THE PINHAS SAPIR CENTER FOR DEVELOPMENT Tel - Aviv University

EARNINGS GAPS BETWEEN ISRAEL'S NATIVE-BORN MEN AND WOMEN: 1975-1993

Yitchak Haberfeld Yinon Cohen

Discussion Paper No. 5-96

September, 1996

We wish to thank the Pinhas Sapir Center for Development for financial support for this research. We thank Karin Amit and Sigal Ohel Shelach for technical assistance.

1. Introduction

Similar to trends in other developed countries, labor force participation rate among Jewish women¹ in Israel has been rising during the past three decades. It went up from approximately 30 percent in the mid-1960s, to almost 50 percent in the early 1990s. In contrast, labor force participation rate of Jewish men has declined during that period from 76 to 62 percent. Not only did women increased their share in Israe's labor market, but the quality of women workers has been improving, as indicated by their high levels of education (Israel, 1994). In addition, equal employment opportunity laws protecting women from market discrimination have been enacted in Israel in recent years. Despite these trends, however, women's position in Israel's labor market has been persistently inferior relative to their male counterparts. The level of gender based occupational segregation has hardly narrowed between 1972 and 1983 (Cohen et al. 1988), and the women-to-men ratio of average hourly wage has been stabel at about 75-80 percent during that period (see Haberfeld [1990] for a review of empirical studies on gender based wage differences in Israel).

At least a portion of the earnings gap in Israel cannot be explained by productivity differences between the two gender groups. Women have been closing the education gap with men during the last three decades. Indeed, most empirical studies found that almost the entire 20-25 percent gap has has remained "unexplained" by productivity differentials between men and women.

We focus on the Jewish labor force only because Israeli Jews and Arabs operate in two separate labor markets (e.g., Lewin-Epstein and Semyonov, 1993).

Consequently, the entire gap has been attributed to market discrimination against women (Haberfeld, 1996).

The present study is designed to describe and analyze trends in the earnings gap between native-born, Jewish Israeli men and women between 1975 and 1993.² However, due to the major ethnic division within the Jewish population between Jews of European or American origin (henceforth Westerners) and those of Asian-African origin (henceforth Easterners), the group of women was broken down into two sub-groups - Western women and Eastern women. These two groups were compared to the group of Israeli-born Western men. This group has been located at the top of the socioeconomic hierarchy in Israel (Amir, 1987; Cohen and Haberfeld, 1995; Haberfeld, 1992; Haberfeld and Cohen, 1996; Mark, 1994, 1996; Nahon, 1987; Smooha and Kraus, 1985; Shmaltz, DeLapergula, and Avner, 1991; Yitzhaki, 1987), and it served us as the benchmark group, much like the U.S. benchmark group of native-born, White, non-Hispanic men.

Our main purpose is to examine whether the increasing weight and quality of women in the Israeli labor market, combined with beter legal protection, have led to narrow both the earnings gap, and the portion of the gap which is due to labor market discrimination against women.

We chose to study native-Israelis only because market behavior of immigrants is quite different than that of natives (e.g., Borjas, 1990; Chiswick, 1977).

2. Theoretical Model

Human capital theory (Becker, 1975) suggests that higher levels of human capital lead to higher productivity, which in turn results in higher earnings. Thus differences, if exist, in average levels of human capital between the two gender groups might explain a portion of the earnings gap between men and women.

In addition to individual productivity levels, earnings are determined by labor market characteristics as well (Dunlop, 1957). Occupational labor markets have been most often recognized as a major factor determining earnings (e.g., Treiman and Hartmann, 1981). Occupational markets differ in skill requirements, work processes and in supply of and demand for labor. Consequently, earnings of people with similar productivity levels might differ across occupations. Men and women are differently distributed across occupational markets (e.g., Albelda, 1986; Fields and Wolff, 1991). more importantly,, earnings in "female type" occupations average less than earnings in "male type" occupations (Goldin, 1990). Thus, gender-based occupational segregation has been held responsible for another portion of the earnings gap between men and women.

The question, however, is whether and to what extent there is still a gap left between men's and women's earnings after differences between the two groups in human capital and in occupational characteristics have been accounted for. Such a residual earnings gap, if exists, is most often equated with market discrimination against women because it can be explained nor by individual or by market differences between men and women (Cain, 1986). The most widely used explanation of discriminatory behavior in the labor market is

that offered by Becker (1971). According to Becker, employers, coworkers and customers have tastes against members of certain groups. Thus, employers and customers that have tastes against female workers are willing to pay more to men in order to avoid market interaction with women. Similarly, male workers that have tastes against female coworkers demand higher wages before they agree to work with them side by side. These premiums added to the male earnings by various types of discriminators create, according to Becker, the "unexplained" portion in the gender-based earnings gap.

3. Empirical Model

This paper is designed to study changes in earnings gaps between native-born Israeli men and women. For that purpose, we examine the sources of the earnings gaps in 1975 (t₁), 1987 (t₂), and in 1993 (t₃), and compare the structure of the gender-based gaps each year. This approach enables us to better understand which labor market processes are responsible for these gaps during the last two decades.

If y_{tj} is the natural logarithm of earnings in year t (t = 1975, 1987, 1993) of members of the jth group (j = native-born Western men. native-born Western women, native-born Eastern women), then an earnings equation can be written as follows:

(1)
$$y_{tj} = X_{tj}' \beta_{tj} + e_{tj}$$

where X denotes a vector of explanatory variables, of individual and occupational characteristics, β is a vector of coefficients, including a constant

term, and e is an error term. This earnings equation was estimated nine times at three points of time, separately for each one of the three groups.

Oaxaca's (1973) traditional method for decomposing the gap in average earnings between two groups into "explained" (endowments effect) and "unexplained" (market effect, which is often equated with "market discrimination") portions is based on an arbitrary decision about one of the two groups that serves as a base-group. Obviously, the estimated effects vary when the base group, to which the other groups are compared, is switched. Several methods have been offered in order to solve this problem. In general, they can be classified into "weighted coefficients" and "weighted endowments" approaches. Both derive the necessary weights from the proportion of the two groups involved in the comparisons.

The first approach—weighting the two groups' coefficients—focuses on the "unexplained" portion of the earning gap and tries to better understand its structure. It is based on the assumption that neither the first, nor the second group's earnings structure (i.e., coefficients) would prevail in the absence of market discrimination (Cotton, 1988; Ashraf, 1996). Instead, this method searches for the nondiscriminatory wage structure in between the two base-line equations used by the traditional method. A weighted equation provides, according to this approach, such nondiscriminatory coefficients.

The second approach—weighting the two groups' endowments—focuses on the "explained" portion of the earnings gap. Since our interest is mainly in this portion of the gap, we chose to use this approach. Specifically, we follow a

method developed by Fishelson (1994), in which both groups (in our case Westerners and Easterners or Westerners and Arabs) are compared to the mean of the entire population (μ):

(2)
$$\mu = [(N_m * X_m) + (N_f * X_f)] / (N_m + N_f)$$

Where N represents the group size. When using this approach, the gap between the average earnings of the two groups is decomposed as follows:

(3)
$$\overline{y}_{tm} - \overline{y}_{tf} = \beta_m (\mu_m - \mu) + \beta_f (\mu - \mu_f) + (\beta_m - \beta_f) \mu$$

The first term on the right-hand side of the equation represents the contribution of the advantage of the superior group to the earnings gap. The second term represents the contribution of the disadvantage of the second group to the earnings gap. Finally, the third term represents the effect of market differential treatment of the two groups, evaluated at the mean endowments of the two groups. It should be emphasized that the first and second terms are *not* two sides of the exact same coin. The first term is the superior group's advantage in endowments as compared with the population average endowments—expressed in terms of the superior group market returns. The second term is the other group's disadvantage in endowments as compared with the population average endowments—expressed in terms of that group returns. Put differently, the advantage or disadvantage of a group is the difference between this group's and the population's mean earnings that would result had the entire population been paid on the basis of that group's returns. Such decomposition is different from the traditional method (Oaxaca 1973) because it partitions the "explained"

component into two parts—one that is due to the advantage of the superior group, and another that is due to the disadvantage of the other group. Figure 1 shows this difference between the two methods. The advantage of the superior group (men) is described by interval "1", while the disadvantage of the other group (women) is described by interval "5". When the traditional decomposition method is utilized, then the "explained" portion is composed of either intervals "1" and "2" (in case the superior group serves as the base-line) or intervals "4" and "5" (in case the other group serves that purpose).

- Figure 1 here -

The difference in market returns to the two groups, if exists, is taken into account by the third term of equation 3, and presented by interval ["2"+"3"+"4"] in Figure 1. It is the difference between two estimates of the entire population's average earnings—one as predicted by the returns received by the superior group, and the other as predicted by the returns received by the other group.

4. Data and Measures

The data used in this study are taken fro the Income Surveys conducted by the Israeli Central Bureau of Statistics during 1975, 1987 and 1993. Income Surveys are conducted annually as a supplement to Work Force Surveys, and contain basic demographic and income information about respondents. These surveys are based on a representative sample of household in urban communities with a population of at least 2,000 people. Since income data are not available for the self-employed, we limit our analysis to salaried workers in

the labor force. Each survey provides information on, approximately 6,000 salaried individuals belonging to, approximately, 4,000 households. We also restricted the sample to men and women, 25-54 years of age. The upper age limit is due to the small number of second generation Jewish workers older than 50. The lower age limit reflects the fact that most Jewish Israelis serve in the military for three years (for men), or two years (for women), and rarely graduate from college and get a permanent job before they reach the age of 25.

We define native-born Jews as all those born in Israel to foreign-born fathers, and all foreign-born Israelis who immigrated to Israel before they were 14 years old. Thus, native-born Eastern Jews are defined as all those born in Israel to fathers³ who were born in Asia or Africa, and those born in Asia or Africa and immigrated to Israel before they were 14 years old. In addition, we included the small group of native-born Israelis to Israeli-born fathers within the group of Western Jews. There is evidence that this group, which is mostly of Western origin, is very similar in its education and income levels to Western Jews.⁴ All these procedures yield a sample of 685, 514 and 625 Western men in 1975, 1987, and 1993 respectively. The comparable figures for Western women are 540, 468, and 628; and for Eastern women 271, 503, and 803.

All members of the sampled household were asked about their income during the 3-month period preceding the interview. Data on income from

Data on mothers' country of birth are not available.

The results of both education and income are appreciable the same if the group of third generation Israelis is omitted from the sample.

salaried work were converted into annual earnings. Since we compare the three groups during the same year, the high inflation rates experienced by the Israeli economy during that period does not pose any difficulty.

Labor supply is measured by annual number of work hours. Two measures of schooling were used. The first is years of schooling, and the second is whether the respondent has at least a college degree. Age is the best proxy available in the data for labor market experience, thus we include in all equations age and its squared term. Since married men in Israel, as in the U.S., earn more than unmarried men, we included a dummy variable for marital status. Finally, we included a dummy variable for those who arrived in Israel as children.

The market structures faced by the three groups were captured by two series of dummy variables. The first, contains ten 1-digit occupational groups, and the second contains ten 1-digit economic sectors.

5. Descriptive Results

5.1 Education

Table 1 presents years of schooling for each group, and the proportion of group members with academic degrees. The average levels of education of all groups has gone up steadily since 1975. As in other countries, it reflects the expansion of the Israeli educational system. Western women and men are the most educated among labor force participants in Israel. Both their years of schooling and the rate of people with academic degrees among them are almost identical. Eastern women, however have not been doing as well. In 1993 they had, on

average, two years of schooling less than Westerners. Similarly, only 11-12 out of 100 Eastern women complete their studies at institutes of higher education, as compared with 36-38 among Westerners.

- Table 1 here -

An important question is whether the trend of increase in the education levels in Israel was faster among some groups than among others. In order to answer this question we examine the education ratios of Eastern women-to-Westerners over time. The higher these ratios, the smaller the gap. Indeed, Eastern women have been making progress between 1975 and 1993. The years of schooling ratio went up by approximately 10 percentage points during that period, from 0.75 to 0.85, and the proportion with academic degrees ratio rose by, approximately, 20 percentage points. Yet, Eastern women still have a long way to go before closing the education gap with Western men and women.

5.2 Earnings

Table 2 presents hourly earnings ratios of women-to-men. Western men earn, on average, much more than the two female groups. Furthermore, the earnings gap had been widening between the mid-1970's and mid-1980's. We chose to examine hourly earnings of full-time, year-around workers rather than annual earnings of the entire population of salaried workers in order to avoid effects caused by differential labor supply of male and female workers on earnings.

The 1975 figures for academic Eastern women should be taken very cautiously due to their very small representation in our sample.

- Table 2 here -

The highest female-to-male earnings ratios were observed in 1975-0.82 for Western women and 0.63 for Eastern women. 12 years later, these ratios declined to 0.72 and 0.51 respectively. The gap between Western men and Western women has remained stable since then. The gap between Eastern women and Western men (and women) has been somewhat narrowing, and reached a ratio of 0.56 in 1993. These trends in the earnings gaps fit the trends in the education gaps described above. Can we conclude that the narrowing of the schooling gaps resulted in equal earnings for Israeli men and women? The answer is no. First, Western men and Western women average similar education levels, yet there is an earnings gap of more than 25 percent left between them. Second, a look at the lower panel of Table 2 reveals a grim reality. The earnings gaps between highly educated men and women are no smaller (and sometimes even larger) than between the entire population of men and women. Thus, a college graduate female can expect to improve her position on the earnings distribution only relative to less educated workers and not relative to highly educated men. College diplomas do not help in equalizing earnings levels of their owners.

6. Estimates of Earnings Equations

Earnings equations were estimated separately for each group, at each time point, as specified in equation (1). Then, the Western men-Western women,

and Western men-Eastern women earnings gap at each time point was decomposed using the method described in equation (3) (see Table 3).

- Table 3 here -

Three findings stand out upon examination of this table. First, the portion of the gender-based earnings gap attributed to market differential treatment ("market discrimination") was similar for both women groups and has remained stable over the years. Its estimated magnitude is 35-45 percent of the observed earnings gap. Second, in all comparisons, women's disadvantage was much more important in "explaining" the male-female earnings gap than was men's advantage. Finally, the most important variable in explaining the earnings gap between the gender groups was number of working hours. This is the only variable explaining the advantage of Western men over Western women, and the disadvantage of Western women vis-à-vis their male counterparts, and the most important variable in explaining the Western men-Eastern women gap.

Recall that women's disadvantage is expressed in terms of women's returns, and men's advantage is expressed in terms of men's returns. Hence, the large disadvantage of women could result either from the large difference between their and the men's average number o working hours, or from their own relatively

Each equation was estimated twice - with and without two series of controls for market structure, namely 1-digit occupations and 1-digit economic sectors. Here we report the results of the shorter equations only because adding the market controls has not changed meaningfully the results nor has contributed to our understanding of the operation of earnings differentials mechanisms.

We repeated the analyses and decomposed the male-female earnings gaps using the traditional Oaxaca's (1973) method. When men served as the decomposition base-line, "earnings discrimination" figures were found to be higher than those presented in Table 3, ranging from 50-60 percent. However, when women were used as the base-line, all estimated

high returns on number of hours worked which magnify those differences in endowments, or from a combination of a relatively low average working hours of women, and relatively high returns for those fewer hours they offer to employers. The difference in the amount of labor supplied by salaried Israell men and women is similar for Western and Eastern women, and has been stabilized in recent years around 30 percent (data are now shown). In addition, the returns received by women for their number of hours worked were higher than those received by men by 40-100 percent. For example, the coefficients of the "number of hours worked" variable in the 1993 equations are 0.00032, 0.00056, and 0.00066 for Western men, Western women, and Eastern women respective (data are not shown).⁸

In addition to the number of hours worked, variables measuring education levels are also responsible for the "explained" portion of the earnings gap between Western men and Eastern women. As can be seen in Table 1, Eastern women have not caught up yet with both Western men and women on education. The differences in average endowments between Westerners and Eastern women are only one side of the story. In addition, Eastern women receive relatively high returns on "years of schooling," and low returns on "an academic degree" compared with returns received by men. As a result, years of schooling contribute, mainly to the women's disadvantage, while academic degree plays a role in explaining the men's advantage in 1993.

figures declined to 20-40 percent. Hence, the mid-point of these estimates is very similar to the estimates reported in Table 3.

7. Summary and Conclusions

The data analyses tell a clear story: while educational gaps between women and men by ethnic origin have narrowed between 1975 and 1982, gender gaps in earnings grew during these years, especially among university graduates. During the next 10 years, 1982-93, the gaps in earnings remained appriciably the same among Westerners, while Eastern women somewhat narrowed the gap between themselves and Western men. Taken together, the results suggest that over the entire period, 1975-93, the earnings of Western and Eastern women relative to the Earnings of Western men, has not improved.

That geder earning gaps do not narrow despite narrowing the educational gaps suggests that it is unlikely that productivity differencials are responsible for the gaps in ernings. The earnings regressions suggest that nearly one-half of the earning gap between women and Western men are not due to productivity-related variables. That this figure is about the same for the entire period, suggests that not much has changed in the past 18 years in the treatment of women in the Israeli labor market. Put differently, to the extent that labor market discrimination is responsible for much of the earning gap between men and women in 1975, the same can be said regarding 1982 and 1992.

An analysis in which hourly, rather than annual, earnings served as the dependent variable revealed a much larger component of an "unexplained" gap.

References

Albelda, Randy P. 1986. "Occupational Segregation by Race and Gender, 1958-1981." Industrial and Labor Relations Review, Vol. 39, No. 3, pp. 404-411.

Amir, Shmuel, 1987. Trends in Earnings Gaps among Jewish Men During the 1970s - By Country of Origin. Survey No. 63, Jerusalem: Bank of Israel, pp. 43-64 (Hebrew).

Ashraf, Javed. 1996. "Is Gender Pay Discrimination on the Wane? Evidence from Panel Data 1968-1989." *Industrial and Labor Relations Review*, Vol. 149, No. 3, pp. 537-546.

Becker, Gary S. 1975. *Human Capital* (2nd ed.). New York: National Bureau of Economic Research.

Becker, Gary S. 1971. *The Economics of Discrimination* (2nd ed.) Chicago, II: University of Chicago Press.

Borjas, George, J. 1990. Friends or Strangers: The Impact of Immigrants on the American Economy. New York: Basic Books.

Cain, Glen G. 1986. "The Economic Analysis of Labor Market Discrimination: A Survey." In Ashenfelter, Orley and Layard, Richard (eds.), Handbook of Labor Economics, Vol. 1, New York: Elsevier Science Publishers, pp. 693-785.

Chiswick, Barry R. 1977. "Sons of Immigrants: Are they at an Earnings Disadvantage?" *American Economic Review*, Vol. 67, No. 1, pp. 376-380.

Cohen, Yinon and Haberfeld, Yiltchak. 1995. "Schooling and Income Gaps Between Western and Eastern Jews in Israel, 1975-1992." Tel-Aviv University: Golda Meir Institute for Social and Labor Research, Discussion Paper No. 80.

Cotton, Jeremiah. 1988. "On the Decomposition of Wage Differentials." Review of Economics and Statistics, Vol. 70, No. 2, pp. 236-243.

Dunlop John, T. 1957. "The Task of Contemporary Wage Theory." In Taylor, George, W. an Pierson, Frank C. (eds.), New Concepts in Wage Determination. New York: McGraw-Hill, Inc., pp. 127-139.

Fields, Judith and Wolff, Edward N. 1991. "The Decline of Sex Segregation and the Wage Gap." Journal of Human Resources, Vol. 26, No. 4, pp. 608-622.

Fishelson, Gideon. 1994. "Endowment Effect and Market Effect: Revisited." Research on Economic Inequality, Vol. 5, pp. 55-63.

Goldin, Claudia. 1990. *Understanding the Gender Gap.* New York: Oxford University Press, pp. 58-82.

Haberfeld, Yitchak. 1996. "Women's Earnings in Israel." In Burman, Kathryn M. and Dubeck Paula (eds.), Women and Work: A Handbook. NY: Garland Publishing Inc.

Haberfeld, Yitchak. 1992. "Immigration and Ethnic Origin: The Effect of Demographic Attributes on Earnings of Israeli Men and Women." *International Migration Review, Vol. 27, No. 2, pp. 286-305.*

Haberfeld, Yitchak. 1990. "Gender-Based Salary Discrimination in Israel: Theoretical Framework, Methodology, Results, and Trends." In Globerson, Arie, Galin, Amira, and Fosenstein, Eliezer (eds.), *Human Resources and Industrial Relations in Israel*. Tel-Aviv: Ramot, pp. 313-325 (Hebrew).

Haberfeld, Yitchak and Cohen, Yinon. 1996. "Earnings Gaps Between Israel's Native-Born Men: Western Jews, Eastern Jews, and Arabs, 1987-1993." Unpublished manuscript, Tel-Aviv University.

Israel Central Bureau of Statistics. 1994. Statistical Abstract of Israel. Jerusalem: Central Bureau of Statistics.

Lewin Epstein Noah, and Moshe Semyonov. 1993. *The Arab Minority in Israel's Economy.* Boulder, Col: Westview Press.

Mark, Nili. 1996. "The Contribution of Education to Income Differentials Among Ethnic Groups in Israel." Israel Social Science Research, Vol. 11, No. 1, pp. 47-86.

Nahon, Yaakov. 1987. Education Levels and Employment Opportunities: The Ethnic Dimension. Jerusalem: Jerusalem Institute for the Study of Israel (Hebrew).

Oaxaca, Ronald L. 1973. "Male-Female Wage Differential in Urban Labor Markets." *International Economic Review*, Vol. 14, No. 3, pp. 693-709.

Shmaltz, Uziel, DeLapergula, Gergio, and Uri Avner. 1991. *Ethnic Differentials among Israeli Jews: Revisited*. Jerusalem: Institute of Contemporary Judaism, Hebrew University (Hebrew).

Smooha, Sami, and Vered Kraus. 1985. "Ethnicity as a Factor I Status Attainment in Israel." *Research in Social Stratification and Mobility*, Vol. 4, pp. 151-75.

Yizhaki, Shlomo 1987. Ethnic-Based Stratification and Inequality in Israel. Survey No. 63, Jerusalem: Bank of Israel, pp. 31-42 (Hebrew).

Treiman, Donald J. and Hartmann, Heidi I. (eds.) 1981. Women, Work, and Wages: Equal Pay for Jobs of Equal Value. Washington, D.C.: National Academy Press.

Figure 1: Decomposing Earning Gaps Between Groups: Alternative methods.

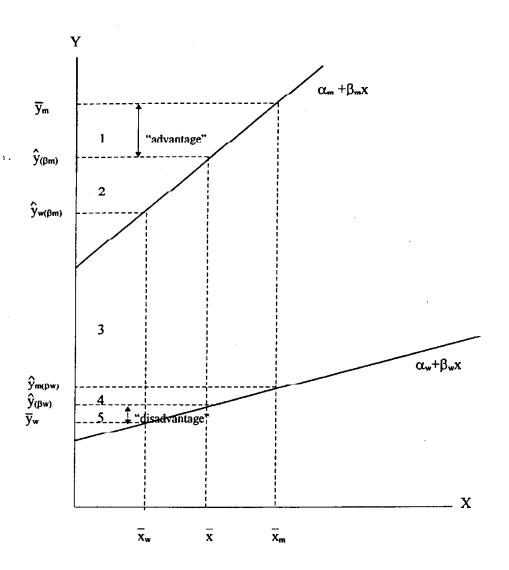


Table 1: Education and Education Ratios of Israell Women and Western Men, 25-54 Years Old: 1975, 1987, and 1993

	1975	1987	1993
Years of schooling:	40.0	40.0	14.2
Western men	12.8	13.6 13.9	14.2 14.2
Western women	13.0 9.8	11.1	12.1
Eastern women	9.0	11.3	12.1
Ratios:			
Western women/Western men	1.02	1.02	1.0
Eastern women/Western men	0.77	0.82	0.85
Eastern women/Western women	0.75	0.80	0.85
Percent with at least B.A.:			
Western men	0.25	0.38	0.36
Western women	0.20	0.38	0.36
Eastern women	0.03	0.11	0.12
Ratios:			
Western women/Western men	0.80	1.0	1.0
Eastern women/Western men	0.12	0.29	0.33
Eastern women/Western women	0.15	0.29	0.33
	1	i	1

Table 2: Hourly Earnings Ratios of Full-Time, Year Around, Salaried Israeli Women and Western Men, 25-54 Years Old: 1975, 1987, and 1993

	1975	1987	1993
"Victory"			
All Women:	0.82	0.70	0.72
Western women/Western men		0.72	0.73
Eastrn women/Western men	0.63	0.51	0.56
Eastern women/Western women	0.77	0.71	0.76
With B.A.:			
Western women/Western men	0.84	0.67	0.68
Eastern women/Western men	0.82*	0.50	0.58
es: Eastern women/Western women	0.97	0.74	0.85
mana and a second a			

^{*} n of Eastern women = 3.

A GENERAL TO SERVICE OF THE SERVICE

STREETS CONTROL OF THE STREET CONTROL OF T

Table 3. Percentages of Annual Earnings Gaps Between Salaried Western Men and Western and Eastern Salaried Women, 25-54 Years Old: 1975, 1987, and 1993

Year	1975		1987		1993	
Comparing Western men with: Total gap* Total gap (percent)	Western women 0.54 100	Fastem women 0.80 100	Western women 0.63 100	Eastern women 0.93 100	Western women 0.62 100	Eastern women 0.88 100
Advantage of men: hours of work age, age ² years of schooling B.A. + Other ^b	18 17 0 0 0	14 6 1 4 0 3	20 20 0 0 0	24 15 2 7 1 -1	23 23 0 0 0	25 14 2 1 5 3
Disadvantage of women: hours of work age, age ² years of schooling B.A.+ Other ^b	39 40 0 -1 0	52 30 2 18 1	37 24 0 0 0	31 21 2 9 -1	37 37 0 0 0	35 24 1 10 0
Market differential treatment ("discrimination"):	<u>43</u>	<u>34</u>	<u>43</u>	<u>45</u>	<u>40</u>	<u>40</u>

a. These gaps are based on geometric means, not actual earnings.

b. Other variables included in the eqautions – being married, and immigrating as a child.