sector pay gap at different points in the distribution, I carry out a series of quantile regressions on the pooled data. Pooled regressions impose the restriction that the returns to observed characteristics are the same for the two sectors and that public-business differences only depend on a dummy factor. Hence, the estimated business sector dummy captures the extent to which the BS pay gap remains unexplained, at the various quantiles, after controlling for individual characteristics, gender and job attributes.

In order to assure that the comparison is meaningful, it is needed to certify that for both genders for the two different sectors the workers' frequency in each decile is sufficient. Figure A.5 teaches us that this requirement is existed.

Figure A.6 presents estimates of the business-public sector wage differential at every decile of the wage distribution. The main set of results from quantile regressions show thin PS pay gap decreases along the wage distribution for both men and women. The other variables included (though not reported in the paper) are in line with the standard findings in the literature: returns to education and age increase over the deciles. These findings confirm the previous claim that focusing on the average business sector gap might be not appropriate.

As it can be seen from the figure, the BS gap is much higher for male workers as compared to their female counterpart. In the case of females the gap is even negative at the bottom deciles, while for males in the upper part of the distribution it becomes large. In other words, if we are asked to interpret these patterns in terms of male to female wage differences, the evidence seems to suggest that female are relatively better off being in the PS with respect to men[13].

7. Results

Figures A.7.1 and A.7.2 present the distribution of ten main occupation groups in public sector and business sector for women and men separately. According to the figures it can be concluded that even though the distributions are widely different there is a common area between them in which workers can change their sector without changing their occupation, for example the academic occupations.

The next table presents the unconditional wage difference between the leavers and the stayers.

Table 4 - naive data
Transitions from BS to PS

BS_PS	Gender	Observations	Monthly Wage	Hourly Wage
0	Women	2,069	2,173	14.5
1	Women	540	1,536	11.5
Percent			70	79
0	Men	5,338	3,481	17.9
1	Men	476	2,861	15.1
Percent			82	84

[13] Similar results were observed for France, Italy and Great Britain, see Lucifora, Meurs (2004), Pages 11-14.

Transitions from PS to BS

PS_BS	Gender	Observations	Monthly Wage	Hourly Wage
0	Women	3,482	2,239	18.5
1	Women	583	2,141	15.3
Percent			96	82
0	Men	1,794	3,684	20.4
1	Men	1,146	3,709	19.4
Percent			100	95

The table shows that females who were leaving BS earn on average 30 per cent less than the stayers, and females who were leaving PS – only 4 per cent less. The findings for males tell us approximately the same story, but the (naive) negative selection in leaving BS is much stronger for females.

Note that entry is low in part especially if PS is well-aware of the tendency of low-ability individuals to apply; they engage in centralized screening to mitigate adverse selection. Note that this makes it more difficult to document negative selection in entry and the results probably provide a lower bound for the negative selection in entry.

Before we get to the regressions, it is interesting to test characteristics which specify the movers and the stayers (a binary correlation) – gender, occupations, and other individuals characteristics like married, family size, and origin. The tables with the complete details are shown in the appendix (Tables A1 and A.2).

Table A.3 till A.6 present the results of 6*4 probit regressions for workers who were employed in PS in 1983 or for workers who were employed in BS. The differences between the regressions are the definitions of the workers' wage: monthly wage (table A.3 and A.5) or hourly wage (table A.4 and A.6) and the sector of the workers in 1983, PS for tables A.3 and A.4 and BS for tables A.5 and A.6. Each table includes regressions for men and women separately, and for both. Two specifications were chosen for every group: one includes both the quadratic form and the linear form of the residual wage and the second only the linear form.

Beside the interesting variable, the unexplained part of the worker's wage, the regressions control for: gender, age, education in 1983 (number of years of schooling), immigration, religion, hours of work per week, weeks of work per year, family size, number of bread winners in the family, a dummy variable for working

partly in 1983 (less than 35 hours per week), a dummy variable for being married and occupations – 9 dummy variables, one for each group of occupations, where the control group is the unskilled occupations.

Transitions from public sector to business sector

Before we examine the interesting variables, a short review of the less interesting parameters; in parentheses the estimations are for females and males, respectively:

The common regression analysis suggests (column 1, table A.3) that females have a leaving rate toward BS from PS of 18 percentage points less than males. Jewish workers have a leaving rate 8 (10 for both genders) percentage points higher than other religions; immigrants, Tsabars (4.3 percentage points higher for males) and married are all estimated to be insignificant. Perhaps surprisingly, the age of the workers given the other controls is found to be insignificant as well. The reason is probably that the exact date of leaving the sector is not known. Another year of schooling decreases the probability to leave PS by 0.9 (0.4 and 1.3) percentage points on average. The effect of another person in the family is 1.0 percentage points less (significant only for females: -1.4). The number of bread winners decreases the probability to leave PS by 2.6 percentage points (for males 3.2) and the effect of another week of work in the previous year is 0.3 less percentage points (0.5 for males). Females with academic occupations leave PS 4 percentage points less compared to unskilled workers, and for males the effect is much bigger – about 20 percentage points less. Managers leave PS 7.5 percentage points less. Workers who worked less than 35 hours leave PS 13 percentage points less (15 and 10).

The analysis of the main parameter of interest about the decision of whether to leave PS and enter BS suggests that the effect of the workers' skill is not monotonous. According to column 1 in table A.3, the signs of the linear and the squared coefficients reveal that the pattern is non-linear and characterized by U-shape. Apparently, for workers who earned a small (or negative) relative unexplained wage, an increase in their unexplained wage decreased their propensity to leave PS; while for workers whose unexplained wage was relative large, an increase in their unexplained wage increased their propensity to leave PS and enter BS. Generally, workers whose wage was below its prediction tend to leave, similar to workers whose wage was above its predicted value. The findings reveal an interesting phenomenon

where workers with relative small (or negative) unexplained wage who have left PS were negative selected by their skills; unlike the workers with relative high and positive unexplained wage who have left PS and were positive selected by their skills. The result may confirm the theoretical model (section 3) about the two contrast effects, the incentive effect and the job training effect, in which the former is most likely to be dominant for the workers whose wage is less than its predicted value, and the latter is most likely to be dominant for the workers whose wages is above its predicted value. The accumulated distribution of the residuals teaches that only 4 per cent of the transitions from PS to BS were negatively selected, the rest, 96 per cent, were positively selected. This obvious result infers that the incentive effect is much stronger than the job training effect. Looking at each gender separately exposes an interesting result in which the residual wage, in both specifications, does not influence the decision of whether to leave for females, while for males the quadratic form is not significant and the linear form is positive – i.e. positive selection in leaving . Perhaps for females the two effects mentioned offset one another or possibly the pecuniary issue has less significance for females relative to males. The incentive effect is dominant for males all over the wage distribution, i.e. males who left PS to BS were positively selected. Figures 4 and 5 illustrate the marginal effect, the total probability and the accumulated distribution of a normalized index of the residual wages - the workers' skills – for both gender and for males, respectively.

Figure 4 – The conditional probability to leave PS against an index of the residual wage, All

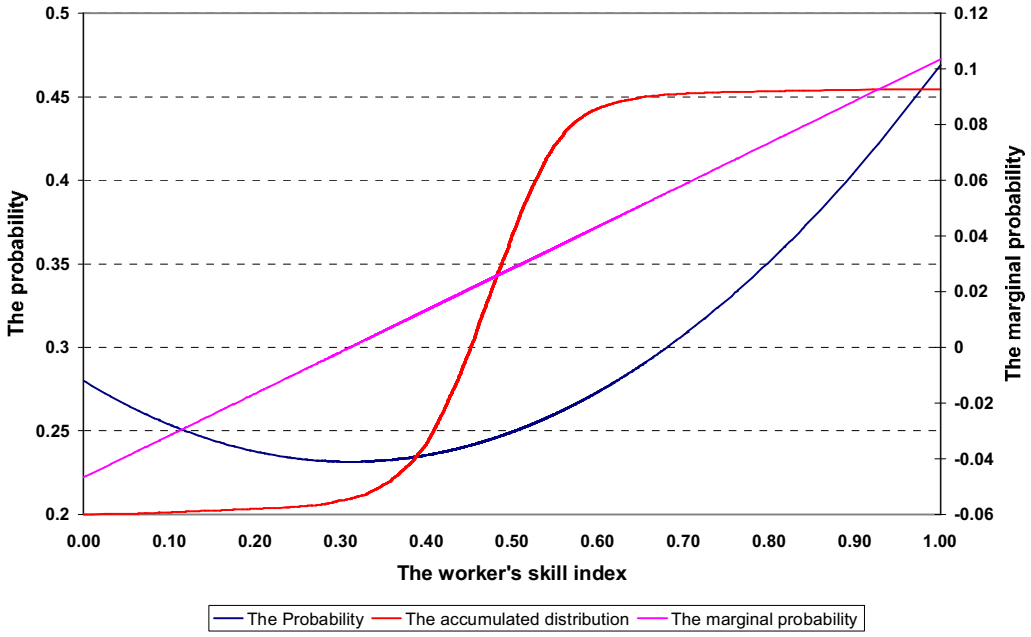


Figure 5 – The conditional probability to leave PS against an index of the residual wage, Males

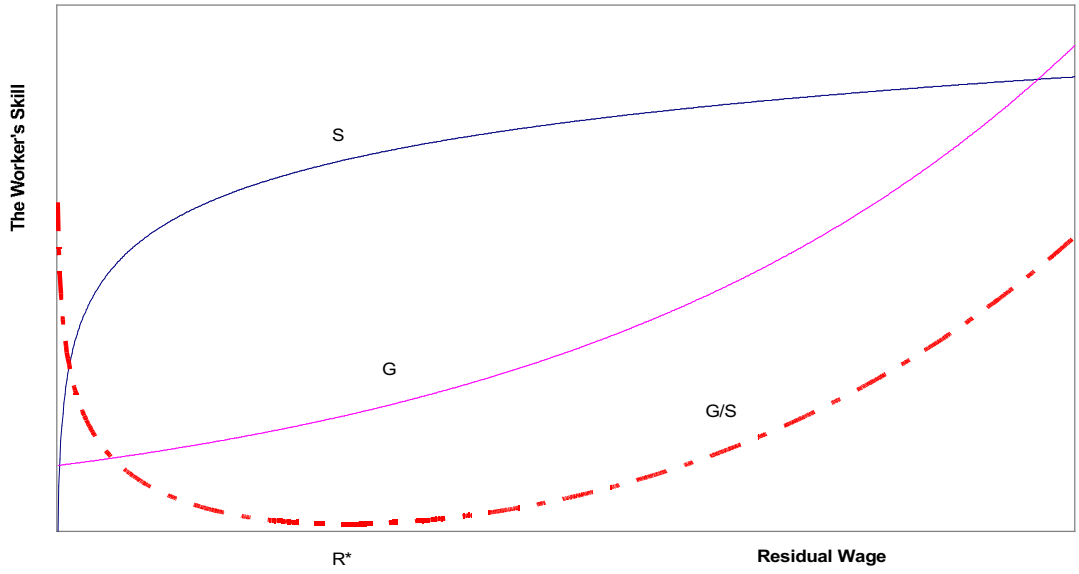
The results suggest that the probability to leave PS for BS as a function of the residual wage is a *U* shape, although the rate of workers who were negatively selected is very low (4 per cent) – the decreasing side of the graph. As stated in section 3 (equation 8) the ratio between the general and the specific skills is the parameter which determines the probability of leaving PS, other variables are constant. If so this variable is supposed to also get its maximum values at the ends of the residual wage distribution, i.e. also a *U* shape. A model in which the general skill's increase is accelerated with respect to the residual wage and the specific skill's increase is decelerated with respect to the residual wage provides an explanation to the observed results. To illustrate, assume:

$$\left.\begin{array}{l}\dfrac{\partial^2 S_g}{\partial r_w^2} > 0 \\ \dfrac{\partial^2 S_s}{\partial r_w^2} < 0\end{array}\right\} \Rightarrow \left\{\begin{array}{l}\dfrac{\partial\left(\dfrac{S_g}{S_s}\right)}{\partial r_w} < 0, r_w < R^* \\ \dfrac{\partial\left(\dfrac{S_g}{S_s}\right)}{\partial r_w} > 0, r_w > R^*\end{array}\right.$$

where r_w is the residual wage.

Figure 6 depicts the theory.

Figure 6 - The workers' skills and the residual wage



The break point R^* is determined by the second derivatives of S_g and S_s respect to r_w.

Table A.4 depicts the results when the wage of the workers is the hourly wage. As it is shown in the table, these variations weaken the quadratic form of the residual while the linear form is still positive and significant at the 10% level at least, for males and for both. The interpretation, which is based by the robustness estimations, is that the incentive effect is stronger than the job training effect.

The same regressions were submitted for workers who changed their occupations' group during the period and for workers who did not. For the sake of parsimony, only the interesting parameters are presented in table A.7, the whole results are available from the author. The majority of the results support the main finding where workers who left PS for BS were positively selected, especially males.

Robustness empirical tests

Some checks were made to test the robustness and the sensitivity of the results (the whole results are available from the author).

The first check is to divide the samples for workers who earn less and above the median monthly wage and to drop the quadratic form of the workers' residual wage as an explanatory variable. Each median is calculated separately for females, males and for both. The results amplify the previous specification: for males, females and for

both the coefficients of the residual wage are negative (almost significant) when the analyzed workers are workers who earned less than the median and positive when the analyzed workers are workers who earned above the median (again almost significant when the checks are done separately for females and males but significant when the check is done for both).

The second check is for partly position: the results suggest that the coefficients of the residual wage are still significant and with the same direction when the analyzed workers are these who worked at least 35 hours per week. The last check reveals that the linear form of the residual wage is significant and positive for females, i.e. a positive selection is observed in leaving PS when checking only females who have worked a complete job.

The third check is for the workers' age: the results suggest that as the population consists of younger workers (less than 35 in 1983) the coefficients of the linear form and the quadratic form are not significant. That is to say that the positive selection is not observed when the population consists of just the young population.

The last check is for education effect. When the population consists of just the workers who had more than 11 years of schooling in 1983 the results are approximately with the same magnitude like the whole population; when the population consists of just the academic workers (more than 15 years of schooling) the directions of the influences are the same but the results are insignificant.

Transitions from business sector to public sector

A short review of the less interesting parameters:

The common regression (column 1, table A.5) analysis suggests that females have a leaving rate toward PS from BS 5 percentage points higher than that of compared males. Married leave BS 2 percentage points less. No difference is estimated for immigrants or Tsabars. The effect of family size, schooling and another bread winner in the family are estimated to be insignificant also. Workers with academic occupations are 5.4 percentage points more likely to leave BS compared to unskilled workers. Like the managers in PS, the managers in BS leave 4.8 percentage points less (3.9 for males). The worker being one year older decreases the probability of leaving by 2.1 percentage points (2.2 for males).

The analysis of the decision whether to leave BS and enter PS exposes that, like the opposite direction of transition, the effect of the workers' skill is not monotonous;

however, it reflects a mirror image of the decision to leave PS. According to column (1) in table A.5, the significance of the linear and the quadratic coefficients and both their negative signs reveal that for workers who earned a negative relative unexplained wage (a negative residual), an increase in their residual wage increases their propensity to leave BS; while for workers whose unexplained wage was positive, an increase in their residual wage decreases their propensity to leave BS and enter PS. Workers whose wage was above its prediction tend to stay in BS like workers whose wage was below its predicted value. Looking closely at the distribution of the residuals reveals that for males approximately all the workers were negative selected. The results completely confirm the hypothesis for negative selection in leaving BS; and even more, the probability to leave BS decreases at an accelerated rate while the two effects probably reinforce each other. Looking respectively for each gender exposes a different picture relative to leaving PS: the residual wage effect is negative for males as well as for females and highly significant in all specifications; even more, the slope is higher for females which means that unlike the selection in leaving PS, the negative selection in leaving BS is more evident among females. However, 96 per cent of the females' transitions were negatively selected, as were 99.7 per cent from the males' transitions. Figures 7 and 8 illustrate the marginal effect, the total probability and the accumulated distribution of a normalized index of the residual wages - the workers' skills – for each gender, respectively.

Figure 7 – the conditional probability to leave BS against an index of the residual wage, females

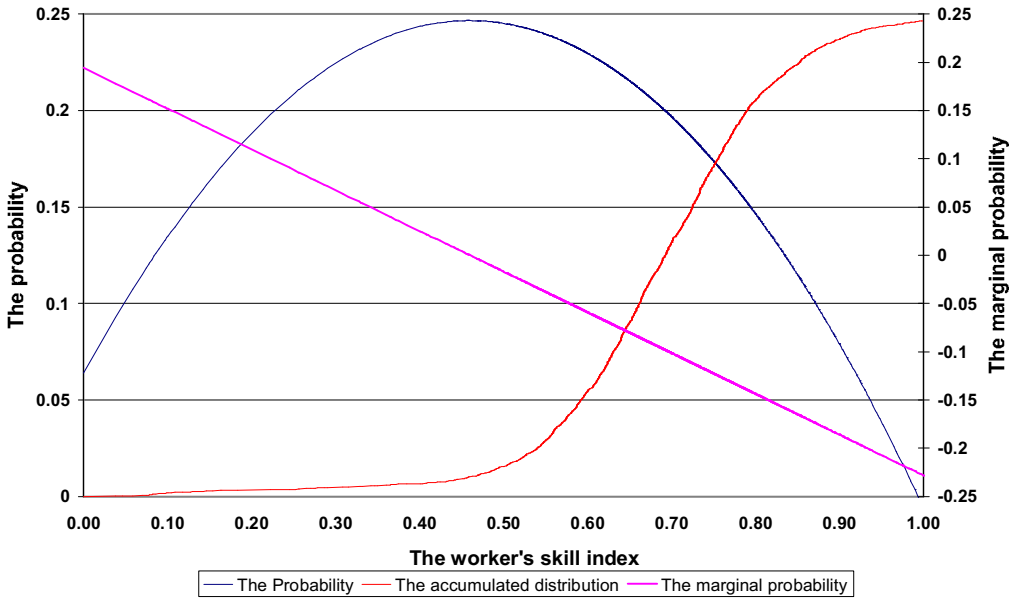


Figure 8 – the conditional probability to leave BS against an index of the residual wage, males

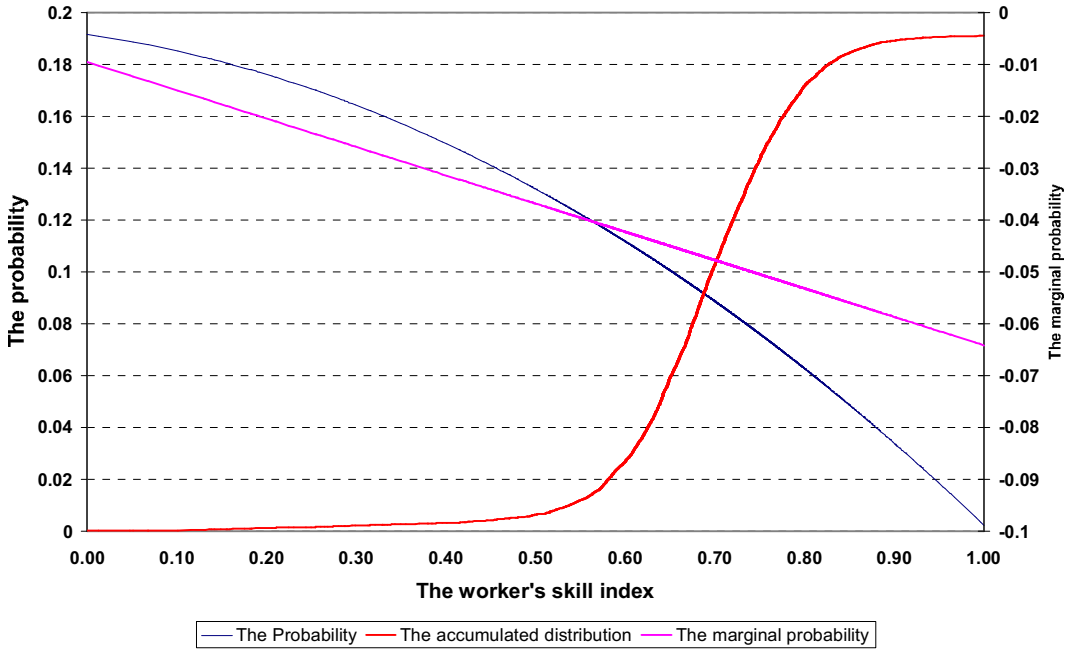


Table A.6 depicts the results in which the wage of the workers is the hourly wage. This specification supports the negative selection of BS leavers which was found in the former specification, while the linear form and the quadratic form are highly significant, especially for females.

Like the previous analysis, the same regressions were submitted for workers who changed their occupation group during the period and for workers who did not. Only the interesting parameters are presented in table A.8, (the whole results are available from the author). The results highly support the main finding where workers who have left BS to PS were negatively selected, both males and females.

Robustness empirical tests

The same checks (like for the transitions from PS to BS) were made to test the robustness and the sensitivity of the results (the whole results are available from the author).

The division for level of wage: The results amplify the previous specification: for males, females and for both the coefficients of the residual wage are negative when the analyzed workers are workers who earned less than the median and negative with a large magnitude (in absolute values) when the analyzed workers are workers who earned above the median wage. In other words, the elasticity of the residual wages is

larger as much as the workers wage is higher; the negative selection in transitions is getting stronger with the workers' wage.

The second check is for partly position: the results suggest that the coefficients of the workers wage are still significant and with the same direction when the analyzed workers are the workers who worked a full-time job, i.e. no less than 35 hours per week, for females as well as for males.

The third check is for the workers' age: the results suggest that as the population consists of younger workers (less than 35 years old in 1983) the slopes (the coefficient of the linear and the quadratic form) are approximately with the same magnitude as the whole population; i.e. no selection effect is associated with the workers' age in leaving BS.

The last check is for education effect. When the population consists of just the workers who had more than 11 years of schooling the results are approximately the same as the whole population. When the population includes just the academic workers (more than 15 years of schooling) the signs of the coefficients are the same but their magnitude is larger (in their absolute values), that is to say, the negative selection in leaving BS is fairly strengthened with the level of education.

8. Other Model

The goal of this section is to estimate another model in order to test whether, to what extent and in which direction the transitions of the workers between the sectors are biased.

The basic model which is analyzed is the following one:

21.

$$Move_i = \beta_0 Educ_i + \beta_1(S_i) + \gamma_0 Educ_i(ROR_J^{PS} - ROR_J^{BS}) + \\ + \gamma_1(S_i)(\sigma_J^{PS} - \sigma_J^{BS}) + \beta_2 Occup\_dummies + \beta_3 X_i + \alpha_j + \varepsilon_i$$

Where $Move_i$ is the transition for each direction: PS to BS or BS to PS. S_i is the workers' skill which, as described, is estimated as the residual wage from regular *Mincer's regressions*.

The parameters ROR_J^{PS}, ROR_J^{BS} are the rates of the return to education in each sector and $\sigma_J^{PS}, \sigma_J^{BS}$ are the appropriate *MSE*s from regular *Mincer's regressions* or the *Giny index* for each sector. The index *J* denotes an occupation division for ten groups of occupations. I estimated these parameters by using the unique census of 1983 which

contains much more observations (not the linked census), the results are shown in figures A.8 to A.10 in the appendix.

According to figure A.8, generally, the rate of the return to education is quite a bit higher in BS. The rest of the figures suggest that the explained and the unexplained inequality are both higher in BS which it hints that the rate of the return on unobserved skills is also higher in BS.

The following summarizes the theoretical predictions:

The higher demand for education in PS provides us with the prediction that β_0 is positive if the model estimates the probability to leave BS and β_0 is negative if the model estimates the probability to leave PS.

If the return for education is higher in BS compared to PS as is seen in figure A.8 then we expect that γ_0 is positive if the model estimates the probability to leave BS and γ_0 is negative if the model estimates the probability to leave PS.

If the return for the unobserved skill is higher in BS compare to PS, which is reflected by higher *MSE* (or by higher *Giny index*), than Incentive Theory provides us with the following predictions:

β_1 is negative if the model estimates the probability to leave BS and β_1 is positive if the model estimates the probability to leave PS.

γ_1 is positive if the model estimates the probability to leave BS and γ_1 is negative if the model estimates the probability to leave PS, i.e. positive selection in leaving PS and negative selection in leaving BS.

The probit regressions' results of the interesting variables are in the appendix (tables A.9 to A.12).

Table 5 summarizes the signs of the empirical estimations against the theory's predictions. As is shown in the tables, most of the linear form variables (the variables without the interactions) have the predicted signs. However, the interaction variables are insignificant when the research population consists of workers who were in BS in 1983. When the research population consists of the workers who were in PS, the sign of the education interactions with the return for education has the opposite sign.

Table 5 - Workers who were in the public sector

	Variable	Expected	Observed	comments
β_0	The worker's education	-	NS	
β_1	The worker's skill	+	NS	Significant only for women in specification number 2
γ_0	The worker's education interacts with the gap of the *ROR*	-	+	Significant only for men
γ_1	The worker's skill interacts with the gap of the *ROS*	-	NS	

NS- Means not significant

Workers who were in the business sector

	Variable	Expected	Observed	comments
β_0	The worker's education	+	NS	
β_1	The worker's skill	-	-	The results are relatively highly significant, for all of the models.
γ_0	The worker's education interacts with the gap of the *ROR*	+	NS	
γ_1	The worker's skill interacts with the gap of the *ROS*	+	NS	

The main conclusion which can be derived from table 5 is that most of the parameters are estimated to be insignificant apart from the workers' skill, which is estimated to have a negative effect when the workers are employed in BS and choose whether to leave. The latter finding is robust and consistent with the theory and the prediction.

9. Wage Increase

The following section tests whether and to what extent the workers who changed their sector are different from the workers who didn't in relation to their wage increase during the research period.

Table 6 presents a naive description of the transition and the average hourly wage ratio or the average of monthly wage difference associated with them.

Table 6 - The difference in the log monthly wage and the hourly wage ratio associated with the transitions

Males

	Business Sector (1995)	Public Sector (1995)
Business Sector (1983)	7.81 (1.12) 2.53	7.51 (1.12) 2.63
Public Sector (1983)	8.21 (1.11) 2.85	8.21 (0.94) 2.98

Standard deviations in parenthesis

Females

	Business Sector (1995)	Public Sector (1995)
Business Sector (1983)	7.48 (1.03) 2.68	7.21 (1.07) 2.65
Public Sector (1983)	7.83 (1.00) 2.97	7.74 (0.87) 2.76

The naive data show that females who have left PS for BS earned larger increases with respect to their monthly and hourly wage compared to females who stayed in PS. Workers, males and females, who left BS for PS earned smaller increase with respect to their monthly wage compared to workers who stayed in BS. Females who were in BS in 1983 earned a larger increase with respect to their hourly wage and a smaller increase with respect to their monthly wage compared to males. The groups which most benefited with respect to their hourly wage increase were public stayers for

males and public leavers for females. The standard deviations of the wage's increases are smaller in PS compared to BS, which stresses the higher sensitivity of the return to skills as well as the higher risk of being employed in BS.

Now the goal is to examine the marginal effect of leaving BS or PS on the wage increase during the research period. Of course, the explanatory variables are correlated and the interesting question is to test the marginal effect of each variable given that the other variables are held constant.
The model I check econometrically is the following:

$$lW_{i,95} = \delta_1 X_i + \delta_2 (D_i) + \delta_3 (lW_{i,83}) + \upsilon_i$$

where D_i is a dummy variable which receives 1 if the worker has left PS (BS) during the period and was employed in PS (BS) in 1983.

Workers who were in Public Sector in 1983

A short review of the less interesting parameters:
According to table A.13 column 1 for workers who were in PS in 1983, females increased their log-monthly-wage 35 percentage points less than males, and their log-hourly-wage – 20 percentage points (table A.14). The effect of being a Tsabar is insignificant. Being an immigrant decreases the log-monthly-wage-increase by 12 percentage points (for males – 21), Jew – 30 points more (for males - 49) and being married is significant only for females – 10 percentage points further. The number of bread winners adds 4.3 percentage points and effect of the number of weeks of work is negligible. The effect of the workers' age is positive but significant only in the common regression; that is because we control the workers' wage in 1983.
Acquiring an extra year of schooling during the period is estimated to increase the log-monthly-wage increase by 3.8 percentage points, 2.9 for females and 4.4 for males. Another year of schooling in 1983 increases the log-monthly-wage-increase by 4.5 percentage points, 5.0 for females and 3.9 for males.
Working in academic occupations increases the log-monthly-wage-increase by 15.1 percentage points for females but no effect is found for males; working in management occupations by 21 and 33, respectively.
Looking intently at the interesting variable of whether the workers left PS and entered BS reveals that all coefficients in all the variations are insignificant and their

magnitude is small. Workers who left PS didn't lose or gain any premium with respect to their monthly wage increase compared to workers who stayed in PS.
The results which are presented in table A.14 suggest that workers who left PS earned smaller increases in their log-hourly-wage. This negative premium is estimated to be approximately with the same size for females and males: 8.1 percentage points for females compared to 7.1 for males.

Some checks were additionally made (all the results are available from the author): separately for workers whose wage was above or below the median-monthly-wage in 1983 which reveals a negative premium for females (9 percentage points) and for males (6 percentage points) whose wage was below the median and were leaving PS. Checking only the workers who worked for no less than 35 hours per week in 1983 reveals approximately the same results as the baseline. The last check reveals workers who were in PS, had no less than 15 years of schooling in 1983 and left to BS from PS have gained a positive premium compared to the workers who stayed in PS, about 14 and 10 percentage points more with respect to their log-wage-increase, for females and for males, respectively. The last finding fits the prediction of the positive selection which we found among the PS leavers in section 7.

Workers who were in business sector in 1983

A short review of the less interesting parameters:
According to table A.15 column 1 for workers who were in BS in 1983, females increased their log-monthly-wage 32 percentage points less then males, and their log-hourly-wage – 16 percentage points (table A.16). The effect of family size for females is positive but small and the effect of number of weeks of work per year is negligible. Another bread winner in the family decreases the log-monthly-wage increase for female by 9 percent. The effect of the worker's age is insignificant, that, as noted before, because we control the workers' wage in 1983. Being married increased the log-monthly-wage-increase by 6.0 percentage points for females and by 13.3 for males; being a Tsabar – 7.1 for males; Jew – 19 percentage points for both genders; being an immigrant decreases the increase of the log-monthly-wage by 15 percentage points.
Acquiring an extra year of schooling during the period is estimated to increase the log-monthly-wage-increase by 2.8 percentage points, for females as for males.

Another year of schooling in 1983 increases the log-monthly-wage-increase by 4.8 percentage points for females and by 6.2 for males.
Working in academic occupations increases the log-monthly-wage-increase by 48 percentage points for females and 25 for males, and working in management occupations by 29 percentage points for both.
Looking closely at the interesting variable of whether the workers left BS and entered PS exposes that all coefficients in all the variations are negative and have large values. For example, on average, workers who were leaving BS lost 25 percentage points of from log-monthly-wage increase compared to workers who stayed in BS. Males who were leaving BS lost approximately the same magnitude as females, but lost more compared to females related to their hourly-wage increase, 18 and 14 percentage points, respectively. Related to the monthly wage increase, unlike the workers who left PS, the workers who left BS suffered a negative benefit; related to the hourly wage increase, workers who left BS suffered a negative benefit which is approximately twice that of the workers who left PS (table A.14 and A.16)

Some checks were additionally made (like for the PS leavers, the all results are available from the author): separately for workers whose wage was above or below the median-monthly-wage in 1983, which reveal a much greater negative premium for those whose wage was above the median and left BS. For example, females whose wage was above its median value and decided to leave BS lost 44 percentage points with respect to their monthly-wage-increase compared to 7 percentage points for those whose wage was below its median value. Checking only the workers who worked in 1983 for 35 hours per week at least reveals approximately the same results. The last check reveals that workers who were in BS, had no less than 15 years of schooling in 1983 and left to PS from BS suffered very large negative premiums compared to the workers who stayed in BS, 53 and 37 percentage points less with respect to their log-wage-increase, for females and males, respectively. The last finding fits the prediction of the accelerated negative selection which we found among the BS leavers in section 7.

Table A.17 and A.18 present the coefficients and the *t statistic* of the interesting parameter δ_2 after dividing the population into two sub samples – one includes

workers who did not changed their occupations' group during the period and the other includes the workers who changed. According to the table, the workers who changed their occupations' group during the period are the workers who residual suffered from the negative premium after they left PS, especially with respect to their hourly-wage-increase. This phenomenon occurs when the workers who left BS are analyzed, while the difference here is that the two populations suffered from a negative premium after leave BS. The workers who also changed their occupations' group suffered more, particularly with respect to their monthly-wage-increase.

In order to test the robustness of the results another specification was done:

19.

$$\Delta lW_{i,95,83} = \delta_1 X_i + \delta_2 (D_i) + \upsilon_i$$

where the interesting variable is whether the worker left BS or PS (D_i).

Table 7 presents the OLS estimation of the coefficients for males, females and for both:

Table 7 – the estimation of δ_2 , Monthly Wage

(t value)

	PS to BS	BS to PS
All	0.034 (1.1)	-0.309 (7.0)
Females	0.078 (1.46)	-0.340 (5.4)
Males	-0.010 (0.23)	-0.267 (4.29)

Hourly Wage

(t value)

	PS to BS	BS to PS
All	-0.095 (3.7)	-0.048 (1.78)
Females	-0.108 (2.6)	-0.023 (0.59)
Males	-0.102 (3.9)	-0.078 (2.12)

The results suggest that workers who left PS to BS did not gain any premium with respect to their monthly-wage-increase compared to workers who stayed in PS; and that workers who left BS to PS suffered a large and negative premium with respect to their monthly-wage-increase compared to workers who stayed in BS. In regard to the hourly-wage increase, workers who left their sector, BS or PS, suffered a negative premium, apart from females, who left BS and did not suffer from any punishment.

10. Discussion

The following section discusses some critiques of the theoretical model and some problems with the data base.

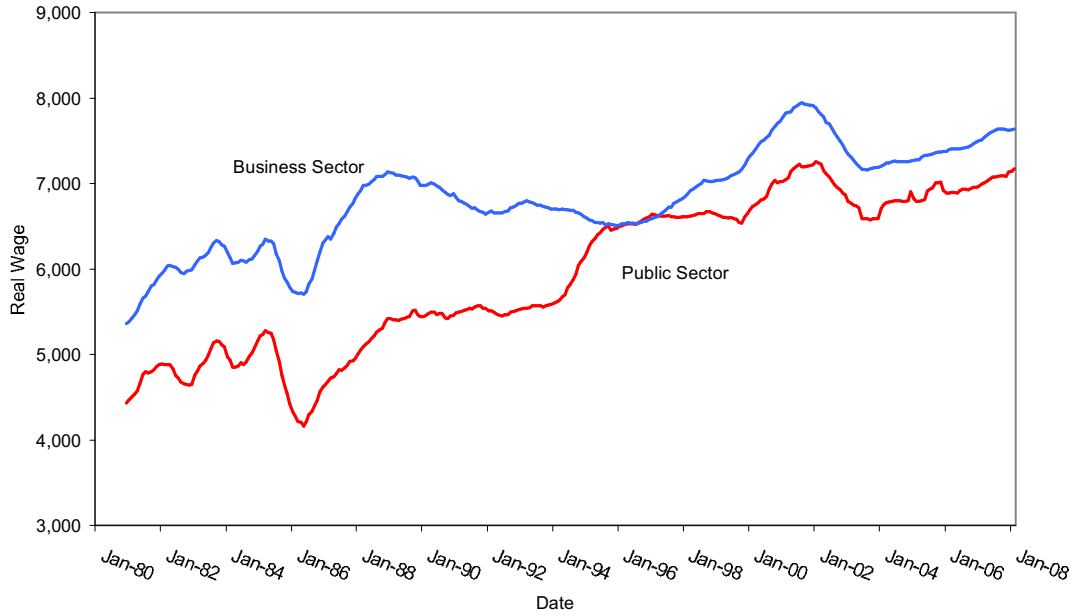
Beginning with some weaknesses in the data base:

1. The data do not provide information on whether the workers were fired or whether they left their jobs voluntarily. This may create a bias in the analysis of the exit and the entry, although the direction of the bias is not comprehendible. As a result, another explanation is provided for the positive selection observed in leaving the public sector – if the workers' wage is higher than its predicted value, this may encourage the employers to dismiss their workers. Higher conditional wage means less profit and greater likelihood for separation. This argument seems to be weak because of two main reasons: first, the public sector unlike the business sector is not characterized by maximum profit targeting (see Burgess (2003) for a review about this issue); the job protection in the public sector is very high and it is almost impossible to dismiss workers after they were granted tenure (about 80 per cent of the public sector in Israel workers have a tenure).
2. The number of observations is small. The sample includes only workers who were working both in 1983 and 1995. For this reason the analysis is a macro level study although it is more interesting to look at the micro level and to test whether the selection is done in a specific occupation, for example teaching or medicine. For the moment this is the best data I can use for the research's purposes. A better data set, for the purpose of expanding the current research, in which the census population of 1995 is merged with the employers-employees data for the following years is being constructed.
3. There is a problem where the definition of the sector in which the workers are employed is not single-valued. As a result there are a few errors: a worker is

considered to work in public sector while he or she actually works in business sector and vice versa. Typical examples are taken from the education or medicine branch - a small percentage of the teachers or the physicians are employed in BS. We must take this into account; even the econometric method controls for the economic branch in all of the specifications.

4. The exceptional wage agreements in 1994 to 1995 in the public sector affect the estimation of the wage increase analysis in section 9 and may create a misleading assessment of the interesting parameter - whether the decision to leave the sector is associated with the wage increase during the research period. Figure 10 depicts the development of the real wage in the two sectors in the last thirty years. The 'eye test' reveals that the agreements in 1994 to 1995 were just a kind of correction for the wage erosion in the public sector compared to the business sector for the previous years.

Figure 10 - The Real Wage in the Public and the Business Sector



5. The hyper inflation in Israel from 1983 to 1985 (more than 150 per cent per year in 1983) may generate an error in the real wage calculation in 1983, especially if the workers were sampled in different months of the years. This problem is minimized because the nominal wage of each worker was calculated as an average of his/her wages in the last three months.
6. In Israel as well as in the rest of the world one can consider work in the public sector as a type of investment in human capital, or as a kind of signaling. For

example, it is well known in Israel that working in the finance ministry and specifically in the budget department is a high-quality signal for employers in the business sector. This progress reinforces the positive selection of the model in which the qualitative workers tend to leave the public sector and it is difficult for the public sector employers to keep them. The control for the workers' age in the regressions and the separate checks for some ages groups weaken the claim that the human capital accumulated is the main explanation of the observed positive selection.

Critiques on the theoretical model:

The main critique on the theoretical model is that unlike migrants who do not decide whether to be born and in which country; the workers do decide initially whether to work: in the public sector or in the business sector. The decision of where to work is not exogenous; this is definitely not a random assignment.

Two arguments confront this claim:

The first argument, and the most important one, is that the selection of the workers is examined compared to their sector co-workers. I do not compare the workers who have left the public sector to the workers who are employed in the business sector; I compare them to the workers who are employed in the public sector; the same intuition applies to the workers who have left the business sector.

The second argument refers to the following claim: if a worker has high (low) general skills, why did he or she initially decide to work in the public sector (business sector). The answer is given by using simple models of search and matching, learning, and signaling. All of these theories have the same mechanism and prediction in which the workers can improve their jobs and increase their wage during their career although they were behaving rationally in their initial steps in the job market.

Search Theory (Burdett and Mortensen (1986), Mortensen and Pissarides (1999)) states that there is no complete information in the market and a situation of natural unemployment exists because the workers who search for jobs are not suitable for the vacant positions because they have not matched yet. Matching Theory (Jovanovic (1979), Eckstein (1995) and Pissarides (2000)) states that not all of the employer-employee pairings are optimal, and during their careers the workers change their jobs and the employers substitute their workers in order to improve their matching. The learning model (Jovanovic (1984) and Mortensen (1988)) is that the workers

themselves and their employers do not entirely know their true skill in the beginning of the work interaction and their knowledge improves with the time as their performance is observed. The last model is a signaling model (see for example Spence (1973), Wolpin (1977) or Weiss (1984)) which teaches us that the employers use some observed characteristics or achievements in order to improve their assessment of the real skill of the worker. For example workers who are promoted faster in their current job are workers whose signal for rival employers is better; consequently their job offer rate grows and their probability to leave is higher.

11. Conclusions

This paper tests the selection effect of two different equal-sharing sectors. Dataset of individuals entering and exiting the public and business sectors is used here to test the predictions.

The findings provide support for positive selection in leaving the public sector and a great deal of evidence for negative selection in leaving the business sector. This is to say that individuals who move to the public sector from a pay-for-performance environment were negatively selected in terms of their unobservable characteristics, like skill. Furthermore, selection patterns vary across genders. Specifically, men are more positively selected in leaving the public sector but the negative selections in leaving the business sector are at parity.

The selection effects also somewhat support the basis for Borjas' hypothesis that selection (either positive or negative) depends on the relative earnings inequality of the origin and destination.

The analysis of the wage increase reveals that workers who left the business sector earned lower monthly-wage-increases compared to the stayers, especially men; while workers who left the public sector did not gain any premium with respect to their wage increase compared to the workers who stayed in the public sector, apart from the educated workers. The findings somewhat fit the predictions derived from the negative selection which we observed in leaving the business sector.

References

Abramitzky, R. (2007): "Testing Self-Selection in Migration: Evidence from the Israeli Kibbutz", UCSD department of economy.

Belman, D. and J. Heywood (1993): "Job Attributes and Federal Wage Differentials", Industrial Relations 32, 148-157.

Ben-David, Dan (2008): "Brain Drained", CEPR DP 6717.

Bender (1998): "The Central Government-Private Sector Wage differential", Journal of Economic Survey, Vol. 12, 177-220.

Bender, K. A. (2003): "Examining Equality between Public-and Private-Sector Wage Distributions", Economic Inquiry 41, 62-79.

Blackaby, D. H., PD Murphy and NC O'Leary (1999): "The Payment of Public Sector Workers in the UK: Reconciliation with North-American Findings", Economics Letters, vol. 65, 239-243.

Blanchflower, Bryson (2007): "The Wage Impact of Trade Unions in the UK Public and Private Sectors", IZA DP 3055.

Borjas, G. J. (1987): "Self-Selection and the Earnings of Immigrants", The American Economic Review, 77(4), 531-553.

(1991): "Immigration and Self-Selection in Immigration, Trade and the Labor Market", ed. by J. Abowd, and R. Freeman. The University of Chicago Press, Chicago.

(1994): "The Economics of Immigration", Journal of Economic Literature, 32(4), 1667-1717.

(2002): "The Wage Structure and the Sorting of Workers into the Public Sector", NBER, WP 9313.

Buchinsky, M. (1994): "Changes in the U.S. Wage Structure 1963-1987: Application of Quantile Regression", Econometrica, 62. 405-458.

(1996): "Women's Return to Education in the US. Exploration by Quantile Regression with Non-Parametric Sample Selection Correction", Department of Economics-Brown University.

(1997): "Recent Advances in Quantile Regression Models: A Practical Guideline for Empirical Research", Journal of Human Resources, 32, 234-253.

Burgess, S. and M. Ratto (2003): "The Role of Incentives in the Public Sector: Issues and Evidence", Oxford Review of Economic Policy, 19 (2), 285-300.

Cardoso, Neuman and Ziderman (2007): "Wage Mobility in Israel: The Effect of Sectoral Concentration", CEPR, DP 6609.

Chamberlain, G. (1994): "Quantile Regression, Censoring and the Structure of Wages in CA", Sims, (eds.) Advances in Econometrics 6th World Congress. Vol. 1. Cambridge.

Chatterji, Mumford and Smith (2007): "The Public-Private Sector Gender Wage Differential: Evidence from Matched Employee-Workplace Data", IZA DP 3158.

Chatterji, Mumford (2007): "The Public-Private Sector Wage Differential for Full-Time Male Employees in Britain: A Preliminary Analysis", IZA DP 2781.

Chiquiar, D., and G. H. Hanson (2005): "International Migration, Self-Selection, and the Distribution of Wages: Evidence from Mexico and the United States", Journal of Political Economy, 113(2), 239-281.

Chiswick, B. (1978): "The Effect of Americanization on the Earnings of Foreign-Born Men", Journal of Political Economy, 86(5), 897-921.

(1999): "Are Immigrant Favorably Self-Selected?", American Economic Review, 89(2), 181-185.

(2000): "Are Immigrants Favorably Self-Selected? An Economic Analysis in Migration Theory: Talking Across Disciplines", ed. by C. D. Brettell, and J. F. Hollifield, pp. 61—76. Routledge, New York.

Dell'Aringa, Lucifora and Origo (2007): "Public Sector Pay and Regional Competitiveness: A First Look at Regional Public-Private Wage Differentials in Italy", the Manchester School, 75 (4), 445-478.

Disney, R. and Gosling A. (1998): "Does It Pay to Work in the Public Sector? ", Fiscal Studies 19(4), 347-374.

Earle and Telegdy (2007): "Ownership and Wages: Estimating Public-Private and Foreign-Domestic Differentials Using LEED from Hungary, 1986–2003", IZA DP 3125

Eckstein, Z., Wolpin K. (1995): "Duration to First Job and the Return to Schooling: Estimates from a Search-Matching Model", The Review of Economic Studies, Vol. 62, No. 2 263-286.

Finkelstein, A., and K. McGarry (2003): "Private Information and its Effect on Market Equilibrium: New Evidence from Long-Term Care Insurance", NBER WP 9957.

Finkelstein, A., and J. M. Poterba (2006): "Testing for Adverse Selection with Unused Observable", NBER WP 12112.

Gould, Eric and Moav, Omer (2007): "Israel's Brain Drain", Israel Economic Review, 5, 1-22.

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

(1990): “Varieties of Selection Bias“, American Economic Review, Vol. 80(2), 313-318.

Heitmueller A. (2006): “Public-Private Sector Wage Differentials in Scotland: An Endogenous Switching Model“, Journal of Applied Economics, Vol. 9, 295-323

Jovanovic B. (1979): “Job Matching and the theory of Turnover“, Journal of Political Economy 87, 972-990.

(1984): “Matching, Turnover and Unemployment“, Journal of Political Economy 92, 108-122.

Kats and Kruger (1991): “Changes in the Structure of the Wages in the Public and Private Sectors“, NBER WP 3667.

Koenker, R. and G. Bassett (1978): “Regression Quantiles“, Econometrica, 46, 33-50.

Kraus, V (1992): “The Role of Industrial and Economic Sector in Gender Inequality in Earnings“, Research in Social Stratification and Mobility, 11, 153-175.

Lazear, E. (1986): “Salaries and Piece Rates“, Journal of Business, 59:3, 405-431.

(2000a): “Performance Pay and Productivity“, American Economic Review, 90:5, 1346-1361.

(2000b): “The Power of Incentives“, American economic Review, 90:2, 410-414.

Liebig, T., and A. Sousa-Poza (2003): “How Does Income Inequality Influence International Migration? “, ERSA conference papers ersa03p472, European Regional Science Association.

Lucifora, Meurs (2004): “The Public Sector Pay Gap in France, Great Britain and Italy“, IZA DP 1041.

Melly B., (2002): “Public-private sector wage differentials in Germany: Evidence from quantile regression“, mimeo, University of St Gallen.

Mortensen, D. (1986): “Job Search and Labor Market Analysis“, In: Ashenfelter, O., Layard, R. (Eds.), Handbook of Labor Economics. North Holland, Amsterdam.

(1986): “Wages Separation and Job Tenure“, Journal of Labor Economics 4, 572-586.

Mortensen, D., Pissarides, C. (1999): “New Developments in Models of Search in the Labor Market“, In: Ashenfelter, O., Card, D. (Eds.), Handbook of Labor Economics, Vol. 3b. North Holland, Amsterdam.

Mueller, R. (1998): “Public-Private Sector Wage Differentials in Canada: Evidence from Qantile Regression“, Economics Letters, 60, 229-235.

Oaxaca, R. L. (1973): “Male-Female Wage Differentials in Urban Labor Markets“, International Economic Review 14(1), 693-709.

Pissarides, C. (2000): “Equilibrium Unemployment Theory“, 2nd ed., Cambridge, Mass: MIT Press.

Poterba, J. and K. Rueben (1994): “The Distribution of Public Sector Wage Premia: Evidence Using Quantile regression Methods“, NBER WP 4734.

Poutvaara, Wagener (2004): “Why Is the Public Sector More Labor-Intensive? A Distortionary Tax Argument“, IZA DP 1413.

Rees, H. and A. Shah (1995): “Public-Private Sector Wage Differential in the U.K.“, The Manchester School 63(1), 52-68.

Shalev (2007): “Inequality and the State in Israel: Implications of the Social Services as an Employer“, Hebrew University, not published.

Simon L., Stephan M. and Alois S. (2008): “Why Does Unemployment Hurt the Employed? Evidence from the Life Satisfaction Gap between the Public and the Private Sector“, IZA DP 3385.

Spence, Michael (1973): “Job Market Signaling“, The Quarterly Journal of Economics, Vol. 87, No. 3, pp. 355-374.

Tansel, A. (2005): “Public-Private Employment Choice, Wage Differentials and Gender in Turkey“, Economic Development and Cultural Change, 53 (2), 453-477.

Weiss, Andrew (1984): “Determinants of Quit Behavior“, Journal of Labor Economics, 2, 3, 371-384.

Wolpin, Kenneth (1977): “Education and Screening“, American Economic Review, 313-317.

Appendix

Figure A.1.1 - hourly wage in each sector in 1983

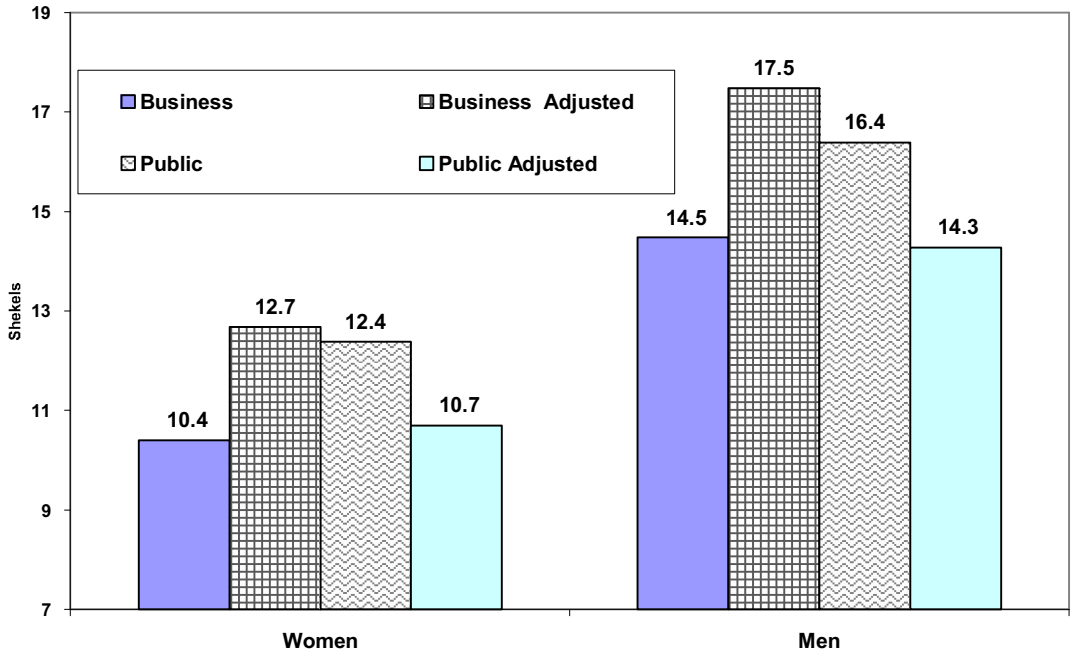


Figure A.1.2 - hourly wage in each sector in 1983, by groups-occupations division
Women

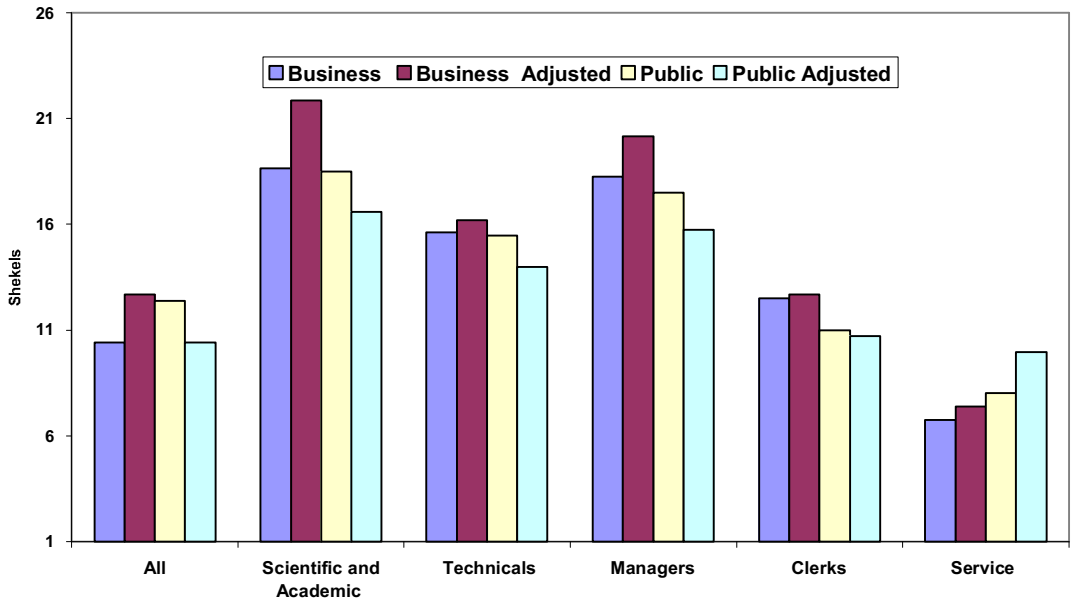


Figure A.1.3 - hourly wage in each sector in 1983, by groups-occupations division
Men

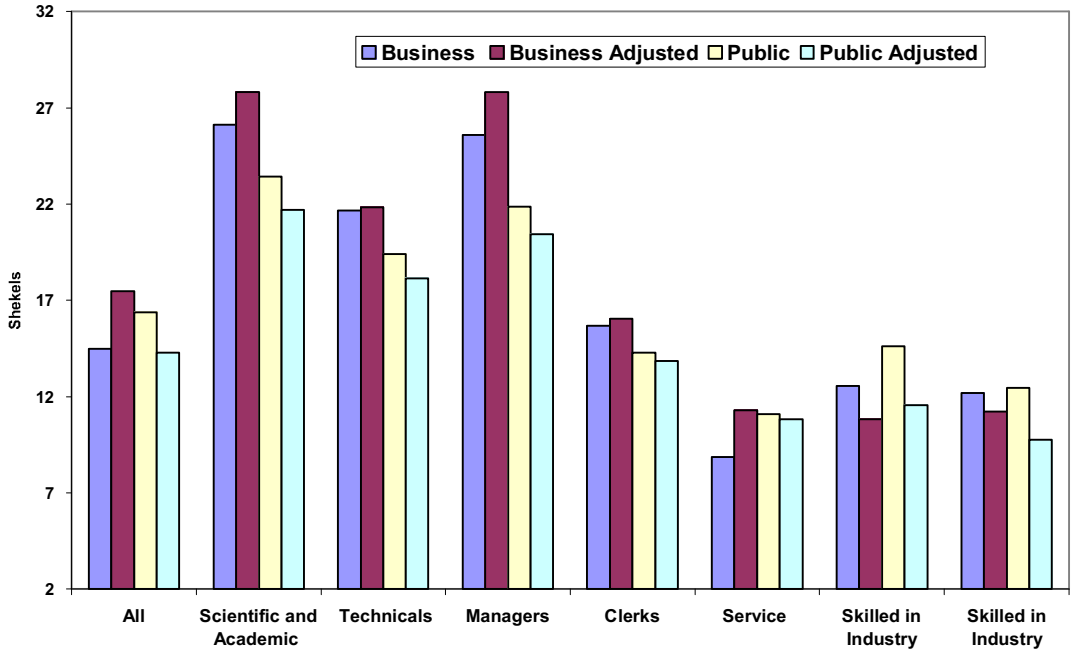


Figure A.2.1 - hourly wage in each sector in 1995

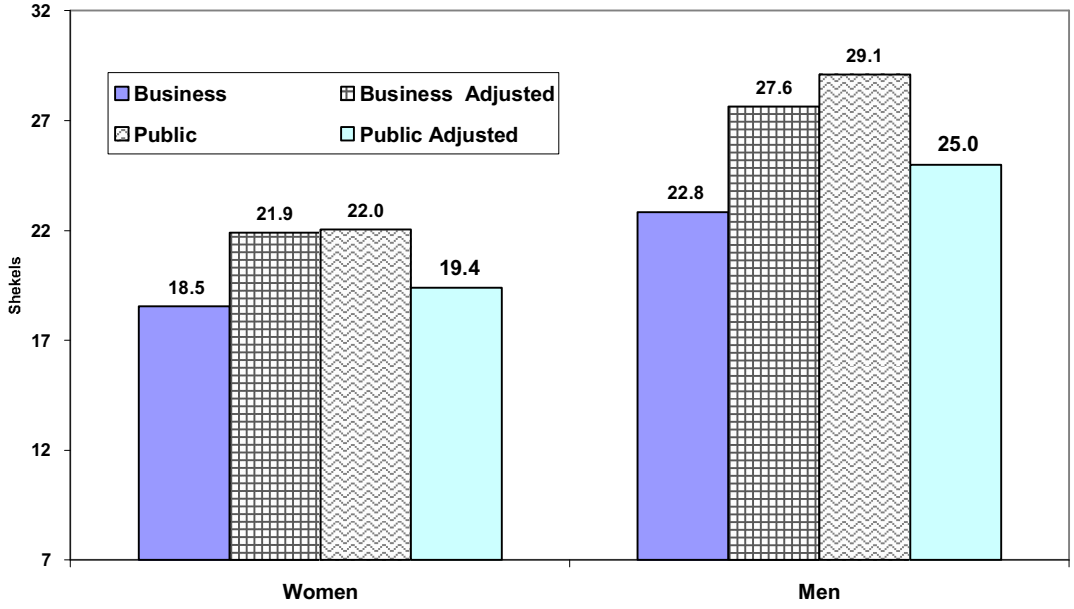


Figure A.2.2 - hourly wage in each sector in 1995, groups-occupations division
Women

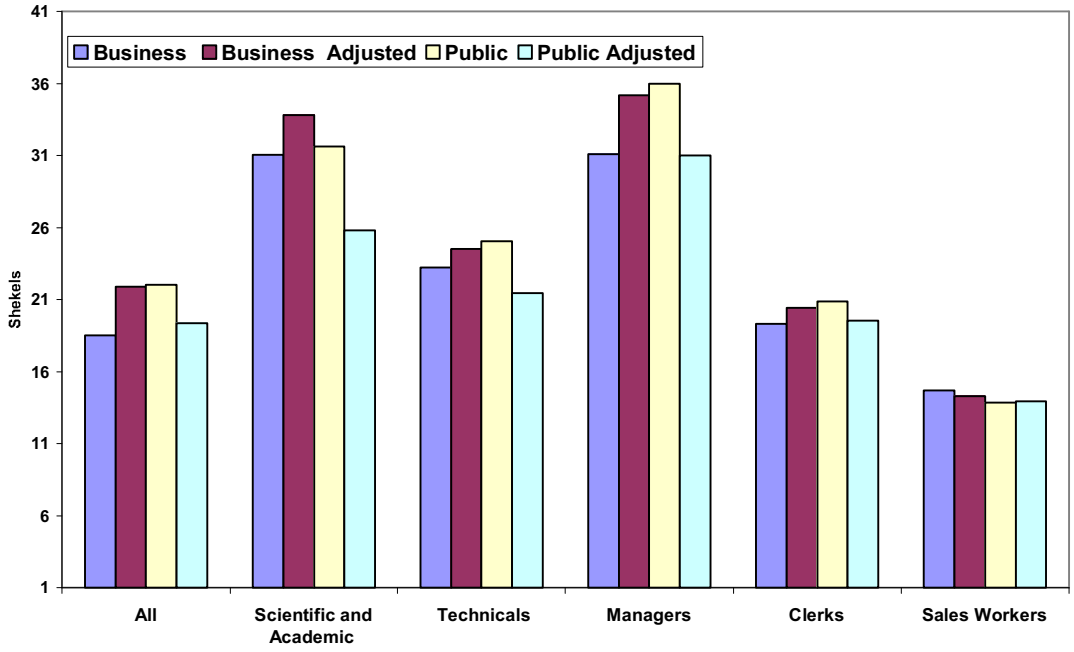


Figure A.2.3 - hourly wage in each sector in 1995, by groups-occupations division
Men

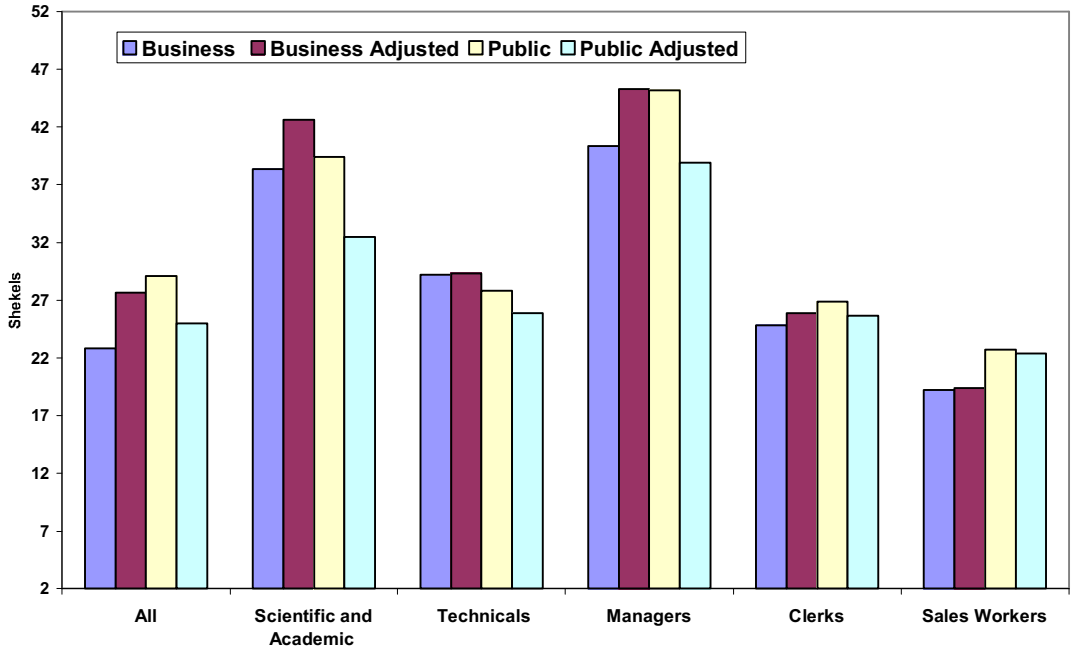


Figure A.3 – the MSEs ratio Public to Business since 1997, Women and Men

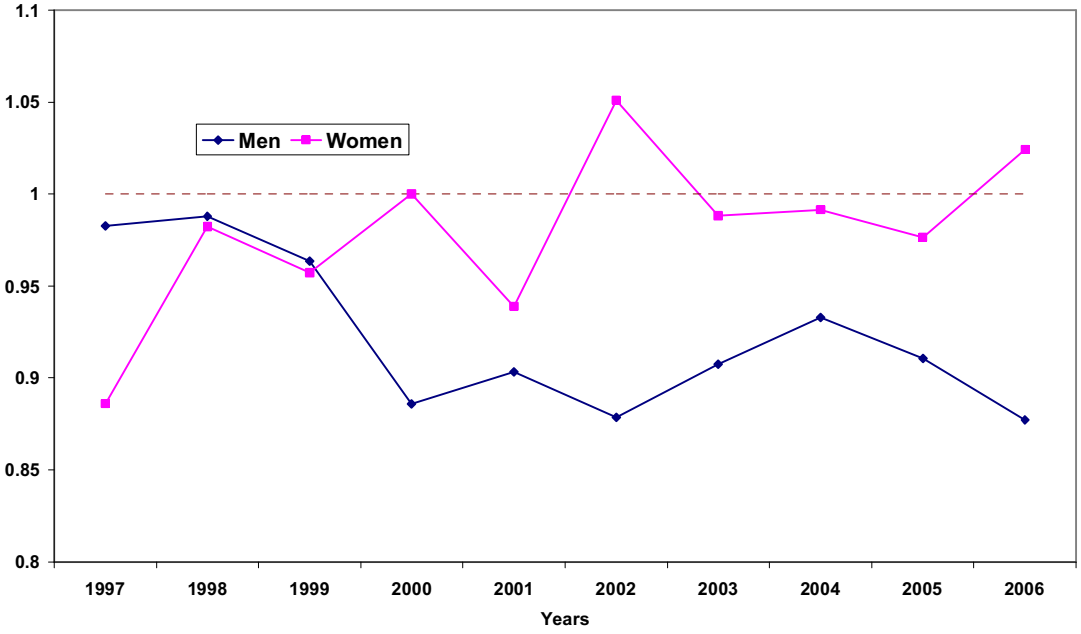


Figure A.4 - the percentiles' monthly wage in each sector in 1983

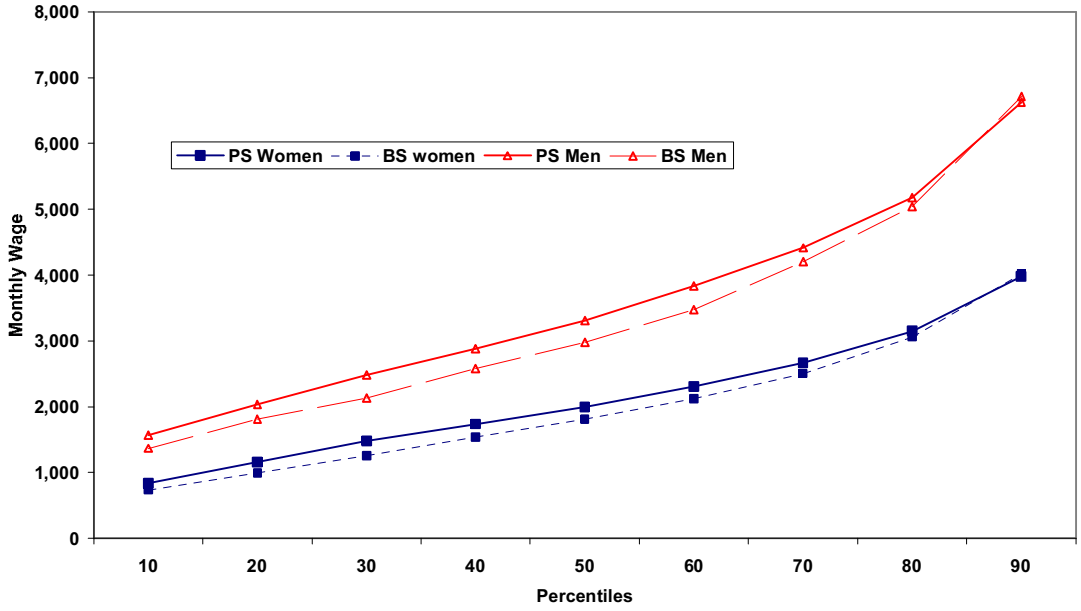


Figure A.5 – The Share of the business sector workers across the pooled deciles

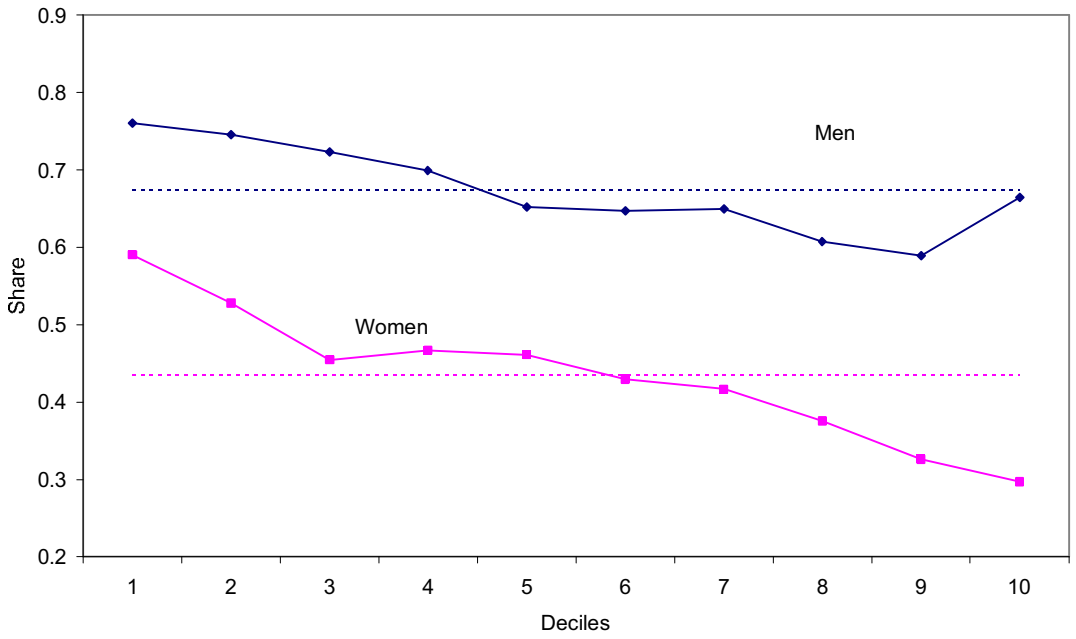
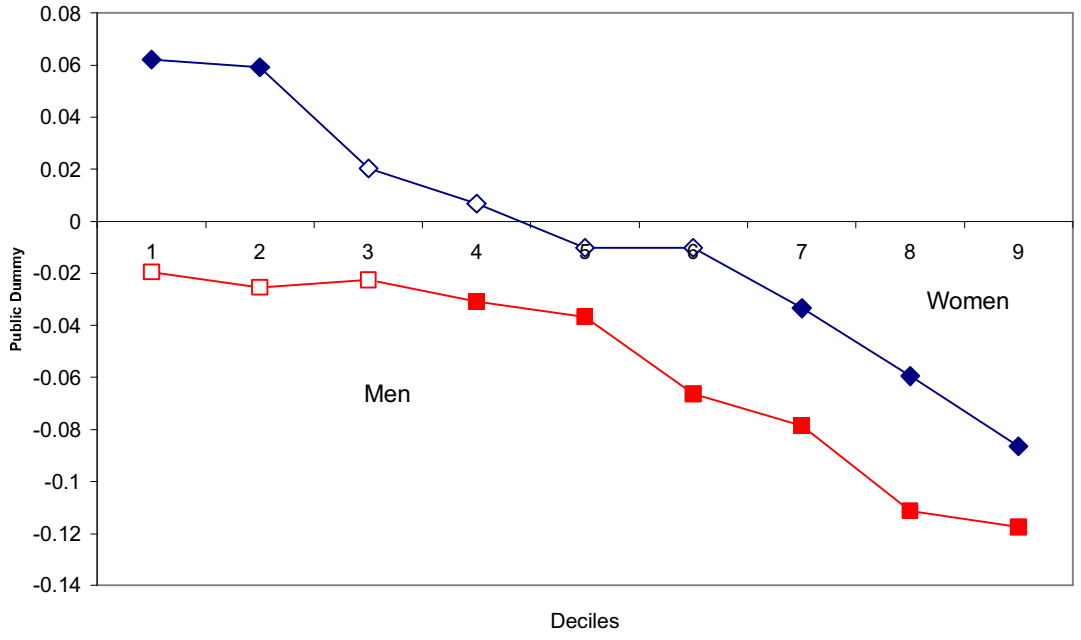


Figure A.6 – Estimates of the wage gap by using quantile regressions*



*The filled dots indicate significance results at the 5% level at least.

Figure A.7.1 - The occupation frequency in public and business sector, Women

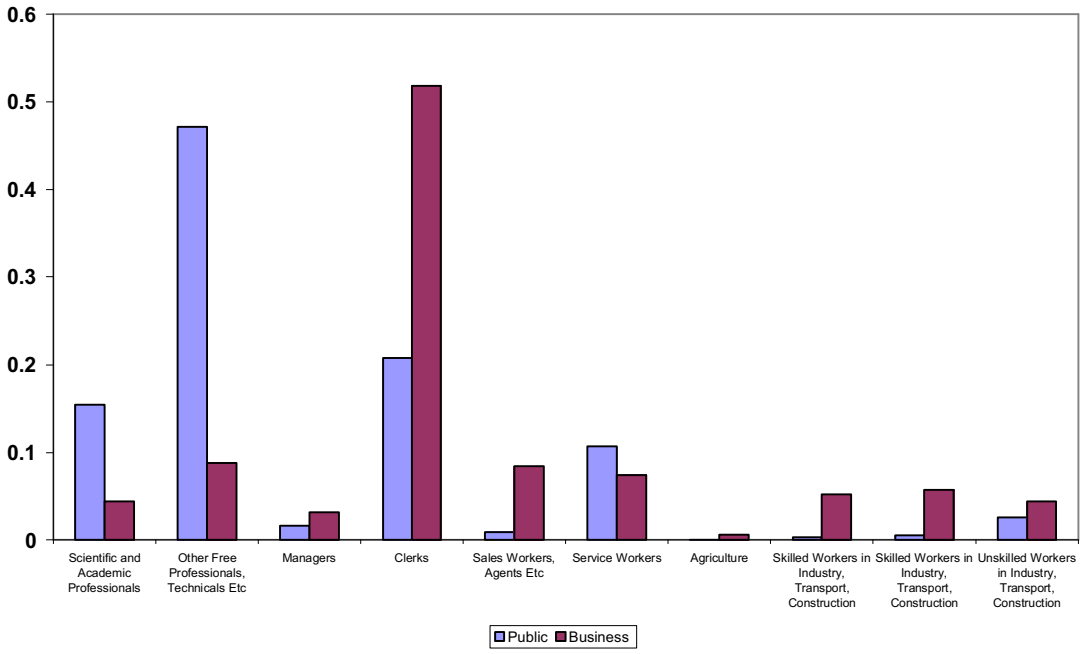


Figure A7.2 - The occupation frequency in public and business sector, Men

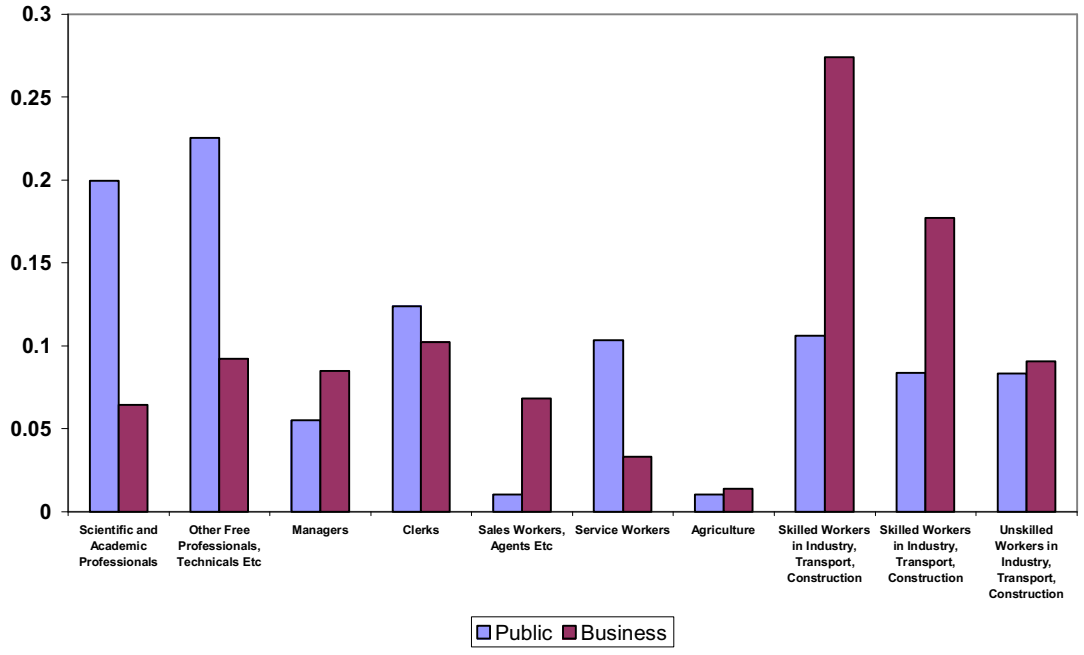


Figure A.8 - The Rate of Return (ROR) to Education in 1983

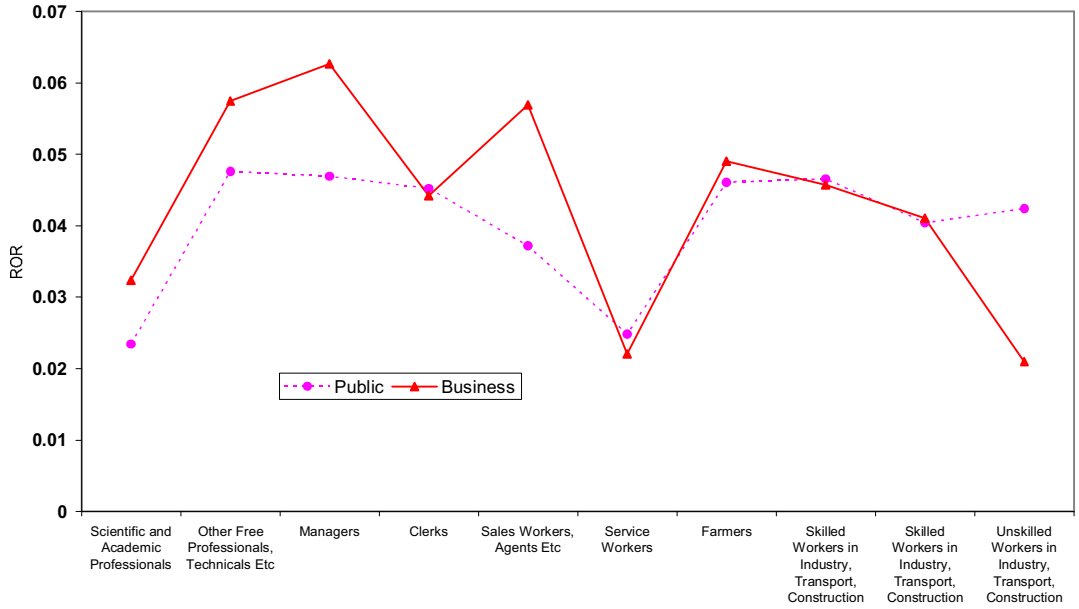


Figure A.9 - The *MSEs* in 1983

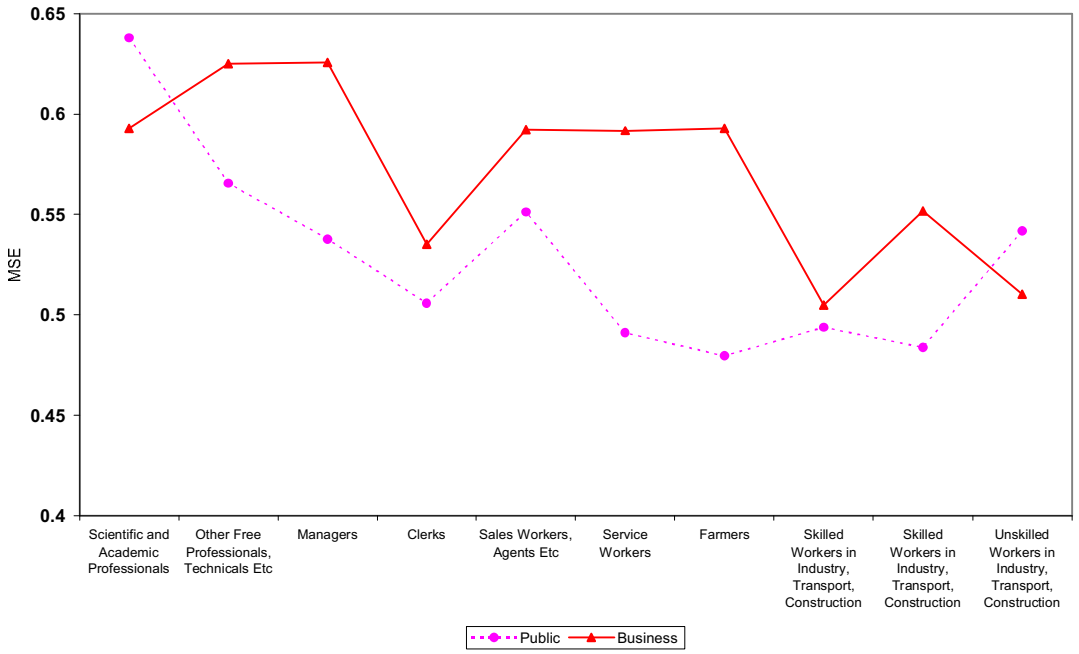


Figure A.10 - Giny Indexes in 1983

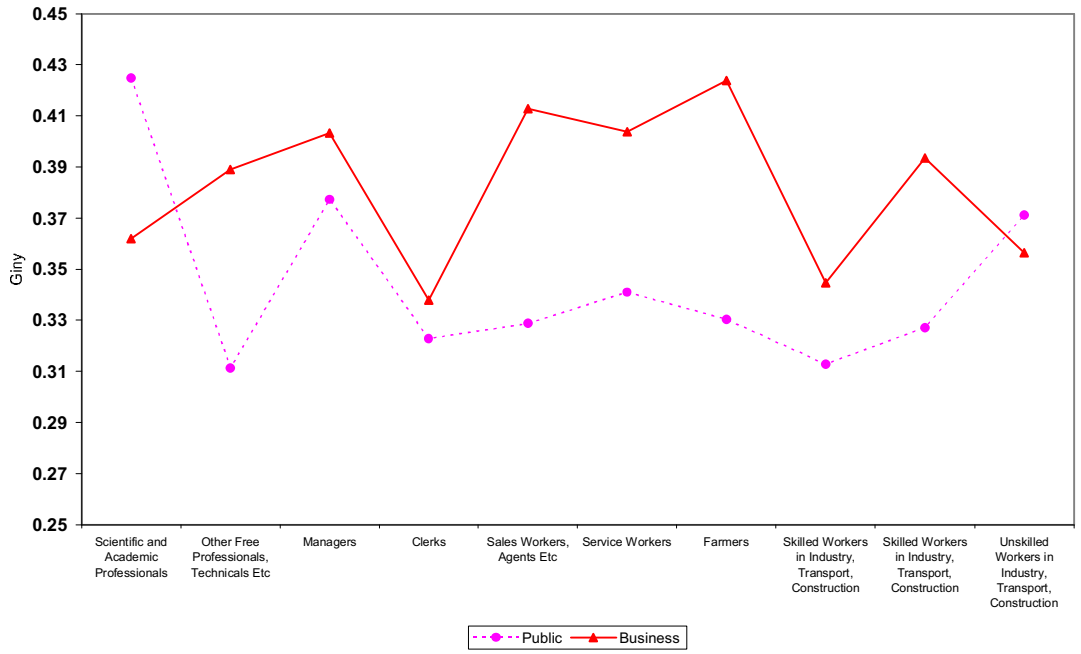


Table A.1 - the transitions between the sectors, Women

PS_BS	0	1	BS_PS	0	1
Obseravtions	3,396	487		1,920	501
Age	33.54	32.50		32.85	31.64
Jew	0.96	1.00		0.99	0.98
Immigrant	0.04	0.04		0.06	0.05
Tsabar	0.56	0.55		0.50	0.55
skilled Occup.	0.20	0.16		0.08	0.11
Partly	0.60	0.41		0.33	0.45
Academic	0.16	0.11		0.03	0.07
Married	0.85	0.79		0.81	0.79

Table A.2 - the transitions between the sectors, Men

PS_BS	0	1	BS_PS	0	1
Obseravtions	1,735	939		4,279	438
Age	34.19	33.35		33.18	33.49
Jew	0.85	0.91		0.87	0.88
Immigrant	0.05	0.04		0.04	0.05
Tsabar	0.56	0.58		0.55	0.53
skilled Occup.	0.42	0.36		0.32	0.27
Partly	0.20	0.11		0.06	0.08
Academic	0.23	0.14		0.06	0.06
Married	0.88	0.85		0.88	0.85

Table A.3 – the dependent variable is whether the worker left PS and entered BS during 1983 till 1995.

$$D_i = \delta_1 X_i + \delta_2 (lWh_i) + \upsilon_i$$

The wage is the log-monthly-wage

	1		2		3		4		5		6	
	All				Men				Women			
Public to Business	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z
Female	-0.178	-11.79	-0.179	-11.90								
Married	-0.005	-0.29	-0.006	-0.32	-0.000	-0.01	-0.002	-0.05	-0.008	-0.40	-0.008	-0.42
Age	-0.015	-1.17	-0.015	-1.19	-0.029	-1.30	-0.030	-1.32	-0.002	-0.15	-0.002	-0.17
Age 2	0.000	0.79	0.000	0.80	0.000	1.10	0.000	1.11	0.000	-0.19	-0.000	-0.17
Jew	0.077	3.26	0.077	3.26	0.100	2.79	0.100	2.79	0.102	2.66	0.101	2.63
Immigrant	-0.012	-0.38	-0.013	-0.42	-0.017	-0.33	-0.019	-0.35	-0.005	-0.16	-0.005	-0.17
Tsabar	0.014	1.03	0.014	1.00	0.043	1.85	0.043	1.84	-0.012	-0.82	-0.012	-0.85
Schooling	-0.009	-3.95	-0.009	-4.01	-0.013	-3.70	-0.013	-3.71	-0.004	-1.64	-0.004	-1.67
Res	0.024	2.34	0.022	2.18	0.045	2.43	0.042	2.29	0.007	0.66	0.007	0.62
Res 2	0.011	1.75			0.011	0.84			0.008	1.20		
Hour per Week	-0.003	-4.19	-0.003	-4.37	-0.005	-4.69	-0.005	-4.71	-0.001	-1.06	-0.001	-1.18
Family Size	-0.011	-2.26	-0.011	-2.26	-0.011	-1.49	-0.011	-1.50	-0.014	-2.31	-0.014	-2.29
Bread Winnes	-0.026	-2.11	-0.026	-2.10	-0.032	-1.63	-0.033	-1.67	-0.012	-0.68	-0.011	-0.67
WPY	-0.003	-4.54	-0.003	-4.58	-0.003	-2.37	-0.003	-2.38	-0.002	-3.84	-0.002	-3.89
Partly	-0.129	-4.97	-0.128	-4.92	-0.147	-3.34	-0.146	-3.32	-0.099	-3.39	-0.098	-3.38
Academic	-0.119	-5.5	-0.119	-5.51	-0.204	-4.87	-0.202	-4.83	-0.041	-1.70	-0.043	-1.77
Technicals	-0.151	-6.24	-0.150	-6.21	-0.114	-2.88	-0.114	-2.86	-0.141	-4.58	-0.141	-4.58
Managers	-0.075	-2.28	-0.075	-2.27	-0.085	-1.63	-0.085	-1.62	-0.063	-1.55	-0.063	-1.55
Clerks	-0.087	-3.56	-0.088	-3.56	-0.177	-4.48	-0.177	-4.48	-0.038	-1.22	-0.039	-1.25
Sales	0.345	4.67	0.351	4.75	0.168	1.53	0.167	1.53	0.443	4.36	0.449	4.41
Service	-0.146	-6.17	-0.146	-6.16	-0.209	-5.18	-0.209	-5.19	-0.084	-2.92	-0.084	-2.92
Agriculture	-0.024	-0.33	-0.023	-0.31	-0.021	-0.22	-0.019	-0.20				
Skilled in Industry	-0.033	-1.08	-0.034	-1.11	-0.060	-1.39	-0.060	-1.39	0.382	2.50	0.378824	2.48
Skilled in Industry	0.038	1.07	0.040	1.10	0.053	1.09	0.055	1.13	-0.010	-0.14	-0.011133	-0.16
Obs.	5,197		5,197		2,370		2,370		2,826		2,826	
Pseudo R2	0.1262		0.1257		0.0674		0.0671		0.1078		0.1072	

Table A.4 – the dependent variable is whether the worker left PS and entered BS during 1983 till 1995.

$$D_i = \delta_1 X_i + \delta_2 (lWh_i) + \upsilon_i$$

The wage is the log-hourly-wage

	1		2		3		4		5		6	
	All				Men				Women			
Public to Business	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z
Female	-0.171	-11.08	-0.171	-11.09								
Married	-0.007	-0.37	-0.007	-0.37	-0.005	-0.14	-0.005	-0.15	-0.008	-0.43	-0.009	-0.44
Age	-0.014	-1.10	-0.014	-1.10	-0.031	-1.37	-0.031	-1.37	-0.001	-0.06	-0.001	-0.06
Age 2	0.000	0.74	0.000	0.74	0.000	1.18	0.000	1.18	0.000	-0.28	-0.000	-0.27
Jew	0.075	3.12	0.075	3.12	0.092	2.50	0.092	2.50	0.100	2.55	0.100	2.54
Immigrant	-0.012	-0.39	-0.012	-0.39	-0.021	-0.39	-0.021	-0.40	-0.003	-0.11	-0.004	-0.11
Tsabar	0.014	1.03	0.014	1.03	0.042	1.78	0.042	1.78	-0.010	-0.72	-0.011	-0.74
Schooling	-0.009	-3.87	-0.009	-3.87	-0.012	-3.38	-0.012	-3.38	-0.004	-1.72	-0.004	-1.73
Res	0.017	1.61	0.017	1.61	0.033	1.71	0.032	1.73	0.008	0.78	0.009	0.80
Res 2	0.000	0.06			0.001	0.1			0.002	0.35		
Hour per Week	-0.002	-3.09	-0.012	-2.43	-0.004	-3.37	-0.004	-3.37	-0.001	-1.12	-0.001	-1.16
Family Size	-0.012	-2.43	-0.024	-1.87	-0.013	-1.66	-0.013	-1.67	-0.015	-2.46	-0.015	-2.45
Bread Winnes	-0.024	-1.87	-0.003	-5.19	-0.031	-1.55	-0.031	-1.55	-0.010	-0.58	-0.010	-0.58
WPY	-0.003	-5.19	-0.127	-4.83	-0.004	-3.46	-0.004	-3.46	-0.002	-3.66	-0.002	-3.68
Partly	-0.127	-4.83	-0.114	-5.31	-0.143	-3.22	-0.143	-3.22	-0.101	-3.43	-0.101	-3.43
Academic	-0.114	-5.31	-0.151	-6.21	-0.212	-5.14	-0.212	-5.15	-0.043	-1.73	-0.044	-1.76
Technicals	-0.151	-6.21	-0.080	-2.44	-0.115	-2.86	-0.115	-2.86	-0.144	-4.65	-0.145	-4.66
Managers	-0.080	-2.44	-0.091	-3.69	-0.094	-1.80	-0.094	-1.80	-0.066	-1.63	-0.066	-1.64
Clerks	-0.091	-3.69	0.344	4.66	-0.178	-4.47	-0.178	-4.47	-0.044	-1.39	-0.044	-1.40
Sales	0.344	4.65	-0.153	-6.49	0.167	1.52	0.167	1.52	0.437	4.30	0.439	4.32
Service	-0.153	-6.49	-0.027	-0.38	-0.226	-5.59	-0.226	-5.60	-0.087	-3.02	-0.087	-3.03
Agriculture	-0.027	-0.38	-0.040	-1.30	-0.030	-0.31	-0.030	-0.31	0.373	2.45	0.372047	2.44
Skilled in Industry	-0.040	-1.3	0.037	1.03	-0.067	-1.56	-0.067	-1.56	-0.015	-0.22	-0.01575	-0.23
Skilled in Industry	0.037	1.03	0.040	1.10	0.054	1.09	0.054	1.10	-0.010	-0.14	-0.011133	-0.16
Obs.	5,097		5,097		2,311		2,311		2,785		2,785	
Pseudo R2	0.1256		0.1256		0.0699		0.0671		0.1078		0.1072	

Table A.5 – the dependent variable is whether the worker left BS and entered PS during 1983 till 1995.

$$D_i = \delta_1 X_i + \delta_2 (lWh_i) + \upsilon_i$$

The wage is the log-monthly-wage

	1		2		3		4		5		6	
	All				Men				Women			
Business to Public	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z
Female	0.048	4.27	0.055	4.86								
Married	-0.020	-1.71	-0.020	-1.68	-0.018	-1.23	-0.018	-1.23	-0.027	-1.12	-0.025	-1.07
Age	-0.021	-2.48	-0.021	-2.49	-0.022	-2.47	-0.022	-2.48	-0.007	-0.38	-0.005	-0.29
Age 2	0.000	2.36	0.000	2.37	0.000	2.58	0.000	2.59	0.000	0.07	-0.000	-0.02
Jew	0.018	1.12	0.016	1.00	0.007	0.46	0.007	0.46	-0.068	-0.94	-0.078	-1.06
Immigrant	0.004	0.22	0.003	0.16	0.018	0.78	0.018	0.79	-0.029	-0.76	-0.034	-0.88
Tsabar	-0.002	-0.22	-0.002	-0.22	-0.009	-0.86	-0.008	-0.84	0.018	0.93	0.015	0.79
Schooling	0.001	0.65	0.001	0.71	0.001	0.69	0.001	0.67	0.002	0.57	0.003	0.71
Res	-0.064	-7.82	-0.049	-7.46	-0.047	-5.05	-0.041	-5.71	-0.097	-5.65	-0.068	-4.79
Res 2	-0.018	-3.4			-0.005	-0.99			-0.052	-3.89		
Hour per Week	-0.000	-0.39	-0.000	-0.22	0.000	0.40	0.000	0.36	-0.003	-1.96	-0.002	-1.75
Family Size	0.001	0.45	0.001	0.46	-0.000	-0.10	-0.000	-0.09	0.004	0.50	0.003	0.34
Bread Winnes	0.009	1.22	0.009	1.16	0.007	0.91	0.007	0.91	0.007	0.33	0.009	0.44
WPY	-0.000	-1.27	-0.000	-1.19	0.000	0.01	0.000	0.05	-0.001	-1.50	-0.001	-1.46
Partly	0.014	0.58	0.015	0.61	-0.023	-1.04	-0.022	-1.02	0.156	2.25	0.151	2.18
Academic	0.054	2.91	0.052	2.79	0.024	0.86	0.023	0.82	0.026	0.81	0.028	0.86
Technicals	-0.019	-1	-0.019	-0.98	-0.024	-1.33	-0.024	-1.31	-0.002	-0.05	-0.006	-0.12
Managers	-0.048	-2.4	-0.048	-2.39	-0.039	-2.18	-0.039	-2.17	-0.083	-1.38	-0.082	-1.34
Clerks	-0.023	-1.44	-0.024	-1.50	-0.014	-0.80	-0.014	-0.78	-0.039	-0.96	-0.041	-0.99
Sales	-0.020	-1.02	-0.022	-1.13	-0.016	-0.80	-0.016	-0.79	-0.015	-0.32	-0.026	-0.54
Service	0.059	2.37	0.058	2.33	0.001	0.06	0.002	0.07	0.157	2.75	0.160	2.79
Agriculture	0.048	1.13	0.049	1.15	0.042	1.05	0.043	1.07	0.063	0.51	0.071539	0.56
Skilled in Industry	-0.027	-1.73	-0.026	-1.63	-0.025	-1.72	-0.025	-1.71	-0.004	-0.08	-0.000695	-0.01
Skilled in Industry	-0.038	-2.34	-0.038	-2.31	-0.036	-2.42	-0.036	-2.41	-0.007	-0.14	-0.005159	-0.10
Obs.	6,505		6,505		4,382		4,382		2,123		2,123	
Pseudo R2	0.0578		0.0553		0.0243		0.0239		0.062		0.0534	

Table A.6 – the dependent variable is whether the worker left BS and entered PS during 1983 till 1995.

$$D_i = \delta_1 X_i + \delta_2 (lWh_i) + \upsilon_i$$

The wage is the log-hourly-wage

	1		2		3		4		5		6	
	All				Men				Women			
Business to Public	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z	dF/dx	z
Female	0.047	4.03	0.051	4.40								
Married	-0.022	-1.86	-0.022	-1.82	-0.020	-1.35	-0.020	-1.35	-0.029	-1.19	-0.026	-1.10
Age	-0.021	-2.50	-0.021	-2.51	-0.022	-2.39	-0.022	-2.41	-0.008	-0.41	-0.006	-0.31
Age 2	0.000	2.39	0.000	2.39	0.000	2.51	0.000	2.53	0.000	0.10	-0.000	-0.01
Jew	0.016	0.97	0.015	0.91	0.006	0.35	0.006	0.35	-0.069	-0.94	-0.074	-1.01
Immigrant	0.002	0.10	0.001	0.07	0.014	0.63	0.014	0.64	-0.029	-0.73	-0.031	-0.81
Tsabar	-0.002	-0.20	-0.002	-0.19	-0.008	-0.84	-0.008	-0.83	0.016	0.82	0.015	0.76
Schooling	0.001	0.50	0.001	0.55	0.001	0.53	0.001	0.53	0.002	0.43	0.002	0.54
Res	-0.052	-6.82	-0.044	-6.71	-0.043	-4.73	-0.039	-5.39	-0.079	-4.89	-0.062	-4.42
Res 2	-0.011	-2.29			-0.004	-0.74			-0.036	-3.00		
Hour per Week	-0.001	-1.52	-0.001	-1.32	-0.000	-0.09	-0.000	-0.11	-0.003	-2.32	-0.003	-2.05
Family Size	0.001	0.50	0.002	0.53	-0.000	-0.09	-0.000	-0.08	0.003	0.43	0.003	0.35
Bread Winnes	0.010	1.26	0.009	1.22	0.008	1.07	0.008	1.08	0.010	0.44	0.010	0.47
WPY	-0.000	-1.19	-0.000	-1.16	-0.000	-0.06	-0.000	-0.03	-0.001	-1.48	-0.001	-1.48
Partly	0.012	0.47	0.012	0.49	-0.024	-1.08	-0.023	-1.06	0.153	2.18	0.147	2.09
Academic	0.046	2.45	0.045	2.40	0.033	1.12	0.032	1.07	0.012	0.36	0.017	0.49
Technicals	-0.022	-1.13	-0.021	-1.11	-0.025	-1.35	-0.024	-1.33	-0.006	-0.11	-0.010	-0.20
Managers	-0.045	-2.22	-0.046	-2.23	-0.038	-2.04	-0.038	-2.04	-0.082	-1.34	-0.082	-1.34
Clerks	-0.028	-1.67	-0.028	-1.69	-0.017	-0.98	-0.017	-0.96	-0.039	-0.94	-0.042	-1.00
Sales	-0.025	-1.24	-0.026	-1.28	-0.016	-0.76	-0.016	-0.76	-0.028	-0.57	-0.034	-0.70
Service	0.058	2.30	0.057	2.28	0.002	0.07	0.002	0.08	0.162	2.76	0.160	2.73
Agriculture	0.044	1.00	0.043	0.99	0.034	0.82	0.034	0.83	0.066	0.52	0.066785	0.53
Skilled in Industry	-0.029	-1.78	-0.028	-1.72	-0.027	-1.79	-0.027	-1.79	-0.001	-0.02	-0.001105	-0.02
Skilled in Industry	-0.038	-2.26	-0.038	-2.24	-0.036	-2.37	-0.036	-2.36	-0.005	-0.09	-0.004907	-0.09
Obs.	6,373		6,373		4,284		4,284		2,092		2,092	
Pseudo R2	0.0552		0.054		0.0235		0.0233		0.0579		0.0528	

.

Table A.7 – the dependent variable is whether the worker left PS and entered BS during 1983 till 1995.

	No Change in Occupation			Change in Occupation		
		dF/dx	Z		dF/dx	Z
Monthly Wage						
All				All		
	res	0.025	1.99	res	0.031	2.03
	res2	0.008	1.12	res2	0.013	1.27
	res	0.024	1.91	res	0.029	1.93
Men				Men		
	res	0.061	2.35	res	0.043	1.71
	res2	0.030	1.93	res2	-0.006	-0.32
	res	0.051	1.94	res	0.045	1.82
Women				Women		
	res	0.011	0.89	res	0.010	0.63
	res2	-0.001	-0.13	res2	0.015	1.37
	res	0.01	0.89	res	0.010	0.58
Hourly Wage		dF/dx	Z		dF/dx	Z
All						
	res	0.018	1.43	res	0.024	1.51
	res2	0.003	0.38	res2	-0.001	-0.14
	res	0.018	1.43	res	0.024	1.52
Men						
	res	0.054	2.01	res	0.027	1.02
	res2	0.023	1.38	res2	-0.016	-0.76
	res	0.049	1.79	res	0.033	1.28
Women						
	res	0.009	0.74	res	0.013	0.76
	res2	-0.001	-0.16	res2	0.007	0.63
	res	0.009	0.73	res	0.013	0.78

Table A.8 – the dependent variable is whether the worker left PS and entered BS during 1983 till 1995.

		No Change in Occupation			Change in Occupation	
Monthly Wage		dF/dx	Z		dF/dx	Z
All						
	res	-0.062	-5.31	res	-0.062	-5.71
	res2	-0.019	-2.48	res2	-0.018	-2.65
	res	-0.045	-5.01	res	-0.047	-5.31
Men						
	res	-0.036	-2.78	res	-0.047	-3.94
	res2	-0.001	-0.10	res2	-0.006	-0.90
	res	-0.035	-3.45	res	-0.041	-4.32
Women						
	res	-0.099	-4.48	res	-0.103	-3.80
	res2	-0.046	-2.84	res2	-0.074	-3.40
	res	-0.062	-3.74	res	-0.072	-3.13
Hourly Wage		dF/dx	Z		dF/dx	Z
All						
	res	-0.054	-4.82	res	-0.050	-4.97
	res2	-0.016	-2.16	res2	-0.011	-1.73
	res	-0.041	-4.57	res	-0.043	-4.82
Men						
	res	-0.030	-2.38	res	-0.045	-3.82
	res2	0.001	0.17	res2	-0.005	-0.76
	res	-0.031	-3.04	res	-0.039	-4.21
Women						
	res	-0.094	-4.32	res	-0.080	-3.17
	res2	-0.045	-2.83	res2	-0.046	-2.38
	res	-0.061	-3.64	res	-0.066	-2.92

The regressions' results of section 8

The following tables present the empirical estimation of the interesting variables for each gender respectively[14] and for both.

The models are different by the variables which were chosen to use in order to describe the within variance of each sector which it is a proxy for the return to skill (ROS).

Table A.9 – the dependent variable is whether the worker left PS and entered BS during 1983 till 1995

Women

Public to Business

	1			2	
	dF/dx	z		dF/dx	z
Schooling	0.001	0.5	Schooling	0.001	0.5
Res	0.028	1.25	Res	0.041	2.14
Res*MSE	-0.070	-0.22			
Res*ROR	-0.124	-0.75	Res*ROR	-0.121	-0.74
			Res*Giny	0.174	0.62
Pseudo R2	0.0793		Pseudo R2	0.0795	
Obs.	2,669		Obs.	2,669	

Table A.10 – the dependent variable is whether the worker left BS and entered PS during 1983 till 1995

Women

Business to Public

	1			2	
	dF/dx	z		dF/dx	z
Schooling	-0.001	-0.17	Schooling	-0.001	-0.19
Res	-0.090	-4.02	Res	-0.063	-3.16
Res*MSE	-0.383	-1.13			
Res*ROR	0.257	1.24	Res*ROR	0.262	1.26
			Res*Giny	0.184	0.53
Pseudo R2	0.0302		Pseudo R2	0.0298	
Obs.	2,118		Obs.	2,118	

[14] The variables (ROR and etc.) were calculated separately for each gender.

Table A.11 – the dependent variable is whether the worker left PS and entered BS during 1983 till 1995

Men

Public to Business

	1			2	
	dF/dx	z		dF/dx	z
Schooling	-0.001	-0.25	Schooling	-0.001	-0.25
Res	0.032	1.08	Res	0.036	1.44
Res*MSE	-0.167	-0.36			
Res*ROR	0.619	2.26	Res*ROR	0.619	2.26
			Res*Giny	-0.137	-0.22
Pseudo R2	0.042		Pseudo R2	0.042	
Obs.	2,070		Obs.	2,070	

Table A.12 – the dependent variable is whether the worker left BS and entered PS during 1983 till 1995

Men

Business to Public

	1			2	
	dF/dx	z		dF/dx	z
Schooling	0.002	1.45	Schooling	0.002	1.43
Res	-0.021	-2.25	Res	-0.027	-3.06
Res*MSE	0.170	1.04			
Res*ROR	0.134	1.11	Res*ROR	0.132	1.09
			Res*Giny	0.012	0.05
Pseudo R2	0.0108		Pseudo R2	0.0104	
Obs.	4,866		Obs.	4,866	

Table A.13 – the dependent variable is the log monthly wage in 1995
All the workers who where in PS in 1983

$$\log(w_i) = \delta_1 X_i + \delta_2 (PS\_BS) + \upsilon_i$$

	1 All		2 Men		3 Women	
l_monthly_wage_95	Coef.	t	Coef.	t	Coef.	t
Public to Business	-0.024	-1.18	-0.037	-1.37	-0.019	-0.56
Female	-0.352	-16.45				
l_monthly_wage_83	0.267	18.15	0.299	13.01	0.236	12.13
Hour Per Week 95	0.001	8.30	0.001	5.21	0.001	6.59
Hour Per Week 83	0.001	0.65	0.002	1.48	-0.001	-0.56
Married	0.042	1.61	0.053	1.28	0.062	1.77
Acquire	0.038	8.99	0.044	7.32	0.029	5.04
Age	0.038	2.08	0.004	0.16	0.054	2.19
Age 2	-0.001	-2.02	-0.000	-0.22	-0.001	-2.00
Jew	0.302	8.38	0.405	8.86	0.072	1.09
Immigrant	-0.119	-2.90	-0.207	-3.28	-0.046	-0.85
Tsabar	0.021	1.09	0.030	1.03	0.021	0.85
Schooling	0.045	13.41	0.039	8.29	0.050	10.60
Family Size	-0.019	-2.83	-0.019	-2.10	-0.005	-0.43
Bread winners	0.043	2.37	0.046	1.91	-0.000	-0.01
WPY 83	0.002	1.96	-0.001	-0.45	0.003	2.78
Partly 83	-0.071	-2.29	0.033	0.60	-0.136	-3.31
Academic	0.111	2.45	0.080	1.36	0.151	1.99
Technicals	0.077	1.86	0.086	1.61	0.083	1.17
Managers	0.248	4.36	0.209	3.03	0.327	3.18
Clerks	0.082	1.95	0.042	0.76	0.120	1.68
Sales	0.227	2.60	0.144	1.15	0.320	2.53
Service	-0.117	-2.60	-0.099	-1.69	-0.126	-1.65
Agriculture	0.001	0.01	-0.018	-0.14	0.259	0.45
Skilled in Industry	0.121	2.35	0.080	1.40	0.659	3.26
Skilled in Industry	0.004	0.07	-0.038	-0.62	0.144	0.96
Constant	6.756	21.20	7.380	15.29	6.234	14.08
Obs.	4,907			2,243		2,664
Adjsuted R2	0.36			0.30		0.27

Table A.14 – the dependent variable is the log hourly wage in 1995
All the workers who where in PS in 1983

$$\log(w_i) = \delta_1 X_i + \delta_2 (PS\_BS) + \upsilon_i$$

	1 All		2 Men		3 Women	
l_hourly_wage_95	Coef.	t	Coef.	t	Coef.	t
Public to Business	-0.071	-3.41	-0.071	-2.55	-0.08	-2.52
Female	-0.202	-9.38				
l_hourly_wage_83	0.246	16.44	0.290	11.99	0.204	10.66
Hour Per Week 95	-0.003	-28.96	-0.003	-22.79	-0.003	-17.55
Hour Per Week 83	0.004	3.73	0.004	3.13	0.002	1.32
Married	0.027	1.06	0.017	0.39	0.037	1.09
Acquire	0.032	7.64	0.039	6.36	0.023	4.04
Age	0.018	0.99	0.023	0.82	0.012	0.49
Age 2	-0.000	-0.79	-0.000	-0.76	-0.000	-0.27
Jew	0.176	4.86	0.253	5.33	-0.049	-0.76
Immigrant	-0.144	-3.52	-0.228	-3.52	-0.070	-1.34
Tsabar	0.027	1.46	0.018	0.61	0.034	1.42
Schooling	0.042	12.66	0.039	7.95	0.047	10.17
Family Size	-0.015	-2.20	-0.006	-0.63	-0.017	-1.71
Bread winners	0.025	1.38	0.016	0.64	0.021	0.73
WPY 83	0.001	0.91	-0.000	-0.29	0.001	1.14
Partly 83	-0.012	-0.39	-0.029	-0.52	-0.029	-0.69
Academic	0.121	2.68	0.089	1.46	0.171	2.3
Technicals	0.099	2.38	0.106	1.92	0.105	1.51
Managers	0.220	3.88	0.175	2.46	0.306	3.07
Clerks	0.033	0.79	0.028	0.49	0.059	0.84
Sales	0.163	1.89	0.095	0.75	0.231	1.89
Service	-0.163	-3.60	-0.138	-2.26	-0.161	-2.15
Agriculture	-0.062	-0.51	-0.050	-0.39	-0.124	-0.22
Skilled in Industry	0.108	2.09	0.068	1.16	0.584	2.99
Skilled in Industry	-0.056	-1.02	-0.081	-1.26	-0.004	-0.03
Constant	1.704	5.40	1.536	3.13	1.889	4.4
Obs.	4,810			2,107		2,623
Adjsuted R2	0.35			0.36		0.30

Table A.15 – the dependent variable is the log monthly wage in 1995
All the workers who where in BS in 1983

$$\log(w_i) = \delta_1 X_i + \delta_2 (BS\_PS) + \upsilon_i$$

	1 All		2 Men		3 Women	
l_monthly_wage_95	Coef.	t	Coef.	t	Coef.	t
Business to Public	-0.252	-11.96	-0.241	-8.48	-0.254	-7.98
Female	-0.318	-16.64				
l_monthly_wage_83	0.325	26.21	0.307	19.81	0.327	15.43
Hour Per Week 95	0.001	10.29	0.001	8.29	0.002	7.39
Hour Per Week 83	-0.000	-0.18	0.002	1.70	-0.003	-1.72
Married	0.097	4.79	0.133	4.88	0.060	1.79
Acquire	0.028	7.40	0.027	6.43	0.028	3.73
Age	0.005	0.37	0.005	0.30	-0.002	-0.06
Age 2	-0.000	-0.64	-0.000	-0.51	-0.000	-0.1
Jew	0.175	6.20	0.187	6.30	0.187	1.73
Immigrant	-0.153	-4.53	-0.145	-3.38	-0.149	-2.68
Tsabar	0.054	3.47	0.071	3.79	0.019	0.71
Schooling	0.058	19.33	0.062	17.83	0.048	8.1
Family Size	-0.001	-0.13	-0.002	-0.32	0.019	1.73
Bread winners	-0.006	-0.50	0.021	1.44	-0.088	-2.77
WPY 83	0.001	1.27	0.002	1.81	0.000	0.09
Partly 83	-0.024	-0.79	0.103	2.01	-0.114	-2.4
Academic	0.304	7.23	0.251	5.33	0.480	5.4
Technicals	0.174	4.97	0.133	3.36	0.290	3.97
Managers	0.307	8.05	0.290	7.00	0.287	3.08
Clerks	0.129	4.27	0.066	1.80	0.189	3.16
Sales	-0.026	-0.69	-0.071	-1.63	0.039	0.54
Service	-0.133	-3.25	-0.085	-1.61	-0.188	-2.55
Agriculture	-0.006	-0.08	0.039	0.51	-0.384	-1.92
Skilled in Industry	-0.073	-2.54	-0.075	-2.43	-0.120	-1.55
Skilled in Industry	0.051	1.69	0.081	2.45	-0.162	-2.15
Constant	7.186	28.66	6.952	22.73	7.317	15.66
Obs.	6,145			4,139		2,006
Adjsuted R2	0.50			0.46		0.42

Table A.16 – the dependent variable is the log hourly wage in 1995
All the workers who where in BS in 1983

$$\log(w_i) = \delta_1 X_i + \delta_2 (BS\_PS) + \upsilon_i$$

	1 All		2 Men		3 Women	
l_hourly_wage_95	Coef.	t	Coef.	t	Coef.	t
Business to Public	-0.158	-7.25	-0.180	-5.94	-0.144	-4.59
Female	-0.161	-8.01				
l_hourly_wage_83	0.288	22.90	0.285	17.42	0.283	13.67
Hour Per Week 95	-0.003	-27.20	-0.003	-24.69	-0.003	-11.26
Hour Per Week 83	0.004	3.68	0.005	3.89	0.000	0.13
Married	0.074	3.51	0.093	3.16	0.038	1.15
Acquire	0.027	6.91	0.028	6.19	0.024	3.22
Age	0.017	1.16	0.029	1.53	-0.002	-0.07
Age 2	-0.000	-1.14	-0.000	-1.50	0.000	0.04
Jew	0.172	5.84	0.171	5.32	0.122	1.15
Immigrant	-0.187	-5.30	-0.177	-3.85	-0.174	-3.14
Tsabar	0.083	5.19	0.080	4.00	0.090	3.33
Schooling	0.052	16.68	0.055	14.83	0.045	7.66
Family Size	-0.003	-0.63	-0.002	-0.36	-0.005	-0.45
Bread winners	-0.005	-0.41	0.009	0.57	-0.023	-0.73
WPY 83	0.001	1.39	0.001	1.36	0.001	0.79
Partly 83	-0.048	-1.55	-0.036	-0.62	-0.111	-2.3
Academic	0.279	6.38	0.213	4.23	0.463	5.24
Technicals	0.170	4.66	0.108	2.55	0.340	4.66
Managers	0.252	6.35	0.221	4.97	0.304	3.3
Clerks	0.111	3.52	0.054	1.36	0.219	3.65
Sales	-0.029	-0.76	-0.096	-2.05	0.120	1.65
Service	-0.082	-1.93	-0.121	-2.12	0.001	0.02
Agriculture	0.015	0.19	0.018	0.21	-0.060	-0.3
Skilled in Industry	-0.081	-2.70	-0.100	-3.03	-0.055	-0.72
Skilled in Industry	0.010	0.32	0.009	0.25	-0.061	-0.82
Constant	1.313	5.07	1.016	3.14	1.781	3.88
Obs.	6,022		4,046			1,976
Adjsuted R2	0.41		0.42			0.34

Table A.17 – the dependent variable is the log wage in 1995
All the workers who where in PS in 1983

$$\log(w_i) = \delta_1 X_i + \delta_2 (PS\_BS) + \upsilon_i$$

		No Change in Occupation			Change in Occupation	
Monthly Wage		Coef.	t		Coef.	t
	All			All		
	ps_bs	0.056	1.64	ps_bs	-0.069	-2.63
	Men			Men		
	ps_bs	0.045	0.89	ps_bs	-0.076	-2.41
	Women			Women		
	ps_bs	0.060	1.2	ps_bs	-0.078	-1.68
Hourly Wage		Coef.	t		Coef.	t
	All					
	ps_bs	0.012	0.35	ps_bs	-0.112	-4.23
	Men					
	ps_bs	0.017	0.33	ps_bs	-0.115	-3.42
	Women					
	ps_bs	0.011	0.23	ps_bs	-0.133	-3.04

Table A.18 – the dependent variable is the log wage in 1995
All the workers who where in BS in 1983

$$\log(w_i) = \delta_1 X_i + \delta_2 (BS\_PS) + \upsilon_i$$

		No Change in Occupation			Change in Occupation	
Monthly Wage		Coef.	t		Coef.	t
	All					
	bs_ps	-0.187	-5.47	bs_ps	-0.275	-10.2
	Men					
	bs_ps	-0.131	-2.41	bs_ps	-0.272	-8.11
	Women					
	bs_ps	-0.241	-5.47	bs_ps	-0.264	-5.51
Hourly Wage		Coef.	t		Coef.	t
	All					
	bs_ps	-0.181	-4.99	bs_ps	-0.139	-5.05
	Men					
	bs_ps	-0.137	-2.3	bs_ps	-0.185	-5.23
	Women					
	bs_ps	-0.235	-5.19	bs_ps	-0.081	-1.78