Rising wage inequality and the wage-gap between Mizarhim and Ashkenazim

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Abstract

Despite narrowing differentials in most productivity-related measures between Ashkenazi and Mizrahi men, the earnings gaps between the two groups not only failed to converge, but actually widened during the past 25 years. The sole reason responsible for that is changes in the earnings structure, namely, rising inequality in earnings since 1975 and especially until 1992. Had earnings inequality stayed at its 1975 level and Mizrahi characteristics and treatment improved as it did, the earnings gap between the two groups would have declined by 19 percent between 1975 and 1999, rather than increased by 32 percent as it actually did.

These results imply that closing educational gaps between Mizrachi and Ashkenazi men does not guarantee a decline in the earnings gap between the two groups. Rather a policy aimed at reducing income and wage inequality is necessary for improving the relative standing of Mizrahi men, whose efforts for economic and social progress can be viewed as "swimming upstream" the raging river of the Israeli labor market.

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The educational gaps between second generation Mizrahi and Ashkenazi Jews in Israel have somewhat narrowed during the 1970s and 1980s (Cohen and Habereld 1998; Cohen 1998; Friedlander et al. 2002). This trend, together with declining differences in other productivity-related characteristics, led many to expect that Mizrahim will start closing up the economic gap with Ashkenazim. Yet previous research show that despite narrowing differentials in most productivity-related measures between the two groups, the earnings gaps between Ashkenazi and Mizrahi men not only failed to converge, but actually widened between 1975 and 1995 (Mark 1994; Cohen and Haberfeld 1998; Cohen 1998).

This paper is aimed at understanding this apparent puzzle, focusing on the role of earnings inequality on the ethnic-based earnings gaps. Specifically, our main hypothesis is that rising earnings inequality is the main reason for the persisting (and at time growing) earnings differentials between Mizrahi and Ashkenazi men during 1975-1999. The paper is organized as follows: the next section discusses possible processes that could explain the persisting earnings gaps between Mizrahim and Ashkenazim. Section 2 presents the data and the statistical model we used to evaluate the empirical status of the inequality hypothesis. Section 3 presents the results, and the last section summarizes the main findings and presents some concluding remarks.

1. Possible explanations for the rising ethnic-based wage differentials

Three processes, not mutually exclusive, may explain the persisting earnings differentials between Mizrahim and Ashkenazim in the Israeli labor market. The first is a basic demographic process: aging. During the 1990s members of the second generation reached a relatively older average age (about 40) compared to less than 35 in the 1970s. Gaps in educational levels result in larger earnings differentials at age 40 than 35. Thus, aging may be responsible for some of the rise in the ethnic-based earning gaps during the past 25 years. The second process that could explain the increase in Mizrahi-Ashkenazi earnings differentials, in light of diminishing schooling differences, is labor market

discrimination. To the extend that Israeli employers prefer Ashkenazim over Mizrahim, and this preference have intensified over time, it would be possible to attribute the stability (or increase) in the ethnic-based earnings gaps to more intense discrimination against Mizrahi workers.

The third process that could explain the relative stability of the wage gap between Mizrahim and Ashkenazim in Israel, is the sharp rise in income and earnings inequality. For our purpose it is important to emphasize that the relations between wage inequality and ethnic-based earnings gaps are structural. When earnings inequality increases, it implies that wages of those at the top percentiles increase relative to the wages of those located at the middle and bottom part of the earnings distribution. Because the top portion of the distribution includes a disproportionate number of Ashkenazim, and the bottom portion includes a disproportionate number of Mizrahim, a rise in inequality widens the earnings gap between the two ethnic groups, when all else is equal.[1]

In Israel income inequality increased sharply in the past 25 years. Between 1975 and 1982 the Gini coefficient among households headed by salaried workers increased from .28 to .32 (Israel 1983). In 1992 the coefficient reached .35, and in 1995 it reached a peak of .36. Between 1995 and 1997 it declined a bit, but by 1999 it returned to its 1995 level (Israel 2001). Data on wage inequality are less readily available than data on income inequality, but available measures, too, imply that earnings inequality increased since the mid 1970s. According to Sussman and Zakai (1996), the Gini Coefficient in earnings in the private sector increased from .33 in 1972 to .44 in 1994. Among public sector workers there is less inequality, but the increase in the public sector was steeper, from .22 to .33 during the same period. According to Dahan (2001), the Gini coefficient for earnings increased from .544 1n 1980 to .585 in 1997. Among men working full-

[1] Rising wage inequality was found to be responsible for much of the slowdown in closing the gender-based wage gap in the US, as well as for the higher wage ratios in European countries compared to the US. For example, In 1994 the wage ratio (women to men) in Italy (.795) was higher than in the US (.729), implying smaller gender gaps in Italy. The entire difference, however, is due to the different wage structures in the two countries. Had men's earnings distribution in Italy been the same as that of the US, the wage ratio in Italy would be only .590. Another word, relative to men, Italian women are doing better than US women, but this is due to the lower earning inequality in Italy than in the US (Blau and Kahn 2000: 94).

time, Dahan calculated that the variance in hourly wage increased by 32% during approximately the same years.

The rise in income and wage inequality in the last two decade is not unique to Israel. With the exception of Germany and Italy, inequality increased in all Western countries (Gottschalk and Smeeding 1997). The standard explanation for the rising inequality in the advanced economies, is skill-based technological change (technological change that brought about an increased demand for high skilled workers, but not to low skilled workers). Low skilled and blue collar workers suffered from weakening of labor unions, from immigration of unskilled workers to Western counties, and from processes of globalization and privatization that resulted in plant relocations overseas (Gottschalk and Smeeding 1997; Freeman and Katz 1995; Katz and Autor 1999). In Israel, no comparable comprehensive studies were conducted. Yet it is reasonable to assume that similar processes affected the Israeli economy and society in the past 25 years. Similar to other developed economies, there was a sharp increase in the returns to experience, and especially to university degrees in Israel since the 1970s (Dahan 2001; Cohen 1998), although it is not known if this increase was driven by skill-based technological changes. Concomitant with the rise in the returns to university education, Israeli unions lost half their membership (Cohen, Haberfeld, Mundlak and Saporta Forthcoming), and collective bargaining agreements were decentralized, thereby incasing wage inequality (Kristal 2002). Finally, the mass migration from Russia and the influx of labor migrants during the 1990s kept wages of less skilled workers at their low levels.

In sum, three processes -- aging, an increase in labor market discrimination against Mizrahim, and rising inequality -- could be responsible for the persisting (and at time widening) ethnic-based earnings differentials in Israel. In the following pages we present evidence that it is mainly rising earning inequality that has been responsible for the persisting earnings differentials between Mizrahi and Ashkenazi men.

2. Data and Variables

The data for the study are taken from Income Surveys for the years 1975, 1982. 1992, and 1999. Income Surveys are conducted annually as a supplement to Labor Force Surveys, and contain basic demographic information as well as earnings data, for a representative sample of 3,000-4,000 households (about 6,000 individuals). Because earnings are not available for self-employed, the study will be limited to salaried workers. In addition, the study will be limited to Jewish men in their prime working ages, in order to focus the discussion on groups with similar rates of labor force participation, that do not suffer from gender or national/religious discrimination (against Arabs). In short, in each of the four years, the analyses include native-born (and those immigrating to Israel as children) Jewish salaried men, 25-54 years old (not many of the second generation are over 54, especially in the 1970s and 1980s). Women, Arabs, self-employed, members of kibbutzim, Moshavim and other small communities, new immigrants arriving Israel at age 15 and over, and labor migrants (from the West Bank, Gaza as well as form overseas) -- major social groups cmprising over 50% of the Israeli labor force -- are not included in the study. The main purpose of this study is to describe and analyze the effect of rising inequality on the development of the earnings gaps among the two largest and central groups of salaried workers in Israel: The one which is at the top of the socioeconomic ladder (Ashkenazim) and the one hoping to catch up with it (Mizrahim).

Mizrachim are defined as Israeli-born to fathers born in Asia or Africa. Those born in Asia and Africa and arrived Israel before they were 15 years old, are also included in the Mizrahi group, as they completed their studies in Israel. Likewise, Ashkenazim are Israeli-born to farthers born in Europe, America, or Australia and also those born in these continents who came to Israel as children. Third generation Israelis (Israeli-born to Israeli-born fathers) are not included in the study, as they are still young and their ethnic origin is not known.

Data on income from salaried work is converted into monthly earnings. We transformed all figures into 1999 NIS. The main variable is thus the (natural logarithm) of monthly earnings. Labor supply is measured by monthly hours of work. Two measures of

schooling are used: years of education and 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. In addition, three dummy variables, known to affect earnings, are included to indicate whether respondents are married, whether they reside in a large metropolitan area, and whether they hold a professional, technical or managerial (PTM) occupation.

2.1 Method

We use a method that enables us to decompose changes in earnings gaps between two groups at two time points into (1) a portion due to changes in group-specific factors; and (2) a portion due to changes in earnings inequality. The first portion – due to groups' specific factors, can be further broken down into two types of group-specific factors: (1.1) the relative change in the groups' qualifications, and (1.2) the relative change in the market treatment of the two groups (and/or unmeasured attributes). The main advantage of this method over the conventional methods of decomposition earning gaps (Oaxaca 1973) is the identification of the independent role of earnings structures (i.e., changes over time in earnings inequality) on earnings gaps between groups. Specifically, in the traditional method the effect of inequality is combined with the effects of market treatment and both create the "unexplained" fraction of the gap, which is often being interpreted as resulting from labor market discrimination. The method we use below allows us to reduce the residual earnings gap by disentangling the black box of "unexplained" portion into a residual portion (due to market treatment and unmeasured characteristics), and into a portion due to changes in earnings structure (i.e., inequality).[2]

First, we calculate earnings differences (D) between Ashkenazim and Mizrahim at each time point:

$$(1) \qquad D_t = Y_{at} - Y_{mt}$$

[2] See Juhn, Murphy, and Pierce (1991), and Blau and Kahn (1997, 2000) for the use in this method for explaining the impact of inequality on the development of racial and gender gaps in the US labor market.

where Y denotes average group (ln) earnings, "a" and "m" are subscripts for Ashkenazim and Mizrahim respectively, and "t" indicates a time point (t = 1975, 1982, 1992, and 1999).

In each year, each Mizrahi's earnings (y_{imt}) was placed in the Ashkenazim's earnings percentile distribution of that year. Each Mizrahi was assigned the percentile that his earnings placed him on. We then calculated the following for each of the years:

(2) MP_t = Mean percentile ranking of Mizrahim in the earnings percentile distribution of Ashkenazim

This percentile ranking is determined by the group-specific factors, namely differences in average earnings determinants between the two groups, and differences in market treatment (i.e., discrimination and/or effects of unobserved characteristics) towards members of both groups.

In order to isolate the impact of differences in earnings determinants from the impact of differences in market treatment, we calculated an earnings equation for Ashkenazim for each year, as follows:

(3) $y_{iat} = X'_{iat}B_{at}$

where X is a vector of earnings determinants of men in year t, and B is a vector of their coefficients.

We applied the estimated equation to the Mizrahi averages in order to derive as estimation of the predicted mean Mizrahi's earnings, adjusted for differences in observed characteristics between the two groups.

In addition, we derived for Ashkenazim residual earnings percentile distribution by calculating a residual score for each Ashkenazi each year (e_{iat})

(4) $e_{iat} = y_{iat} - X'_{iat}B_{at}$

Next, we calculated, for each year, a residual score for each Mizrahi. We did it by using the Ashkenazim's earnings equation:

(5) $e_{imt} = y_{imt} - X'_{imt}B_{at}$

We placed each Mizrahi's residual score in the Ashkenazi residual earnings percentile distribution, and calculated the mean residual for Mizrahim:

(6) MR_t = Mean residual percentile ranking of Mizrahim in Ashkenazim's residual earnings percentile distribution in each year.

This figure (MR_t) indicates the relative earnings of Mizrahim each year, after controlling for ethnic-based differences in earnings determinants. Put differently, it indicates the differential market treatment towards the two groups. The major advantage of this measure, compared to the traditional "unexplained" difference, is that changes in the mean residual are not contaminated by changes in the earnings structure.

Finally, and most important to our research question, we derive the impact of changes in the earnings structure (i.e., overall inequality) on changes in the ethnic-based gaps by first estimating the effect of changes in the ethnic-specific factors on changes in the ethnic-based gaps. For that purpose, we place the mean percentile ranking (eq. 2) of Mizrahim at t_2 (e.g., 1999) on Ashkenazim's earnings distribution at t_1 (e.g., 1992). The earnings associated with Ashkenazim's percentile at t_1 would have been the mean earnings for Mizrahim at t_2 had the earnings structure remained constant between t_1 and t_2. Thus, the difference between this expected earnings figure and the actual Mizrahim's earnings in t_2 is the result of changes in the overall earnings structure (as measured by changes in the inequality within the Ashkenazim earnings distribution).

3. Results

Table 1 present means and standard deviations for all variables for both groups in the four years. In none of the productivity-related variables, the gaps between Mizrahim and Ashkenazim widened between the 1970s and the 1990s. Rather, most gaps appear to be narrower in 1999 than in 1975 or 1982. The age difference decrease from 2.2 years in 1975 to 1.5 in 1999. The schooling difference decreased from 3.0 years in 1975 to 2.2 years in 1999. The other measure for schooling, rates of university graduates, also shows some narrowing of the gap. The ratio (Mizrahim to Ashkenazim) of the proportion of college graduates increased from .23 in 1982 to .33 in 1999. Consequently, the ratio of the proportion in top white-collar occupations increased from .34 in 1975 to .45 in 1999. Even in the likelihood to be married (a powerful determinant of earnings among men), the ethnic gap in the 1990s is slightly smaller than in the 1970s and 1980s. In monthly hours of work, however, the trend is not clear. While in 1975 Ashkenazim worked 3 hours per month more than Mizrahim, the gap increased to 6 hours in 1982, then declined to 2 hours in 1992, and increased again to 6 hours per month in 1999. In sum, with the exception of hours, in all other measured productivity-related variables, the ethnic gaps between Mizrahim and Ashkenazim, while still substantial, have somewhat narrowed during the past 25 years. Such declines are expected to attenuate the earning differentials between the groups.

Table 2, however, suggests otherwise. The differential in (ln) monthly earning gaps between Ashkenazim and Mizrahim grew from .255 in 1975 to .323 in 1982, and to a peak of .365 in 1992 before it fell to .337 in 1999.[3] However, Mizrahim's mean location on Ashkenazim's earnings distribution has actually improved a bit, from the 32nd percentile in 1982 to the 34th and 35th percentiles in 1992 and 1999, respectively.

Table 3 addresses the main question of the study, namely, the role of inequality on the ethnic-based earnings gaps. For each time period, columns 2-5 show what portion of the

[3] The earnings ratio (Mizrahim to Ashkenazim) in monthly NIS declined from .738 in 1975, to .707 in 1982, to .672 in 1992, and increased slightly to .680 in 1999.

change in the earnings gap (column 1) is due to changes in Mizrahim's group specific factors (column 2, 3, and 4) vs. changes in earnings inequality (column 5). The results suggest that rising inequality is the main process driving up the ethnic-based earnings gaps. Between 1975 and 1999 the differential in (ln) monthly earnings between the Ashkenazi and Mizrachi men increased from .255 to .337. The entire increase, however, is due to changes in the earnings structure. Relative to Ashkenazim, Mizrahim's productivity-related traits as well as the market treatment of their traits have actually improved over time. To the extent that market treatment is due to discrimination, it implies that direct labor market discrimination against Mizrahim declined between 1975 and 1999. Taken together, the relative improvement in Mizrahim's traits and their treatment by the market, would have lowered the gap in (ln) earnings by .049. But the effect of inequality (an increase of .131 in the differential) more than offset these gains, resulting in an overall rise of .082 in the gap in (ln) earnings between 1975 and 1999.

It is important to note that most of the effects of inequality occurred between 1975 and 1992. During these years, Mizrahim's efforts in the labor market were more than offset by the forces responsible for rising inequality. Between 1992 and 1999 changes in inequality hardly affected the earnings gaps. Consequently, during these years Mizrahim were able to translate their small convergence in productivity-related variables to a .028 decline in the ethnic-gap in (ln) monthly earnings.

4. Summary and Conclusions

Table 3 tells an unequivocal story: Since 1975 and especially until 1992 the changes in the earnings structure, namely, rising earnings inequality, is the sole reason behind the rising earning gap between Mizrahi and Ashkenazi men. Had earnings inequality stayed at its 1975 level and Mizrahi characteristics and treatment improved as it did, the earnings gap between the two groups would have declined by .049 log points, or about 19 percent between 1975 and 1999, rather than increased by 32 percent as it actually did. Thus, the rise in the earnings gap between Ashkenazim and Mizrahim during the past 25 years must not be attributed to rising gaps in productivity-related traits, or rising labor

market discrimination against Mizrahim. In fact, Mizrahim made some relative gains in productivity-related characteristics (and their treatment by the market) since 1975. However, the rising inequality more than offset these gains of Mizrahim, and blocked their relative economic progress.

Most of the effects of inequality occurred between 1975 and 1992. Between 1992 and 1999 changes in inequality hardly affected the earnings gaps. Consequently, during these years Mizrahim were able to translate their small convergence in productivity-related variables to a .028 decline in the ethnic-gap in (ln) monthly earnings.

These results imply that a policy aimed at reducing income and wage inequality is necessary for improving the relative standing of Mizrahi men, whose efforts for economic and social progress can be viewed, in Blau and Kahn's (1997) words as "swimming upstream" the raging river of the Israeli labor market. Finally, it is likely that income inequality hurts other weak groups in Israeli society -- women, new immigrants, Arabs, young workers, and high school dropouts -- relative to the most advantageous group in the Israeli labor market: educated Ashkenazi men.

5. References

Blau, Francine and Lawrence Kahn. 2000. "Gender Differences in Pay." *Journal of Economic Perspectives* 14: 75-99.

Blau, Francine and Lawrence Kahn. 1997. "Swimming Upstream: Trends in Gender Wage differentials in the 1980s." *Journal of Labor Economics* 15:1 pt.1 1-42.

Cohen, Yinon. 1998. "Second Generation Jewish Immigrants in Israel: Have the Ethnic Gaps in Schooling and Earnings Declined?" *Israeli Sociology* 1:115-134. (Hebrew)

Cohen, Yinon, and Yitchak Haberfeld. 1998. "Second Generation Jewish Immigrants in Israel: Have the Ethnic Gaps in Schooling and Earnings Declined?" *Ethnic and Racial Studies* 21: 507-528.

Cohen, Yinon, Yitchak Haberfeld, Guy Mundlak, and Ishak Saporta. Forthcoming (2003) "Unpacking Union Density: Membership and Coverage in the Transformation of the Israeli Industrial Relations System." *Industrial Relations*.

Dahan, Momi. 2001. "The rise in economic inequality." In Ben Bassat, A. (ed.) *The Israeli Economy, 1985-1998: From Government Intervention to Market Economics.* Tel-Aviv: Am Oved Publishers, pp. 610-656 (Hebrew).

Freeman, Richard, and Lawrence Katz (eds). 1995. *Differences and Changes in Wage Structures*. Chicago: University of Chicago Press.

Friedlander, Dov, Zvi Eisenbach, and Eliyahu Ben-Moshe. 2002. *Change processes in educational attainments and achievements in Israel since the 1950's: The influences of religion, ethnicity and family characteristics.* Jerusalem: Central Bureau of Statistics and Dept of Population Studies, Hebrew University, Jerusalem (Hebrew).

Gottschalk, Peter, and Timothy Smeeding. 1997. "Cross National Comparisons of Earnings and Income Inequality." *Journal of Economic Literature* 35: 633-687.

Israel. 1983. Supplement to Monthly Bulletin of Statistics. 34: 7.

Israel. 2001. Statistical Abstract of Israel. Jerusalem: Central Bureau of Statistics.

Juhn, Chinhui, Kevin Murphy, and Brooks Pierce. 1991. "Accounting for the slowdown in Black-White wage convergence." Pp. 107-143 in Marvin Kosters (ed.) *Workers and their wages*. Washington, DC: AEI Press.

Katz, Lawrence and David Autor. 1999. "Changes in the Wage Structure and Earnings Inequality." In *Handbook of Labor Economics*, vol. 3A, edited by Orley Ashenfelter and David Card, 1999.

Kristal, Tali. 2002. "Decentralization of collective bargaining agreements and the rise in Inequality in Israel. M.A. Thesis, Dept. of Sociology, Tel Aviv University (Hebrew).

Mark, Nili. 1994. "Ethnic gaps in income and consumption in Israel." *Economic Quarterly* 41(1): 55-77 (Hebrew).

Oaxaca, Ronald L. 1973. "Male-female wage differential in urban labor markets." *International Economic Review* 14(3): 693-709.

Sussman, Zvi, and Dani Zakai. 1996. "The Decentralization of Collective Bargaining and Changes in the Compensation Structure in Israel's Public Sector." Discussion Paper No. 96.04. Jerusalem: Research Department, Bank of Israel.

Table 1. Means and standard deviations for labor market characteristics among Mizrachi and Ashkenazi native-born salaried men, 25-54 years old: 1975, 1982, 1992 and 1999.

	1975		1982		1992		1999	
	Miz	Ashk	Miz	Ashk	Miz	Ashk	Miz	Ashk
Earnings (1999 NIS)[a]	3,871	5,242	3,827	5,415	6,445	9,629	7,997	11,766
	(1,698)	(5,476)	(2,016)	(2,922)	(4,155)	(6,487)	(5,954)	(9,649)
Years of schooling	9.90	12.95	10.65	13.71	11.56	14.20	12.44	14.62
	(3.01)	(3.43)	(2.69)	(3.15)	(2.76)	(3.02)	(2.71)	(2.91)
Academic degree	0.052 [b]	0.276 [b]	0.075	0.322	0.104	0.384	0.141	0.431
Age	32.43	34.61	33.87	35.83	37.44	39.67	38.69	40.15
	(6.77)	(7.91)	(6.38)	(6.98)	(7.79)	(7.64)	(7.91)	(8.87)
Married	0.872	0.914	0.870	0.904	0.844	0.864	0.807	0.821
Hours of work	192.95	195.06	194.97	201.39	198.25	200.32	198.92	205.50
	(35.58)	(46.06)	(27.72)	(38.86)	(42.45)	(51.07)	(45.39)	(49.57)
PTM occupatons	0.154	0.453	0.160	0.513	0.210	0.529	0.238	0.526
Metropolitan area	0.247	0.362	0.187	0.263	0.172	0.229	0.130	0.214
N	539	594	614	487	979	654	1,726	1,154

[a] All earnings figures were transformed into 1999 new Israeli shekells.
[b] Data on academic degree are not available in 1975. The figures indicate those who have 16 years of schooling or more.

Table 2: Analysis of (ln) real earnings of Mizrachi and Ashkenazi native-born salaried men, 25-54 years old: 1975, 1982, 1992 and 1999.

	1975	1982	1992	1999
Mean (ln) earnings :				
Mizrahim	8.169	8.133	8.575	8.781
(s.d.)	(0.467)	(0.483)	(0.675)	(0.665)
Ashkenazim	8.424	8.456	8.940	9.118
(s.d.)	(0.509)	(0.551)	(0.743)	(0.749)
Differential (Ashkenazim - Mizrahim) (equation 1)	0.255	0.323	0.365	0.337
Mean Mizrachi percentile in Ashkenazi distribution. (equation 2)	32.19	32.16	34.08	35.56
Differential in adjusted mean (ln) earnings. (equation 3)	0.108	0.103	0.129	0.092
Mean Mizrachi residual percentile in Ashkenazi residual distribution (equation 6)	45.98	43.94	43.77	45.21

Table 3. Decomposition of changes in (ln) earnings differentials between Mizrahim and Ashkenazim ,1975 -1999.

	Total change in (ln) earnings	Due to change in Mizrahi percentile	Due to change in characteristics	Due to change in treatment (discrimination) or unobserved characteristics)	Due to change in inequality
	1 (2+5)	2 (3+4)	3	4	5
1975-1982	.068	.000	-.005	.005	.068
1982-1992	.042	-.036	.026	-.062	.078
1992-1999	-.028	-.029	-.037	.008	.001
1975-1999	.082	-.049	-.016	-.033	.131

Appendix

Estimated coefficients of the determinants of (ln) real monthly earnings of Mizrahi and Ashkenazi native-born salaried men, 25-54 years old: 1975, 1982. 1992, 1999 (s.e. in parentheses)

	1975		1982		1992		1999	
Variable	Miz	Askh	Miz	Askh	Miz	Askh	Miz	Askh
Years of schooling	.039**	.019**	.039**	.013	.048**	.010	.068**	.029**
	(.007)	(.006)	(.009)	(.011)	(.009)	(.011)	(.007)	(.009)
Academic degree	[a]	[a]	-.004	.158*	.033	.168*	-.007	.236**
			(.087)	(.066)	(.082)	(.065)	(.051)	(.051)
Age	.029	.044*	-.023	.070**	.069**	.183**	.081**	.117**
	(.022)	(.024)	(.031)	(.031)	(.024)	(.031)	(.018)	(.022)
Age²	.000	.000	.000	-.001*	-.001**	-.002**	-.001**	-.001**
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Married	.283**	.271**	.167**	.432**	.318**	.329**	.175**	.190**
	(.053)	(.067)	(.057)	(.079)	(.056)	(.072)	(.038)	(.051)
Hours of work	.004**	.003**	.004**	.003**	.004**	.005**	.005**	.005**
	(.000)	(.000)	(.000)	(.001)	(.000)	(.000)	(.000)	(.000)
Professional technical and managerial	.199**	.141**	.184**	.222**	.261**	.226**	.219**	.215**
	(.056)	(.044)	(.056)	(.052)	(.056)	(.052)	(.036)	(.040)
Metropolitan area	-.033	-.069*	-.129**	-.017	-.041	-.015	-.003	-.030
	(.041)	(.039)	(.045)	(.049)	(.049)	(.054)	(.039)	(.043)
Constant	.363	.520	4.765	3.419	4.116	2.167	4.978	4.361
N	539	594	614	487	979	654	1,726	1,154
F	32.70	28.34	19.86	26.89	45.91	58.07	105.32	99.97
R^2(adj)	.292	.244	.198	.299	.266	.406	.326	.407

[a] Data on academic degree were not available in 1975.

* p<0.1

** p<0.05