

Family gap in pay and gender wage gap in Israel¹

Shosh Shahrabani

ABSTRACT

Over the past decades, empirical evidence has suggested the existence of a significant “family gap” in hourly pay, that is, pay differentials between mothers and other women. There also appears to be a relationship between the gender gap and the family gap: countries in which having children has a large negative impact on women’s pay tend to exhibit a larger gender gap in pay as well. This study examines the family gap in Israel, for both women and men, with the aim of shedding light on the relation between it and the gender wage gap. It further examines the family gap in different economic sectors, based upon CBS census data, and describes changes between 1983 and 1995. The findings reveal a differential effect of family size on the returns to human capital (years of education and work experience) for men and women in Israel. Results also indicate that the gender wage gap increases with family size. The asymmetrical effect of family size on women versus men stems mainly from the positive effect of children on men’s wages in some sectors. The study also found that the family gap for women in Israel decreased between 1983 and 1995 in all but the public sector.

Introduction

Many studies over the past few decades have examined the family gap, also known as the “motherhood penalty,” in hourly pay (e.g., Budig and England, 2001; Harkness and Waldfogel, 2003; Korenman and Neumark, 1992). The term refers to pay

¹ This research was supported by grants from the Sapir Center, Tel Aviv University, and the Max Stern Academic College of Emek Yezreel. An earlier version of this paper was presented at the annual meeting of the Israel Economic Association, Maale HaHamisha, May 2004. The data set was taken from the Israel Social Science Data Center (ISDC), The Hebrew University. I am grateful to Ruth Klinov, Uri Benzion, Mira Baron and anonymous reviewers for their helpful comments and suggestions.

differentials between mothers and other women, or between fathers and other men. A wage penalty for motherhood is relevant to larger issues of gender inequality, as any “price” paid for being a mother that is not experienced by fathers will affect many women and contribute to the gender wage gap.

There is no doubt that, on the average, women today earn higher wages relative to men than they did in the past. Klinov (2004) found that the ratio of female/male hourly earnings for full-time employees in Israel rose from 73% in 1976 to 86% in 2000. Yet, the gender gap in Israel is still larger than in other countries. For example, in 1994/1995 the ratio of female/male hourly earnings for full-time employees was 84% in Australia, 81% in Germany and 83% in Sweden (Harkness and Waldfogel, 2003), while in Israel it was only 79%.

Harkness and Waldfogel (2003) point to a relationship between the gender gap and the family gap across countries: those in which children have a large negative effect on women’s pay tend to exhibit a large gender gap in pay as well. In light of this finding, this study examines the family gap in Israel for both women and men, taking into account differences between economic sectors and describing changes that occurred between 1983 and 1995. Gender wages are analyzed according to four main economic sectors (for details on each one, see “Data” below): the public sector, the product sector, services not requiring a high education level (henceforth, low services sector) and services requiring a high education level (henceforth, high services sector). Klinov (2004) notes differences between these sectors: the public sector determines wages administratively, reflecting policy decisions; wages in the product sector, which is under pressure from international competition, are open to competition; the low services sector is affected by foreign workers in the labor force; and the high services sector is the most dynamic in its demand for labor. Using data from the censuses of 1983 and 1995 (CBS-Israel Central Bureau of Statistics),² I examined the gender wage equations of full-time employees in each sector. The reason for focusing on full-time employees was the difference in patterns of full-time wages versus those of part-time wages.³ The model is based on gender wage equations, with explanatory variables for human capital, personal characteristics, family status and family size. It also analyzes the interaction variables of family size and human capital variables (level of education and years of work experience) so as to examine the family gap for men and women. The study aims at answering the following main questions: (1) Does family size have any effect on the returns to human capital in gender wage equations? (2) Is there any difference between men and women in the effect of family size on these returns to

2 Unlike income surveys, the large nationally based set of population data in the CBS contains various demographic and family structure variables.

3 The characteristics of women who work full-time may differ from those of women who choose to work part-time, hence contributing to a bias in the gender wage gap.

human capital? (3) Is there any difference between the four economic sectors in the effect of family size on gender returns to human capital? (4) Were there any changes between 1983 and 1995 in the effect of family size on gender wage equation returns?

Literature review

A growing body of research has investigated the family gap in pay in developed countries, finding that women with children earn lower wages than other women (Anderson et al., 2002; Budig and England, 2001; Hill, 1979; Hundley, 2000; Korenman and Neumark, 1992; Lundberg and Rose, 2000; Taniguchi, 1999; Waldfogel, 1997a, 1997b, 1998). These studies found that, even after controlling for women's "human capital" (i.e., education, work experience) and job characteristics, mothers earn less than their childless counterparts.

Estimates of the size of the motherhood penalty vary, but the existence of such a penalty has been replicated across studies using different data, methodologies and sets of control variables. For example, studies using the National Longitudinal Survey of Young Women in the U.S. estimate a motherhood penalty of about 3% per child (Taniguchi, 1999) or about 3%-5% for one child and 5%-7% for two or more children (Anderson et al., 2002), after controlling for multiple human capital and sociodemographic variables. Other studies suggest the motherhood penalty to be roughly 7% per child, or 5% for one child and 10% for two children, a net of various factors that may affect earnings (Budig and England, 2001; Waldfogel, 1997a). Moreover, in a longitudinal study for the periods 1975–1985 and 1986–1998, Avellar and Smock (2003) show that children lower women's wages significantly, and that this motherhood penalty has been quite stable over time.

Various explanations have been raised to account for the family gap in hourly pay. These explanations are not mutually exclusive. Neoclassical economists argue that women, particularly mothers, earn lower wages because of their rational decisions to allocate more time to familial tasks than to paid jobs outside the home (Becker, 1985; Mincer and Polachek, 1974). Becker's (1991) "new home economics" approach argues that mothers may be less productive on the job than non-mothers because they are tired from home duties or because they are "storing" energy for anticipated work at home. Therefore, children may affect women's wages by lowering their efforts on the job. On the other hand, Korenman and Neumark (1989) argue that there is no consistent evidence that marriage and children cause a reduction in the productivity of mothers at work versus that of non-mothers or of men.

A second explanation for lower wages of women with children has to do with various forms of tradeoffs made by women between wages and flexibility. The theory of compensating differentials states that competition eventually requires all jobs to be equally attractive to the employee at the margin when both pecuniary (wages) and

non-pecuniary benefits are taken into account. Women, for instance, may choose jobs that offer part-time hours or convenient hours, and may trade off wages in return for these types of schedules. These choices may contribute to reducing the amount of work experience and job tenure a woman accumulates over time. Taniguchi (1999) mentioned that there is little evidence that mothers voluntarily “choose” the kinds of paid jobs that are less demanding and lower paid in order to give them sufficient time and effort for their families. Nonetheless, mothers’ employment behaviors often entail a tradeoff between career and parental tasks.

A third explanation for the lower wages of mothers may reflect employer preferences or discrimination. The discrimination explanation encompasses any number of ways that employers treat mothers differently than other women and men in terms of job placement, promotion or pay levels within jobs (Budig and England, 2001:208).

In contrast to the case for women, studies show that marriage and children increase men’s earnings (Daniel, 1995; Lundberg and Rose, 2000). For example, the hourly wage of married men, most of them with children, is higher by 10%-15% than that of other men (Loh, 1996). Hundley (2000) shows that family status (marriage) and family size have a positive effect on men’s wages, but a negative effect on women’s wages. Hundley also indicates that the hourly wage ratio between men and women increases when the size of the family increases. In addition, the empirical findings of Millimet (2000) indicate that the gender hourly wage gap would decrease by 9.5% if the average couple (age 30–49) had one less child in the household.

One of the explanations for the positive effect of marriage and children on men’s wages is men’s increased motivation to raise their income in order to support their growing families (Hersch and Stratton, 1997). This is compatible with Hill’s (1979) findings that, after controlling for quality variables, employees with greater financial commitments to their families tend to earn higher wages. In addition, Korenman and Neumark (1992) argue that married men can develop their working skills more than women because the household duties are not divided equally between men and women.

One of the problems mentioned in the literature is the endogenous nature of women’s fertility. The endogenous problem refers, on the one hand, to the effect of family income on the family’s fertility decisions, and on the other hand, to the effect of the number of children on the family income. In other words, not only is the family’s income affected by the size of the family and the number of children in the house, but the family income may affect the planned number of children and family size. Millimet (2000) found no evidence of this endogenous problem for households in the young cohort aged 21–30 (indicating that family income did not affect fertility decisions). For the 35–49 age group, however, he found endogenous issues involving women’s fertility, as well as a significant positive effect of children on men’s wages, though no significant effect on women’s wages. Yet, Koreman and Neumark (1992)

found that family status and number of children are exogenous rather than endogenous variables in wage equations.

Harkness and Waldfogel (2003) show sizable differences across countries in the differentials in lifetime earnings between women with children, women without children and men. They argue that countries with a large negative effect of children on women's pay tend to have a large gender gap in pay as well, pointing to a relationship between family gap and gender gap. In Israel, marriage was found to have a strong positive effect on men's wages and a weak positive effect on women's wages (Kraus, 2002). Moreover, using annual income surveys, Klinov (2004) showed a negative effect of family size on earnings of both men and women, but this effect disappeared by 2000.

Family gap in pay within the institutional context

Increased maternal employment has brought new challenges for families. These challenges are especially great for mothers, since women remain the primary caretakers of children in all Western countries (Blossfeld and Drobnic, 2001). For women with dependent children, critical factors include the number and ages of their children, and the availability and generosity of various government policies that offset the associated caretaking demands.

Family policies are often viewed as the major mechanism through which welfare regimes operate to support women's labor market activity by reducing their burden of family obligations and by providing them with better opportunities to compete in the labor market. Such policies consist of a variety of services and benefits provided by the state, such as maternity-leave benefits and availability of publicly funded child-care facilities, to meet the needs of families with children.

Several studies reveal that participation of women in the labor market tends to be higher in places marked by developed family policies (e.g., in the Scandinavian countries; Stier et al., 2001). In addition, the supply of child-care services is regarded as an essential factor not only in determining female participation rates, but also for the motherhood penalty. Davies et al. (2003) found the lowest family gaps in pay, or motherhood penalties, in Europe to be in Belgium, Italy, Portugal, France and Denmark, while the largest were in Germany and the UK. The authors argued that the availability of publicly funded child care in Denmark and France contributes to the low family gaps in pay estimated for those countries. In contrast, in Germany and the UK, provisions for day care and after-school facilities enabling mothers to work full time are lacking or underdeveloped. At the same time, Mandel and Semyonov (2005) argued that, while implementation of family policies enables more women to join the economically active labor force, it also increases occupational segregation, as it seems to channel women into "female-type jobs" in disproportionate numbers. This, in turn, increases inequality in earnings.

In Israel, social policy provides women with the opportunity to participate in the labor force. This includes a three-month paid maternity leave granted to all working women, and the option for mothers of young children to work one hour less a day without any pay penalty. In addition, the government provides subsidized day-care facilities for young children. Moreover, the public sector has become one of the especially “preferred” employment sectors for women due to its “supportive family policy.” More specifically, the public sector is more tolerant of absenteeism and is more likely to permit flexible hours (Gornick and Jacobs, 1998). In this context, it is interesting to examine the family gap in the public sector and to compare it to the family gap in other economic sectors in Israel.

Data

The data were taken from the demographic version of the Israeli Central Bureau of Statistics (CBS) population censuses for 1983 and 1995. The sample includes Jews and others, full-time employees (working at least 35 hours a week, 50 weeks a year) aged 23-44 who belong to the civilian labor force (1995) or who worked during the census year (1983) and were not new immigrants⁴ or foreign workers. I focused on full-time employees in order to identify a more homogeneous group of men and women employees and so that computation of the gender pay gap would not be affected by any hourly wage penalty for part-time work. Moreover, there are differences in wage patterns for full-time versus part-time employees (Klinov, 2004). The sample focuses on the 23-44 age group only, as I wanted to examine the relation between family structure and the wages of women and men whose children are still living at home.

The 1983 sample includes 44,017 men and 18,738 women, while the 1995 sample includes 45,593 men and 26,239 women.⁵ Each sample was divided into eight groups—by gender and by four principal economic sectors:

- * Public sector: health services, education, community and social services (whether operated by government or not), public administration.
- * Product sector: agriculture, building, manufacturing.
- * Low services sector: security, transportation, accommodation services, commerce.
- * High services sector: research and development, communications, banking and insurance, business services, computers, electricity, water, real estate.

4 New immigrants were defined as individuals who came to Israel after 1990 for the 1995 census, and those who came to Israel after 1976 for the 1983 census.

5 All individuals with extreme wage values were dropped from the sample.

Structural changes in the labor force

During the 1980s and 1990s, the Israeli labor market underwent several major changes. The first half of the 1980s was marked by a period of high inflation, reaching an annual rate of over 400%. After the stabilization program of 1985, this high inflation level was curbed, but the unemployment rate rose. The second change, in 1989 and the early 1990s, was marked by the arrival in a short period of time of about 800,000 new immigrants from the former Soviet Union. Until the labor market adjusted to this major change, around 1995, unemployment rates rose considerably. At that time, unemployment rates for women were much higher than for men (for example, CBS data reveal that unemployment rates in 1992 were 14% for women and 9% for men). Inflation and immigration have contributed to the increasing trend of income inequality in Israel (Ben-David, 2003). Yet, during the period 1985–1992, the women/men hourly wage ratio was fairly stable, at around 77%, while since 1993 it has risen to 82% (Klinov, 2004). In addition, women's labor force participation rates have increased substantially, reflecting, among other things, higher education levels.

These major changes in the two past decades were accompanied by economic growth and structural changes in the economic sectors. Table 1 shows the different distributions in the labor force by gender for the 23–44 age group across the four economic sectors between 1983 and 1995. The upper portion of the table shows that the relative share of women in the labor force for this age group increased from 30% to 37% between 1983 and 1995. The lower half indicates a decline in the relative shares of the public and product sectors (among the labor force of this age group) in this period, and a rise in the the high and low services sectors. Moreover, whereas in 1983, men constituted the majority of the labor force in this age group in all four economic sectors, in 1995, women were the majority in the public and high services sectors (54% and 52%, respectively). To determine whether or not these structural changes had an impact on the gender wage gap, I examine the effects of economic sector, as well as of children, on gender wages in 1983 and 1995.

Family structure and pattern of the gender wage ratio

First, this section describes the family structure in Israel according to chosen sample data for 1983 and 1995 (census data). Then, it presents the raw gender gap in Israel. Finally, it examines the relation between family size and the raw wage ratio of men versus women. The evidence in this section is not based on any statistical method. The aim is to examine the raw gender wage gap according to different groups that a priori have the same average qualifications. Subsequent sections describe the above relations within an analytical framework.

Table 1. Employees aged 23-44, by Economic Sectors and by Gender, 1983 and 1995

Sector	Men%	Women%	All	Men%	Women%	All
	1983			1995		
Percentage by Gender in each Economic Sector						
Public	55	45	18,015	46	54	17,625
Product	84	16	24,869	80	20	25,312
Low Services	75	25	12,100	67	33	18,054
High Services	53	47	7,771	48	52	10,841
All	70	30	62,755	63	37	71,832
Percentage by Economic Sector for each Gender						
Public	22.6	43.0	28.7%	17.7	36.5	24.5%
Product	47.3	21.5	39.6%	44.4	19.4	35.2%
Low Services	20.6	16.1	19.3%	26.5	22.8	25.1%
High Services	9.4	19.4	12.4%	11.5	21.4	15.1%
All	100	100	100	100	100	100

Family structure in Israel

In comparison to other developed countries, Israel has a relatively high “familism index,” measured by a high fertility rate (in 1994, 2.6 compared to less than 1.8, the average rate in 21 developed countries), a high marriage rate (6.7 per 1,000 persons) and relatively low divorce rates (1.56 per 1,000 persons) in comparison to other developed countries (Fogiel-Bijaoui, 2001). However, the study notes that, over time, this familism index has moderately declined, as fertility and marriage rates have decreased and the divorce rate has increased.

In order to consider changes in family structure for each gender separately, I calculated the distribution of the number of persons per household for those belonging to the group of veteran Israelis and full-time employees between the ages of 23-44, for 1983 and 1995. The data indicate that the percentage of women in five- to six-person households increased significantly between these two years (from 21.7% to 29.7%), while the percentage of women in households of less than five persons decreased. For men, the percentage belonging to small families (one- to two-person household) increased between 1983 and 1995 (from 18.7% to 24.2%), and the percentage in three- to four-person households decreased (for larger families, the percentage of men

did not change).⁶ These findings support the assumption that differential changes in family structure for the two genders is one possible explanation for the remaining wage gap between men and women.

Raw gender wage gaps

Table 2 shows the raw gender wage gap in Israel by age group and level of education. The sample includes veteran Israeli full-time employees aged 23–44, for 1983 and 1995. The table shows the median hourly wage ratio for men and women, as well as the hourly wage ratio for the lowest quartile (Q1–25 percentile) and the third quartile (Q3–75 percentile).⁷

The columns in Table 2 show, for each year, that the gender wage ratio tends to increase with age, reflecting life-course or career effects. But an examination of the rows shows that the gender wage ratio considerably declined for each age group over time. These changes indicate that the new cohort of women is faring better than previous ones. The same tendencies were reported for the US and other developed countries (Blau and Kahn, 2000). In addition, for all educational levels as a group, the gender wage gap is in general greater for higher wage levels than for lower wage levels ($Q_3 > Q_1$), though it is not higher for each of the education levels.

A comparison of the 1983 data to the 1995 data by sectors indicates that the wage ratio declined for all but the high services sector. In this sector, the gender wage gap increased for the lower education level. Kraus (1992) found gender wage gaps in Israel to be smaller in the public sector than the private sector. However, when we consider other factors, such as age group and education level, the gender wage gaps in the public sector are not smaller (and in some cases are even larger) than in the other sectors.⁸

6 Some of the changes in the distributions for both men and women may reflect the gap in marriage age over time. For example, in 1980, the average age for marriage was 22.4 for women and 25.3 for men, while in 1995 the average ages were 23.4 and 26.4, respectively (CBS, *The Annual Statistical Report*, 2004). This trend may, in turn, affect the age of the first birth and the number of planned children in families.

7 The hourly wage ratio was obtained by dividing the monthly wage by the total number of monthly working hours, since the census data provide only the monthly wage. Note that this calculation disregards the premium paid for overtime hours.

8 Data available upon request.

Table 2. Median male/female hourly wage ratios, first and third quartiles of full-time employees, by age group and education level, 1983 and 1995

Age Group	Wage Ratio Male/Female		Q ₁ First Quartile		Q ₃ Third Quartile		Number of Observations Men		Number of Observations Women	
	1983	1995	1983	1995	1983	1995	1983	1995	1983	1995
All Education Levels										
23-44	1.41	1.25	1.37	1.20	1.44	1.32	43,682	44,549	22,821	32,277
Less Than 12 Years of Schooling										
23-33	1.35	1.28	1.39	1.30	1.36	1.25	9,828	3,742	4,428	1,130
34-44	1.53	1.37	1.53	1.35	1.49	1.37	9,698	7,395	3,697	3,809
12 Years of Schooling										
23-33	1.32	1.17	1.26	1.19	1.33	1.21	5,286	9,311	5,180	8,360
34-44	1.42	1.25	1.42	1.23	1.42	1.26	3,538	6,460	1,872	5,874
13-15 Years of Schooling										
23-33	1.38	1.17	1.37	1.17	1.37	1.26	6,028	5,257	2,647	4,454
34-44	1.57	1.43	1.53	1.39	1.60	1.34	4,106	4,633	1,643	3,034
More Than 15 Years of Schooling										
23-33	1.39	1.25	1.35	1.21	1.37	1.30	3,538	3,163	1,734	3,002
34-44	1.47	1.34	1.45	1.35	1.46	1.34	4,587	4,633	1,666	2,614

Raw gender and family gaps in wages

As mentioned above, several studies have emphasized the contribution of the family gap to the gender wage gap (e.g., Harkness and Waldfogel, 2003). This section describes the family gap in Israel and the raw hourly gender wage ratio for two types of families: two- and five-person households. To examine the impact of family size on hourly wages, I compared the hourly wages of women and men (separately) in two-person households to that of women and men in five-person households according to education level.⁹ The sample includes full-time employees aged 35-44, disaggregated by economic sectors. This narrow age group was chosen to reduce differences in

9 For the 23-44 age group, married women (or men) in two-person households usually included a couple without children, while five-person households for married women (or men) in most cases included three children (although some families include more than two adults at home).

individuals' years of experience, and to refer to women whose children are still living at home.¹⁰

Table 3 shows the median hourly wage ratio according to four main categories:

- X_1 : wage ratio between married women in two-person and five-person household.
- X_2 : wage ratio between married men in two-person and five-person household.
- X_3 : wage ratio between married men and married women in two-person household.
- X_4 : wage ratio between married men and married women in five-person household.

The raw data in the table indicate that, for women in 1983, there was a family gap in almost all sectors and education levels (the median hourly wage for married women in a five-person household was less than that of married women in a two-person household, $X_1 > 1$). However, by 1995, this family gap had disappeared. For men, we observe the "opposite" family gap, since in both years the median hourly wage for married men in a five-person family was higher than that for married men without children ($X_2 < 1$).

Table 3 also indicates that the gender wage gap in both years increases as family size increases ($X_4 > X_3$). In addition, in most cases the gender wage gap, given family size, is higher for lower education levels. A comparison between 1983 and 1995 shows that, for five-person households, this gap decreased over time ($X_{4(1995)} < X_{4(1983)}$). However, for smaller families (two-person households), the gender wage gap decreased only for the lower education level and increased for the higher education level. To conclude, the raw wage data in Table 3 suggest there is some relationship between the gender gap in pay and the family gap in pay.

The model

Previous studies have decomposed the gender wage gap into three main components: (1) differences in the effects of personal characteristics of men and women; (2) differences in the returns to human capital and other independent variables in the wage functions of both genders, which can be partially explained as "market discrimination" (Oaxaca, 1973); and (3) the "unexplained" error term. Among these studies are: Oaxaca and Ransom (1994), Oaxaca (1973), and, for Israeli data, Kraus

10 The data for the 23-44 age group (not shown in this paper) revealed tendencies similar to those in the 35-44 group.

Table 3. Median hourly wage ratios by family size for full-time employees aged 35-44, by education level and economic sector, 1983 and 1995

Years of schooling	X ₁ Females		X ₂ Males		X ₃ Male/Female		X ₄ Male/Female	
	1983	1995	1983	1995	1983	1995	1983	1995
Public Sector								
0-12	0.91	0.78	0.83	0.74	1.40	1.29	1.54	1.36
13+	1.02	0.95	0.95	0.77	1.45	1.14	1.57	1.42
Product Sector								
0-12	0.90	0.73	1.07	0.75	2.32	1.42	1.97	1.37
13+	1.10	0.71	0.67	0.70	1.00	1.31	1.66	1.33
Low Services Sector								
0-12	1.16	0.99	0.92	0.74	1.22	1.10	1.53	1.48
13+	1.10	0.93	0.70	0.88	1.05	1.23	1.65	1.30
High Services Sector								
0-12	1.10	0.84	0.82	0.83	1.40	1.44	1.86	1.45
13+	1.09	0.81	0.63	0.68	0.88	1.16	1.52	1.38

X₁ Wage ratio between married women in 2-person and 5-person household.

X₂ Wage ratio between married men in 2-person and 5-person household.

X₃ Wage ratio between married men and married women in 2-person household.

X₄ Wage ratio between married men and married women in 5-person household.

(2002), Cohen and Haberfeld (2003), and Neuman and Oaxaca (2003). The model proposed in this paper consists of two parts. The first part focuses on estimating the differential returns (coefficients) to human capital and other independent variables in the wage functions for each gender, in order to specify the family gap in Israel. The second part of the model adds to the existing literature by decomposing the gender wage gap according to four main economic sectors.

Using OLS regressions, in a framework similar to that of Harkness and Waldfogel (2003), I estimated the human capital earnings functions of men and women separately, with the natural logarithm of monthly wages as the dependent variable and the following explanatory variables (see Appendix A): (a) marital status-married/unmarried; (b) number of persons in household—a set of dummy variables, which includes 1-2 persons, 3-4 persons, 5-6 persons, and 7+ persons per household; (c) potential experience, calculated as the individual's age minus years of schooling

minus 6, and potential experience squared¹¹; (d) education level—a set of dummy variables, which includes number of years of schooling: 0-12 (without matriculation), 12 (matriculation), 13-15 (academic or partial academic degree), 16+ (higher academic degrees); (e) origin—a set of five dummy variables: four countries of origin or birth countries for Jews and one variable for non-Jewish residents; (f) economic sector—4 dummy variables; and (g) the natural logarithm of monthly work hours. I also added an interaction between some independent variables to examine the effects of children (or the number of persons in the household) on the return from education level and on the return from years of work experience.

While the decision to participate in the labor force and the decision to work at a full-time or part-time job are endogenous, work hours are exogenous mainly for the full-time group (Baffoe-Bonnie, 2001).¹² Therefore, I follow other studies that have examined the relation between family structure and the gender wage gap for full-time employees and treated labor hours as exogenous (e.g., Hudis, 1976; Waldfogel, 1998).

Results

Wage equations

The results of the wage equations for 1983 and 1995 indicate, as expected, that the important variables affecting the wages of men and women are: working hours, experience, education level, origin, nationality and family size (Table 4).¹³ The differences between the returns (coefficients) to human capital and other independent variables for men and women are as follows:

Working hours: For both years, I found no significant difference between the working hour returns for men and women. However, analysis of the wage equations by economic sector shows that, in 1983, the return for working hours was higher for women than for men in the low services sector (in all other sectors, the differences are not significant), while in 1995 this return was higher for men in the product sector and public sector (see Table 5 for 1995 data).¹⁴

11 Potential experience was calculated, as the census does not include data on actual experience. Note that potential experience may overestimate women's actual experience, since it does not take into account maternity leave or other non-working periods, which are especially relevant for mothers.

12 The results of Baffoe-Bonnie's (2001) empirical study indicated that part-time workers are more sensitive (in choosing their work hours) to changes in income tax than full-timers. Moreover, they found that the percentage change in working hours, for all workers, due to tax changes is very low.

13 According to F values (not shown in the tables).

14 Results for 1983 by economic sector, not shown in the paper, are available upon request.

Table 4. Regression coefficients of wage equations, where dependent variable is Ln monthly wage of full-time employees aged 23-44, by gender, 1983 and 1995

	1995		1983	
	Women	Men	Women	Men
Intercept	4.68	4.70	7.44	7.88
	(0.11)*	(0.07)*	(0.14)*	(0.09)*
Ln Working Hours	0.64	0.75	0.46	0.47
	(0.02)*	(0.01)*	(0.03)*	(0.02)*
Persons (3-4)	0.15	-0.06	0.12	-0.04
(Base = Persons 1-2)	(0.03)	(0.02)*	(0.03)*	(0.02)
Persons (5-6)	0.05	-0.26	0.03	-0.12
	(0.04)	(0.03)*	(0.04)	(0.03)*
Persons (7+)	0.23	-0.21	0.02	-0.23
	(0.10)	(0.04)*	(0.11)	(0.05)*
Exp. (yrs of experience)	0.06	0.06	0.05	0.05
	(0.00)*	(0.00)*	(0.00)*	(0.00)*
Exp. Square	-0.00	-0.00	-0.00	-0.00
	(0.00)*	(0.00)*	(0.00)*	(0.00)*
Marital Status	-0.06	-0.09	-0.05	-0.10
(Base = Married)	(0.01)*	(0.00)*	(0.01)*	(0.01)*
Schooling (12 yrs)	0.36	0.23	0.297	0.22
(Base= 0-12)	(0.02)*	(0.01)*	(0.01)*	(0.01)*
Schooling (13-15)	0.596	0.44	0.51	0.46
	(0.02)*	(0.01)*	(0.02)*	(0.01)*
Schooling (16+)	0.87	0.67	0.71	0.67
	(0.02)*	(0.01)*	(0.02)*	(0.02)*
Origin - Eastern	-0.02	-0.07	-0.06	-0.13
(Base = Western)	(0.01)	(0.00)*	(0.01)*	(0.01)*
	0.03	0.02	0.01	-0.02
Origin - East Europe	(0.01)*	(0.01)*	(0.01)	(0.00)*
Origin - Israeli	0.02	0.03	-0.04	-0.05
	(0.01)*	(0.01)*	(0.02)	(0.01)*
Non-Jews	-0.35	-0.35	-0.40	-0.51
	(0.01)*	(0.01)*	(0.02)*	(0.01)*

	1995		1983	
	Women	Men	Women	Men
High Services Sector	0.18	0.12	0.22	0.04
(Base = Product Sector)	(0.01)*	(0.00)*	(0.01)*	(0.00)*
Low Services Sector	-0.07	-0.05	-0.03	-0.06
	(0.00)*	(0.00)*	(0.01)*	(0.00)*
Public Sector	-0.04	-0.03	0.02	-0.06
	(0.00)*	(0.00)*	(0.01)*	(0.00)*
R ²	0.26	0.26	0.31	0.30
N	26239	45593	18738	44017

Standard error in parentheses. * $p < .05$.

Origin: In both years, the returns from origin for men from Eastern countries are lower than those for men from Western countries (a result that is compatible with Cohen and Haberfeld, 2003). The same effect is shown for women. However, the origin effect on wages is more dominant for men than women in both years.

Nationality: In both 1983 and 1995, returns for non-Jews are lower than those for Jews (of Western origin), for both women and men. In 1995, there was no significant difference in nationality returns for either gender.

The relation between family structure and wages

This section analyzes the effects of education level and work experience variables combined with the effects of family size. That is, it examines the relation between family size and the wages of men and women according to the wage equations. It also examines the systematic differences in this relation among the four economic sectors. Table 5 summarizes the results for 1995 for the main variables related to family structure.

Marital status: In general, *ceteris paribus*, marital status had a positive effect in both years on the wages of men and women, although this effect was stronger for men. This result is compatible with Kraus (2002).

Family size: In both years, as well as in all four economic sectors, family size had a differential effect on the wages of men and women.

Family size and the return from years of work experience: For all sectors (last two columns), family size had a small positive effect on the experience return for men, while for women the opposite effect emerged (controlling all other variables). In other words, the return from years of work experience for women in a two-person family, without children, is higher than this return for women in a three- or more person

Table 5. Regression coefficients of wage equations, where dependent variable is Ln monthly wages of full-time employees aged 23-44, by gender and economic sector, 1995

	Public Sector		Product Sector		Low Services Sector		High Services Sector		All Sectors	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Ln Working Hours	0.61*	0.80*	0.53*	0.72*	0.70	0.74	0.76	0.79	0.65	0.75
	(0.05)*	(0.04)*	(0.06)*	(0.02)*	(0.05)*	(0.03)*	(0.05)*	(0.05)*	(0.02)*	(0.02)*
Persons 3-4	0.21	0.30	0.12*	-0.14*	0.04*	-0.17*	0.14	0.19	0.15	-0.06
(Base=Persons 1-2)	(0.07)*	(0.08)*	(0.07)	(0.03)*	(0.07)	(0.05)	(0.08)	(0.12)	(0.04)	(0.03)*
Persons 5-6	0.16	0.05	-0.08*	-0.32*	-0.20	-0.31	0.24	0.07	0.05	-0.26
	(0.08)	(0.09)	(0.09)	(0.04)*	(0.09)*	(0.06)*	(0.10)*	(0.14)	(0.04)	(0.03)*
Persons 7+	0.14	-0.14	0.34	-0.24*	0.02	-0.18	0.54	-0.00	0.23	-0.22
	(0.17)	(0.13)	(0.24)	(0.06)*	(0.24)	(0.09)	(0.30)	(0.25)	(0.10)	(0.04)*
Experience (yrs)	0.05	0.07	0.06*	0.05	0.06	0.04*	0.06*	0.09	0.06	0.06
	(0.00)*	(0.00)*	(0.00)*	(0.00)*	(0.00)*	(0.00)*	(0.00)*	(0.00)*	(0.00)*	(0.00)*
Experience · Persons 3-4	-0.00	0.00	-0.00*	0.01*	-0.00*	0.01*	0.00	0.00	-0.00	0.01
	(0.00)*	(0.00)	(0.00)	(0.00)*	(0.00)	(0.00)*	(0.00)	(0.00)	(0.00)*	(0.00)*
Marital Status	-0.05	-0.04	-0.04*	-0.14*	-0.08	-0.10*	-0.08	-0.05	-0.07	-0.10
(Base=Married)	(0.02)*	(0.02)	(0.02)*	(0.01)*	(0.02)*	(0.01)*	(0.01)*	(0.02)	(0.01)*	(0.00)*
Schooling 12 (yrs)	0.39	0.42	0.35	0.18	0.30*	0.18*	0.24	0.29	0.36	0.23
(Base= 0-12)	(0.05)*	(0.05)*	(0.03)*	(0.01)*	(0.04)*	(0.02)*	(0.05)*	(0.08)*	(0.02)*	(0.01)*
Schooling 13-15	0.59	0.63	0.67*	0.42*	0.49*	0.33*	0.50	0.57	0.59	0.44
	(0.05)*	(0.05)*	(0.04)*	(0.02)*	(0.04)*	(0.02)*	(0.05)*	(0.08)*	(0.02)*	(0.01)*
Schooling 16+	0.86	0.79	1.05*	0.78*	0.76	0.66	0.75	0.75	0.87	0.67
	(0.05)*	(0.05)*	(0.05)*	(0.02)*	(0.05)*	(0.03)*	(0.05)*	(0.08)*	(0.02)*	(0.01)*
Schooling 12 · Persons 3-4	-0.13	-0.26	-0.05*	0.03*	-0.02	0.03	-0.16	-0.07	-0.10	-0.01
	(0.05)*	(0.05)*	(0.05)	(0.02)	(0.05)	(0.03)	(0.06)*	(0.10)	(0.02)*	(0.01)
Schooling 13-15 · Persons 3-4	-0.07	-0.21	-0.05	0.07*	0.04	0.14	-0.13	-0.09	-0.05	0.04
	(0.06)	(0.06)*	(0.05)	(0.02)	(0.06)	(0.03)*	(0.06)	(0.10)	(0.03)	(0.01)*
Schooling 16+ · Persons 3-4	-0.07	-0.15	-0.06	0.01	0.05	0.16	-0.08	-0.05	-0.04	0.07
	(0.06)	(0.06)*	(0.06)	(0.03)	(0.06)	(0.04)*	(0.07)	(0.10)	(0.00)	(0.02)*
Origin - Eastern	0.00	0.04	-0.04*	-0.13*	-0.04*	-0.10*	-0.03	-0.07	-0.07	-0.02
(Base=Western)	(0.02)	(0.02)	(0.02)	(0.01)*	(0.02)	(0.01)	(0.02)	(0.02)*	(0.00)*	(0.01)

	Public Sector		Product Sector		Low Services Sector		High Services Sector		All Sectors	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Origin–East Europe	0.08	0.10	-0.00	-0.021	-0.00	-0.00	0.00	0.04	0.02	0.03
	(0.02) [#]	(0.02) [#]	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01) [#]	(0.01) [#]
Origin–Israeli	0.02	0.08	0.04*	0.01*	0.01*	0.00*	0.02	0.05	0.03	0.02
	(0.02)	(0.03) [#]	(0.03)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01) [#]	(0.01) [#]
Non-Jews	-0.24	-0.19	-0.44	-0.39	-0.46	-0.42	-0.40	-0.44	-0.35	-0.35
	(0.02) [#]	(0.02) [#]	(0.03) [#]	(0.01) [#]	(0.04) [#]	(0.02) [#]	(0.04) [#]	(0.03) [#]	(0.01) [#]	(0.01) [#]
R ²	0.30	0.34	0.23	0.22	0.27	0.26	0.21	0.27	0.26	0.26
N	9,573	8,052	5,085	20,227	5,975	12,079	5,606	5,235	26,239	45,593

Standard error in parentheses.

[#] Significant coefficient ($p < .05$).

* Significant difference between coefficients of men and women ($p < .05$).

household, while the opposite is true for men.¹⁵ A comparison of the experience return according to gender shows that, for small families (two persons without children), there is no significant difference between men and women; however, for larger families, the experience return of men is higher than that of women. Looking at the data per economic sector, the number of persons in the household in 1983 and in 1995 had a small positive effect on the experience return for men in all but the high services sector (which showed no significant family gap effect). For women, the negative effect of family size on years of experience decreased between 1983 and 1995 in all but the public sector.

Family size and the return from education: When the economic sectors are aggregated, the results in Table 5 show that, in 1995, women at all educational levels had an advantage over men in terms of education return, but only in small families (two-person households without children). This advantage decreased significantly when the family became larger, since family size has a small negative effect on a woman's education return, but a small positive effect on a man's return in the wage equations. For very large families (seven persons and more), family size has a negative effect on the education return for both genders, though for women the negative effect is larger. When considering each sector separately, we find that the results for the product sector and the low services sector are similar to the results described above

15 The interaction effects of family size with work experience and with education, for three or more persons in the household, are not shown in the table.

for the aggregated sectors. In 1995, however, men have an advantage over women on the education return in small families in the high services sector and in the public sector, except at the high education level. Moreover, this advantage becomes larger in the high services sector when family size increases, since family size has a small negative effect on women's education return, but no effect on men's education return. In the public sector, in 1983, family size has a positive effect on the return for men, but a negative effect or no effect on the return for women. In contrast, in 1995, there was a family gap for both genders in the public sector.

Changes in family gap between 1983 and 1995

In general, the negative effect of family size for women on the return from years of experience decreased between 1983 and 1995, in all but the public sector. For men, there are no significant changes in the effects of family size on the experience return in any sector between these years.

Considering the data per sector, between 1983 and 1995 in the product and low services sectors, the negative effect of family size for women on the education return decreased or disappeared, while the positive effect for men increased (for high education levels). In the high services sector, the insignificant effect of family size for women on education returns in 1983 became negative and significant in 1995, while for men there were no significant effects in either year. Finally, in the public sector, the insignificant negative effect for women in 1983 became significantly negative in 1995 (though not for high education levels), while the positive effect of family size for men on education returns became significantly negative (for all education levels).

There are two possible explanations for the general decline in the effect of family size on women's returns from experience and education. The first is the *increasing centrality* of work for mothers between the two time periods. While in the 1980s, Powell and Posner (1989) found that men were more committed to their careers than women, more recent studies found no statistical difference between males and females in terms of career commitment (Rozier and Hersh-Cochran, 1996; Kaldenberg et al., 1995). In Israel, Sharabi (2000) reported a decline in the centrality of work for women after the birth of children, and a reverse trend for men. There is, however, no data on *changes* in commitment attitude over time. Changes in family policy in Israel in the 1990s, among them the increasing use of subsidized day-care centers and the growth in the number of onsite child-care facilities, have enabled more mothers to work at full-time jobs and to commit themselves to work. In addition, Shirley and Wallace (2004) found that the gender gap in domestic work has narrowed considerably, not because men are doing more, but because women are doing less than they were twenty years ago. These findings support the growing centrality of work among mothers and the drop in the motherhood penalty.

A second possible explanation for the reduced effect of family size on women's returns from experience and education is that employers now hold less discriminatory

attitudes toward mothers than they did fifteen or twenty years ago, especially with respect to highly educated workers. It may be that the increasing participation rates of mothers in the Israeli labor force over time and the possibility of examining a mother's commitment to work over time may contribute to the decrease in discriminatory attitudes towards them.

Discussion

The main research results point to an asymmetric effect of family gap in pay on women and men in full-time jobs in Israel in 1983 and 1995. These results are compatible with findings regarding the family gap in pay in the U.S. and other developed countries. The results further show differential effects of this family gap for the four main economic sectors, together with a decline in the gap over this period. In fact, using annual income surveys, Klinov (2004) also showed that by 2000 the negative effect of family size on earnings among both men and women disappeared. The general trend of a declining family gap is compatible with the reduction in the gender earnings gap due to the increase over time in women's levels of qualifications and education, coupled with a growth in their commitment to the labor market (Hakim, 1996).

Waldfogel (1997b) found that a larger number of children in a family has a negative effect on women's wages, while Korenman and Neumark (1992) found a positive effect on men's wages. The results of this paper for Israeli data reinforce these previous findings for some economic sectors, but not for all. According to the wage equations analysis, increased family size has a negative effect on the return from women's years of work experience (in 1983 for all sectors, and in 1995 only for the public sector), while it has a positive effect on men's experience return (in all but the high services sector). In addition, the results indicate a differential effect of family size on gender education returns. In general, for small families (two-person households), a woman's return on her education is higher than that for men (except for the high services sector). However, for larger families, the advantage of women's education returns significantly decreases, while in the high services sector, women's returns on education are lower than those for men.

Two main explanations have been raised to explain the remaining family gap, after controlling for human capital and other personal characteristics: the effect of motherhood productivity and employer discrimination (Budig and England, 2001). It may be that a basic part of the family gap is discriminatory, and that the portion related to productivity is the one that varies by number of children, because those factors affect decisions about how time and energy are allocated between child rearing and work (Budig and England, 2001:220).

The findings of this paper also indicate a larger asymmetric effect of family gap in pay for men and women in the public sector in comparison to other sectors. In

particular, the returns on working hours and on years of work experience for larger families are significantly higher for men than for women in this sector. Thus, over time, the family gap has persisted in the public sector but has declined in other sectors. These results are compatible with previous findings (Klinov, 2004; Maor-Shavit and Sabag-Endevald, 2004) that Israeli women have negative returns when employed in the public sector versus the private sector, while men have positive returns.¹⁶

There are several possible explanations for the different family gaps for women and for men in the four economic sectors between 1983 and 1995. One refers to *specific sectorial* factors, such as the wage policy in the public sector. In the second half of the 1980s and during the 1990s, efforts were made to lower the public budget in Israel. This may explain the significant high reduction in the public sector's premiums for both genders, especially for the younger age group (23-44). In other words, the government's fiscal pressures restrained the level of public pay premiums. This affected women more than men, as women are in the majority in the public sector.

In addition, the low premium for mothers in the public sector can be related to the wage and promotion policy in this sector. Efroni (1980) argued that the main discriminatory mechanism in the public sector in Israel is the uneven distribution of adjacent benefits (such as overtime wages, payments for global work hours and vehicle payments) between women and men doing the same jobs. She also found that the promotion track for women is slower than for men, which may have a cumulative effect on the motherhood penalty in this sector. It seems that the "family-supportive policy" of the public sector mainly enables mothers to keep their jobs, but is not sufficient for eliminating the family gap in pay.

The difference in family gap between economic sectors may also be explained by *overall changes in the family structure* and their impact on productivity and wage. The data indicate that, between 1983 and 1995, the percentage of women in five- to six-person households increased significantly, while the percentage of women in households of less than five persons decreased. For men, an opposite trend is apparent: while the percentage of men belonging to small families (one- to two-person households) increased, the percentage in three- to four-person households decreased. Considering that family structure is a dominant factor in choosing one's sector of employment, women tend to move to sectors with fewer premiums and men tend to move to sectors with higher premiums (Klinov, 2004). Yet, family structure may affect productivity of mothers of young children, especially in highly demanding and competitive sectors, such as the high services sector. This may explain the findings of a motherhood penalty and no family gap for fathers in the high services sector and is compatible with Becker's (1991) "new home economics" argument.

16 Nevertheless, Yaish and Kraus (2003) came to the opposite conclusion, albeit not specifically with respect to the family gap. Furthermore, their sample included a broader age group of 25–64.

Finally, further research is needed on part-time workers. This study focused on full-time employees since there are differences in patterns of full-time versus part-time wages. In the two past decades, the percentages of the labor force in part-time jobs have decreased for both genders. For example, in 1988, the percentages of employees in part-time jobs were 16.2% for men and 39.6% for women, while in 2000, the percentages were 14.5% and 36.2%, respectively (Klinov, 2004). For comparison, in developed countries, part-time jobs at the end of the 1990s were 49% in Canada, 68% in the UK, 43.6% in the US and 30.5% in Finland (Harkness and Waldfogel, 2003). Nevertheless, further research is needed on the gender wage gap for part-time workers in Israel, since a large portion of these workers are mothers. In addition, more research is needed based on time series to highlight the cumulative effect of the family gap in pay between women and men in Israel and its contribution to the gender wage gap.

References

- Anderson, D. J., Binder, M., and Krause, K. (2002). "The motherhood wage penalty: Which mothers pay it and why?" *The American Economic Review* 92,2:354-358.
- Avellar, S., and Smock, P. (2003). "Has the price of motherhood declined over time? A cross-cohort comparison of the motherhood wage penalty." *Journal of Marriage and the Family* 65,3:597-608.
- Baffoc-Bonnic, J. (2001). "The impact of income taxation on the labor supply of part-time and full-time workers." *International Review of Applied Economics* 15,1:107-128.
- Becker, S. G. (1985). "Human capital, effort, and the sexual division of labor." *Journal of Labor Economics* 3,1:S33-58.
- . (1991). *A Treatise on the Family*. Cambridge, MA: Harvard University Press.
- Ben-David, D. (2003). "Israel's long-run socio-economic trajectories." *The Economic Quarterly* 50,1:29-46.
- Blau, F. D., and Kahn, L. M. (2000). "Gender differences in pay." *Journal of Economic Perspectives* 14,4: 75-99.
- Blossfeld, H. P., and Drobnic, S. (2001). "A cross-national comparative approach to couples' careers," in H. P. Blossfeld and S. Drobnic (eds.), *Careers of Couples in Contemporary Societies*. Oxford: Oxford University Press (pp. 1-15).
- Budig, J. M., and England, P. (2001). "The wage penalty for motherhood." *American Sociological Review* 66,2:204-226.
- Cohen, Y., and Haberfeld, Y. (2003). "Gender, ethnic, and national earnings gaps in Israel: The role of rising inequality." Working paper, The Pinhas Sapir Center for Development, Tel Aviv University.
- Daniel, K. (1995). "The marriage premium," in K. Ierulli (Ed.), *The New Economics of Human Behavior*. New York: Cambridge University Press (pp. 113-125).
- Davies, R., Elias, P., and Pierre, G. (2003). "European estimates of the family gap in pay: Evidence from the ECHP, BHPS and GSOEP." Paper presented at the Conference of the European Panel Users Network, July 3-5, 2003, Colchester, UK. <http://www.iser.essex.ac.uk/epunct/2003/docs/pdf/papers/davies.pdf>
- Efroni, L. (1980). "Promotion and wages of women in the public services in Israel." Doctoral dissertation, Hebrew University, Jerusalem (Hebrew).
- Fogiel-Bijaoui, S. (2001). "Families in Israel: Between familism and post-modernism," in G. Rosen (ed.), *Sex, Gender and Politics, Women in Israel* (3rd ed., pp. 107-166). Tel Aviv: Hakibutz Hamcuhad (Hebrew).

- Gornick, J. C., and Jacobs, J. A. (1998). "Gender, the welfare state, and public employment: A comparative study of seven industrialized countries." *American Sociological Review* 63:688-710.
- Hakim, C. (1996). *Key Issues in Women's Work: Female Heterogeneity and the Polarization of Women's Employment*. London: Athlone Press.
- Harkness, S., and Waldfogel, J. (2003). "The family gap in pay: Evidence from seven industrialized countries." *Research in Labor Economics* 22:369-414.
- Hersch, J., and Stratton, L. S. (1997). "Housework, fixed effects, and wages of married workers." *Journal of Human Resources* 32:285-307.
- Hill, M. S. (1979). "The wage effects of marital status and children." *Journal of Human Resources* 14,4: 579-594.
- Hudis, P. M. (1976). "Commitment to work and to family: Marital-status differences in women's earnings." *Journal of Marriage and the Family*, May:267-278.
- Hundley, G. (2000). "Male/female earnings differences in self-employment: The effects of marriage, children, and the household division of labor." *Industrial and Labor Relations Review* 54,1:95-115.
- Kaldenberg, D., Becker, B., and Zvonkovic, A. (1995). "Work and commitment among young professionals: A study of male and female dentists." *Human Relations* 48,11:1355-1377.
- Klinov, R. (2004). "Gender wage gap 1970-2001." Discussion paper no. 2-04, The Sapir Center, Tel Aviv University (Hebrew).
- Korenman, S. D., and Neumark, D. B. (1992). "Marriage, motherhood and wages." *Journal of Human Resources* 27,2:233-255.
- . (1989). "Is superwoman a myth? Marriage, children, and wages." Board of Governors of the Federal Reserve System Economic Activity Section, Working Paper Series, 94 (43).
- Kraus, V. (2002). *Secondary Breadwinners, Israeli Women in the Labor Force*. Westport, CT: Praeger.
- . (1992). "The role of industrial and economic sectors on gender inequality in earnings." *Research in Social Stratification and Mobility* 11:153-175.
- Loh, L. S. (1996). "Productivity differences and the marriage wage premium for white males." *Journal of Human Resources* 31,3:566-589.
- Lundberg, S., and Rose, E. (2000). "Parenthood and the earnings of married men and women." *Labour Economics* 7:689-710.
- Mandel, H., and Semyonov, M. (2005). "Family policies, wage structures, and gender gaps: Sources of earnings inequality in 20 countries." *American Sociological Review* 70,6:949-967.
- Maor-Shavit, G., and Sabag-Endeveld, M. (2004). "Measuring wage gaps between public and private sectors in Israel." Research paper no. 83, The National Insurance Institute of Israel (Hebrew).
- Millimet, D. L. (2000). "The impact of children on wages, job tenure, and the division of household labour." *Economic Journal* 110,462:139-158.
- Mincer, J., and Polachek, S. (1974). "Family investments in human capital: Earnings of women." *Journal of Political Economy* 82:576-608.
- Neuman, S., and Oaxaca, R. L. (2003). "Estimating labor market discrimination with selectivity-corrected wage equations: Methodological considerations and an illustration from Israel." Discussion paper, The Pinhas Sapir Center for Development, Tel Aviv University.
- Oaxaca, R. L. (1973). "Male-female wage differential in urban labor markets." *International Economic Review* 14,3:693-709.
- Oaxaca, R. L., and Ransom, M. R. (1994). "On discrimination and the decomposition of wage differentials." *Journal of Econometrics* 61:5-21.
- Powell, G., and Posner, B. (1989). "Commitment to career versus family/home life: Effects of sex, sex-role identity, and family status." *Psychological Reports* 64:695-698.
- Rozier, C., and Herish-Cochran, M. (1996). "Gender differences in managerial characteristics in a female-dominated health profession." *The Health Care Supervisor* 14,4:57-65.
- Sharabi, M. (2000). "Continuity and change in work centrality: Longitudinal research between 1981 and 1993." Doctoral dissertation, Haifa University (Hebrew).

- Shirley, C., and Wallace, M. (2004). "Domestic work, family characteristics, and earnings: Reexamining gender and class differences." *Sociological Quarterly* 45,4:663-690.
- Stier, H., Lewin-Epstein, N., and Braun, M. (2001). "Welfare regimes, family-supportive policies, and women's employment along the life-course." *American Journal of Sociology* 106,6:1731-1760.
- Taniguchi, H. (1999). "The timing of childbearing and women's wages." *Journal of Marriage and the Family* 61,4:1008-1018.
- Waldfogel, J. (1998). "Understanding the 'family gap' in pay for women with children." *Journal of Economic Perspectives* 12:137-156.
- . (1997a). "Working mothers then and now: A cross-cohort analysis of the effects of maternity leave on women's pay," in Francine Blau and Ronald Ehrenberg (eds.), *Gender and Family Issues in the Workplace* (pp. 92-126). New York: Russell Sage.
- . (1997b). "The effects of children on women's wages." *American Sociological Review* 62:209-217.
- Yaish, M., and Kraus, V. (2003). "The consequences of economic restructuring for the gender earnings gap in Israel, 1972-1995." *Work, Employment and Society* 17,1:5-28.

APPENDIX A

Notations

Ln W_{it} – The dependent variable: Natural logarithm of monthly wage at year t (t = 1983, 1995) of individuals that work in sector j (j = public sector, product sector, low services sector, high services sector), for gender i (i = female, male).

Ln Hrs – The natural logarithm of monthly work hours.

Per – Number of persons in household: a set of dummy variables, which includes 1–2 persons, 3–4 persons, 5–6 persons, 7+ persons in household. The base variable is 1–2 persons.

Exp – Potential experience, calculated as the individual's age minus 6 years of schooling.

(Exp)² – Potential experience squared.

M – Marital status (married /unmarried).

Sch – Education level: a set of dummy variables, which includes number of years of schooling: 0–12 (without matriculation), 12 (matriculation), 13–15 (academic or partial academic degree), 16+ (higher academic degrees). The base variable is 0–12 years of schooling.

Org – Origin and religion: a set of five dummy variables, of which four are dummies of the birth country of Jews (who were born abroad) or origin countries (of fathers of Israeli-born Jews). The countries were divided into four categories: Israel, Western countries, Asia and Africa, and Eastern Europe. The fifth dummy variable was for non-Jewish residents. The base variable is Jews from Western countries.

Sec – Economic sector with four dummies: public sector, product sector, low services sector, high services sector. The base variable is the product sector.

The OLS regressions of wage equations are:

1.
$$\text{Ln } W_{it} = a + \beta_{it1}(\text{Ln Hrs}) + \beta_{it2}(\text{Per}) + \beta_{it3}(\text{Exp}) + \beta_{it4}(\text{Exp})^2 + \beta_{it5}(\text{Exp}) \cdot (\text{Per}) + \beta_{it6}(\text{M}) + \beta_{it7}(\text{Sch}) + \beta_{it8}(\text{Sch}) \cdot (\text{Per}) + \beta_{it9}(\text{Org}) + \beta_{it10}(\text{Sec})$$
2.
$$\text{Ln } W_{it} = a + \beta_{it1}(\text{Ln Hrs}) + \beta_{it2}(\text{Per}) + \beta_{it3}(\text{Exp}) + \beta_{it4}(\text{Exp})^2 + \beta_{it5}(\text{Exp}) \cdot (\text{Per}) + \beta_{it6}(\text{M}) + \beta_{it7}(\text{Sch}) + \beta_{it8}(\text{Sch}) \cdot (\text{Per}) + \beta_{it9}(\text{Org})$$