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Male Income, Female Income, and Household Income Inequality in Israel: A Decomposition Analysis

by

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Abstract

Differentiating between the sensitivity of income inequality to male income and female income, and decomposing inequality by income determinants, we find that total income inequality is less sensitive to female income variability or the level of female income than to male income variability or the level of male income. Uniform increases in education reduce income inequality, with female education having a larger effect than male education. The fraction of minority populations has a positive effect on inequality, but this operates mostly through female income. All this suggests that female income is the most adequate target for inequality-reducing policy, and that within-household gender equality is good for reducing income inequality among households.

Introduction

Income inequality in Israel has been increasing in recent years, as has been the case in many other countries. Despite a decent growth of the economy, much concern has been expressed about the unequal distribution of the benefits of growth, and in particular about increasing poverty among particular population groups such as ethnic minorities, the elderly, remote localities, etc. The purpose of this paper is to add a gender dimension to this discussion. In particular, we investigate the hypothesis that

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at least part of the observed inequalities is due to different gender roles in different population groups. Using data from the 2005 Family Expenditure Survey in Israel, we compare the contributions to inequality of male and female incomes, the marginal effects on inequality of these incomes, and the elasticity of inequality with respect to a number of income determinants.

Closing the gender gaps in labor force participation, labor supply and wages is a policy objective in many countries. The rise over time of the fraction of female income in total household income is therefore considered as a favorable outcome. The question is whether this is good or bad for income inequality. Winegarden (1987), using a cross-national data, found evidence for a Kuznets-type inverted U effect of women's labor force participation on income inequality. Burtless (1999) suggested that the rise in the correlation between male and female earnings could increase household income inequality. See also Aslaksen, Wennemo and Aaberge (2005) for evidence on this "flocking together" phenomenon in Norway. However, Cancian and Reed (1998) found that wives' earnings reduced household income inequality in the U.S., and Pencavel (2006) showed that this has been a result of the increase in women's labor force participation. Harkness, Machin, and Waldfogel (1997) found that women's earnings had an equalizing effect on household income in the UK. Also, Davies and Joshi (1998) found that the increase in female labor force participation in the UK was a key factor in keeping families out of poverty. Björkland (1992), Del boca and Pasqua (2003), Abe and Oishi (2007) and Amin and DaVanzo (2004) reached similar conclusions for Sweden, Italy, Japan and Malaysia, respectively.

This paper will shed light on this question in the context of Israel. Gronau (1982) has shown that women's earnings played an equalizing role in household income inequality in Israel, in the mid-1970s. He focused on Jewish households and emphasized differences between ethnic groups. It is interesting to come back to this issue 30 years later, in a period when two-earner households are much more common, among non-Jewish households as well.

Income inequality can be decomposed by income sources in more than one way. Shorrocks (1982) recommends focusing on "natural" decompositions. Lerman and Yizhaki (1985) have shown that in the case of the natural decomposition of the Gini index of inequality by income sources, the contribution of each income source to overall income inequality is a product of the share of this income source in total income, the Gini correlation between this income source and total income, and the variability of this income source. They further showed that the marginal effect of each income source, i.e. the impact on total income inequality of a uniform percentage increase in this income source, is proportional to the difference between the contribution of this income source to inequality and its share in total income.

Why would there be a difference between the contributions and the effects of male and female incomes? An individual's income is determined by three main factors: labor force participation, labor supply, and the wage rate. Gender differences are known to exist in all three factors. In an average family, the female is still the secondary contributor to household income. Part of this may be due to the natural comparative advantage of females in household production. Another part may be due to gender discrimination in the labor market. In either case, labor force participation and labor supply of females are more sensitive to changes in wages and income, and their wages are lower. Hence, it is likely that the fraction of female income in total household income is lower, and that female income is less correlated with total income than male income. Both of these could lead to a lower contribution of female income to total inequality. However, it is not easy to predict whether the variability in female income is higher or lower than the variability in male income. Therefore, the relative contribution of female income to overall income inequality is theoretically ambiguous, and hence the marginal effect of female income on total income inequality is also ambiguous. In this sense, economic policies aiming at increasing gender equality in the labor market could lead to an increase in total income inequality.

Economic policies could also affect female income indirectly, through their impact on income determinants. This raises interest in measuring the importance of income determinants on inequality. For example, Breen and Salazar (2004) examine the impact of female education on household income inequality. Gronau (1982) found that the effect of women's earnings on household income inequality in Israel varies strongly with schooling and ethnic origin.

The rest of this paper goes as follows. The next section describes the methods used to decompose inequality by income source, and the following section extends these methods to regression-based decomposition by income determinants. The following section describes the data. After that we present the empirical results. The last section offers a summary and some conclusions.

Inequality decomposition by income sources

Although decompositions of the Gini index of inequality by income components appeared in the literature in the 1970s, Shorrocks (1982) was the first to offer a general scheme that can be used with other inequality measures as well. He suggested focusing on inequality measures that can be written as a weighted sum of incomes:

(1) $I(\mathbf{y}) = \Sigma_i a_i(\mathbf{y}) y_i,$

where a_i are the weights, y_i is the income of household i, and $\mathbf{y}$ is the vector of household incomes. If income is observed as the sum of incomes from k different sources, $y_i = \Sigma_k y_i^k$, the inequality measure (1) can be written as the sum of source-specific components S^k:

(2) $I(\mathbf{y}) = \Sigma_i a_i(\mathbf{y}) \Sigma_k y_i^k = \Sigma_k [\Sigma_i a_i(\mathbf{y}) y_i^k] \equiv \Sigma_k S^k.$

Dividing (2) through by $I(\mathbf{y})$, one obtains the proportional contribution of income source k to overall inequality as:

(3) $s^k = \Sigma_i a_i(\mathbf{y}) y_i^k / I(\mathbf{y}).$

Shorrocks (1982) noted that the decomposition procedure (3) yields an infinite number of potential decomposition rules for each inequality index, because in principle, the weights $a_i(\mathbf{y})$ can be chosen in numerous ways, so that the proportional contribution assigned to any income source can be made to take any value between minus and plus infinity. In particular, three measures of inequality that are commonly used in empirical applications are: (a) the Gini index, with $a_i(\mathbf{y}) = 2(i-(n+1)/2)/(\mu n^2)$, where i is the index of observation after sorting the observations from lowest to highest income, n is the number of observations and μ is mean income; (b) the squared coefficient of variation with $a_i(\mathbf{y}) = (y_i - \mu)/(n \mu^2)$; and (c) Theil's T index with $a_i(\mathbf{y}) = \ln(y_i/\mu)/n$.

Shorrocks (1982) further showed how additional restrictions on the choice of weights can reduce the number of potential decomposition rules. In particular, two restrictions are sufficient to derive a unique decomposition rule. The restrictions are (a) that an equally-distributed income source has a zero contribution to overall inequality; and (b) that if total income is divided into two components whose factor distributions are permutations of each other, their inequality contributions are equal. The unique decomposition rule obtained by imposing these restrictions is:

(4) $s^k = \text{cov}(\mathbf{y}^k,\mathbf{y})/\text{var}(\mathbf{y})$.

This is the decomposition rule that is based on the squared coefficient of variation inequality index. Fields (2003) reached the same conclusion in a different way. However, Shorrocks (1983) still suggested not to rely solely on this decomposition rule, but rather to compare the results of several different decomposition rules.

There is still much confusion in the literature about the meaning of the inequality contributions of the different income sources, that can easily lead to wrong interpretations (Kimhi 2007). For the Gini decomposition rule, Lerman and Yitzhaki (1985) have shown that the contribution of each income component is a product of its share in total income, the Gini correlation between this component and total income, and the Gini coefficient of that income component. For the squared coefficient of variation decomposition rule, Shorrocks (1982) has shown that the inequality contribution of an income source is equal to the average of two quantities: the inequality that would be observed if this income source was the only source of inequality, and the amount by which inequality would fall if inequality in this income source were eliminated. These two examples imply that inequality contributions are related to source-specific income variability.

Perhaps a more policy-relevant question is what is the impact on inequality of a uniform change in a particular income source. Shorrocks (1983) has noted that comparing s^k, the contribution of income source k to inequality, and α^k, the income share of source k, is useful for knowing whether the k^{th} income source is equalizing or disequalizing. Lerman and Yitzhaki (1985) have shown that the relative change in the Gini inequality index following a uniform percentage change in $\mathbf{y}^k$ is $(s^k\text{-}\alpha^k)\text{G}(\mathbf{y})$. Kimhi (2007) has shown that a similar result can be obtained for other inequality measures using simulations.

Regression-based inequality decomposition

Regression analysis as a tool for inequality decomposition has been used since the 1970s. It enables to identify exogenous variables, that are known to affect income and may be sensitive to policy measures (e.g., education), and measure their effect on income inequality. Morduch and Sicular (2002) and Fields (2003) extended the decomposition by income source procedure (3) to a regression-based decomposition by determinants of income. They expressed household income (or log-income) as:

(5) $\mathbf{y}=\mathbf{X}\boldsymbol{\beta}+\boldsymbol{\varepsilon}$,

where **X** is a matrix of explanatory variables, **β** is a vector of coefficients, and **ε** is a vector of residuals. Given a vector of consistently estimated coefficients **b**, income can be expressed as a sum of predicted income and a prediction error according to:

(6) $\mathbf{y} = \mathbf{X}\mathbf{b}+\mathbf{e}$.

Substituting (6) into (1) and dividing through by $I(\mathbf{y})$, the share of inequality attributed to explanatory variable m is obtained as:

(7) $s^m = b_m\Sigma_i a_i(\mathbf{y})x_i^m/I(\mathbf{y})$.

Using the regression coefficients, it is possible to compute the "income shares" of the explanatory variables as

(8) $\alpha^m = b_m\Sigma_i x_i^m/\Sigma_i y_i$,

and evaluate the impact on the Gini index of inequality of a uniform increase in an explanatory variable, as in Lerman and Yitzhaki (1985), by computing $(s^m\text{-}\alpha^m)\mathrm{G}(\mathbf{y})$. Kimhi (2007) claimed that this is not always interpretable, and suggested to evaluate these "marginal effects" by simulations.

Data

The data for this research were taken from the 2005 Family Expenditure Survey in Israel. In addition to a detailed account of household expenditures, the survey collected personal information about household members, including their labor market activities and their income from various sources. Additional income components, which could not be assigned to individuals, were collected at the household level. In particular, individual income included income from salaried work, self employment and "other" work, child allowance (assigned to the mother of the child), old age, survivors, casualty, disability, unemployment, income maintenance and other allowances, income from pension funds, and income from rents or remittances. Capital income and profits from businesses were reported at the household level. Profits were assigned to household members according to their income from self employment.

The original data set included 21,046 individuals from 6,272 households. We selected households in which both the reported head of household and spouse were present, married, and under 65 years of age. These amounted to 3,497 households. We have redefined the head/spouse to male/female, and summed the labor (in gross terms) and transfer income of the male, female, and other household members. The sample means of these income sources (on a per-capita basis) are shown in the first column of table 1. We observe that nearly half of household income originates from male labor, while female labor accounts for less than a quarter. The labor income of other household members amounts to 5% of the total. Transfer income amounts to about 10% of the total, and it is assigned relatively equally to the male, female, and other household members.

Inequality decomposition results

Table 1 presents the results of the decomposition of inequality by income source for two inequality measures: the Gini and the squared coefficient of variation. As mentioned earlier, these measures allow for intuitive interpretations of the decomposition results. We report the source-specific shares of inequality and the simulated marginal effect of a universal percentage increase in each income source. Standard errors of both inequality shares and marginal effects were obtained by bootstrapping (200 repetitions), using a special code written in Gauss.

We observe that the inequality shares roughly correspond to the income shares of the different sources, and this is why the marginal effects are relatively small. The Gini and squared CV decompositions are qualitatively similar and quite close quantitatively. The two exceptions are female labor income and capital income, which have higher and lower contributions, respectively, under the Gini decomposition rule. The contributions of other transfer income are different as well, but they are not significantly different from zero.

The marginal effects according to the Gini decomposition rule imply that both male and female labor income are inequality-increasing, but the effect of female labor income is less than half of the effect of male labor income. The effect of female labor income is negative according to the squared CV decomposition rule, but is not statistically different from zero. The labor income of other household members is inequality-decreasing. Transfer income from all sources is inequality-decreasing as well, with transfers obtained by other household members having the strongest effect and male transfers having the weakest effect. Capital income is found to be inequality-decreasing under the Gini decomposition rule, but inequality-increasing under the squared CV decomposition rule. The latter effect is not statistically significant, though.

The policy implications of these results are straightforward. Any policy that increases the labor income of the male or the female is likely to increase overall income inequality, while a policy that increases labor income of other household members is likely to decrease inequality. Since most of the income of other household members is obtained by children of the head of household, this mostly refers to labor income of young individuals near the beginning of their careers. Female labor income is less inequality-increasing than male labor income. Increasing transfer income is likely to decrease overall income inequality, where transfers to other household members are likely to have the strongest effect. Here, perhaps the parents of the head of household are those responsible for the bulk of these transfer payments. The result that an increase in capital income is likely to decrease overall income inequality is both surprising and questionable, because it does not hold under the squared CV decomposition rule. Hence, one should be careful when deriving policy implications from this result.

The problem with these policy implications is that most policy measures affect income indirectly. It is often not easy to predict the impact of policy on labor income, because it may have different effects on labor force participation, on labor supplied, and on wages. It may be more informative to find the effects of income determinants, such as schooling, on income inequality. For this we use the regression-based decomposition (7). We start by estimating a linear income-generating regression (5).

The explanatory variables we have chosen can be found in table 2. These include age and schooling of the male and female, household size differentiated by age (0-18 versus 18+) and gender (for 18+ only), a dummy for minority (non-Jewish) populations, and two sets of dummy variables, one indicating geographic location and the other indicating the size of the locality.

Table 3 includes the regression results (first column). We find that both male and female ages increase income. However, the effect of male age is nonlinear: it deteriorates with age and becomes negative at age 53. When we allowed a nonlinear effect of female age, the coefficients of both female age and female age squared were not statistically significant. Both male and female schooling increase income, with female schooling having a much stronger effect. Household size decreases per-capita income, as expected. This effect is weakest for adult males and strongest for adult females, whereas the effect of children is in between. Minority populations have lower per-capita incomes, other things equal. Geographical differences seem to be significant, with incomes in Tel Aviv and the Center of the country higher than elsewhere. Size of locality also seems to matter, with incomes in both largest and smallest localities higher than in intermediate-size localities.

Table 4 (first column) shows the regression-based decomposition results using the Gini decomposition rule. The decomposition of the squared CV came out very similar, and therefore is not presented here. We find that roughly a half of income inequality is explained by the income determinants that served as explanatory variables. The particular contribution of an explanatory variable to inequality is interpreted as the effect of an increase in the variance of this variable. Therefore, it is not very meaningful for categorical variables. Also, for variables such as age and age squared it is not clear how to use these results. Focusing on the continuous explanatory variables, we find that male and female schooling, as well as household size, have positive contributions to inequality. Interestingly, female schooling has a much larger contribution that male schooling. Also, the number of children has a much larger contribution than the number of adults.

In order to obtain more interpretable results, we computed marginal effects of explanatory variables by simulations. In particular, we increased each continuous explanatory variable at a time by one percent, and computed the resulting change in inequality. For the categorical variables, we computed the difference in inequality between two hypothetical situations: one in which all the sample is assigned to a single category, and another in which all the sample is assigned to the excluded category.

The computed marginal effects are reported in table 5 (first column). The effects of male and female ages are negative, implying that population ageing, a process that is observed in many developed countries, is favorable for income distribution. More interestingly, education of both male and female have negative effects on income inequality, with female education having a much stronger effect than male education. This implies that policies promoting higher education are favorable not only for growth but for income distribution as well. Household size has a positive effect on income inequality, and the effect of the number of children has a stronger effect than the number of adults. This is probably due to the fact that larger households tend to be those with lower per-capita income. The same is true for the positive effect of minority populations. Geographical redistribution of the population away from Tel Aviv has a positive effect on inequality. This is particularly relevant for policy, because population redistribution has always been a stated policy in Israel. Similarly, population redistribution away from the largest cities into intermediate-size localities also increases income inequality. Hence, the suburbanization process needs to be examined on this ground as well.

To emphasize the gender aspect of these results, we decompose income inequality further by allowing each explanatory variable to affect different components of income differently. Arayama et al. (2006) have shown that this could be done by combining the regression-based decomposition with the decomposition by income source, so that the contribution of explanatory variable m to inequality through income source k is:

$$(9) \qquad s^{mk} = b_{km}\Sigma_i a_i(\mathbf{y})x_i^{m}/I(\mathbf{y}),$$

Where b_{km} is the coefficient of explanatory variable m in a regression of $\mathbf{y}^{\mathrm{k}}$ on $\mathbf{X}$. We apply this decomposition after separating total income into three components: male income, female income, and other income. Compared to the earlier decomposition by income source (table 1), we combine labor and transfer income of the male/female, and combine income of other household members and capital income.

The source-specific regression results, decomposition results and marginal effects are reported in the remaining columns of tables 3, 4 and 5, respectively. The regression results (table 3) differ somewhat across income sources, but not dramatically. The decomposition results (table 4) show more variation across income sources. Overall, most of the explained inequality is explained by variables operating through male income, while the fraction of inequality explained by variables operating through other income is very small. There are several specific exceptions to this rule. The contribution of female schooling to inequality through female income is almost as large of its contribution through male income. This is a reasonable result. The number of adult household members contributes negatively to inequality through other income, but contributes positively through male and female incomes. The contribution of minority populations is assigned mostly to female income. The contribution of locality size to inequality through other income is not statistically significant. The differences in the source-specific marginal effects (table 5) follow a similar pattern. In particular, a uniform increase in the number of adults (males or females) in the household increases income inequality through its effects on male and female income, but decreases income inequality through its effect on other income. Also, an increase in the size of minority populations increases income inequality significantly only through its effect on female income.

Summary and conclusions

This paper explored the gender dimension of income inequality in Israel, differentiated by sources of income and by variables that determine income indirectly. We found that variability in female labor income is contributing less to total income inequality than variability in male labor income, and that the same is true for gender-specific transfer incomes. In addition, a uniform increase in female labor income increases total income inequality much less than a uniform increase in male labor income. Taking into consideration the fact that the fraction of male labor income in total household income is more than twice than the fraction of female income, it seems like reducing male labor income uniformly and increasing female labor income uniformly by the same amount is not likely to have a considerable effect on the Gini index of inequality. However, using the squared CV decomposition rule, the effect of a uniform increase in female labor income is not statistically different from zero, and hence such a change in the within-household income distribution is likely to reduce total income inequality. This difference between the implications based on the two alternative decomposition rules implies that one should not trust conclusions based on an arbitrarily-chosen particular decomposition rule.

Using marginal effects on inequality derived from regression-based inequality decomposition, we found that uniform increases in both male and female education reduce inequality, with female education having a larger effect. We also found that the fraction of minority populations has a positive effect on inequality, and that this operates mostly through female income. All this suggests that female income is the most adequate target for inequality-reducing policy. In particular, increasing female income through education, especially among minority populations, is likely to be the most effective policy measure. We conclude that promoting gender equality within the household could help fight against overall income inequality.

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Table 1. Inequality decomposition by income source

	Mean per-capita income (NIS per month) and percent	Inequality measures: Gini	Inequality measures: Squared CV
Inequality index		0.4228	0.9978
Inequality contributions			
Male labor income	2,257 (46.8%)	0.5314 (45.4)	0.5416 (13.7)
Female labor income	1,067 (22.1%)	0.2488 (24.7)	0.1902 (5.92)
Other labor income	245 (5.1%)	0.0351 (8.37)	0.0211 (2.50)
Male transfer income	165 (3.4%)	0.0256 (6.11)	0.0228 (2.93)
Female transfer income	135 (2.8%)	0.0119 (4.34)	0.0106 (2.71)
Other transfer income	150 (3.1%)	0.0012 (0.31)	0.0138 (1.60)
Capital income	806 (16.7%)	0.1460 (15.7)	0.1997 (4.17)
Marginal effects			
Male labor income		0.0002668 (8.94)	0.0014030 (1.541)
Female labor income		0.0001147 (4.87)	-0.0007283 (-1.05)
Other labor income		-0.0000662 (-6.03)	-0.0005964 (-2.79)
Male transfer income		-0.0000358 (-3.18)	-0.0002525 (-1.55)
Female transfer income		-0.0000672 (-9.68)	-0.0003568 (-3.28)
Other transfer income		-0.0001262 (-10.9)	-0.0003692 (-2.22)
Capital income		-0.0000828 (-3.67)	0.0009268 (0.95)

Note: asymptotic t-statistics in parentheses.

Table 2. Explanatory variables

Variable	Unit	Sample mean	Comments
Demographics			
Male age	years	44.00	
Male schooling	years	13.54	
Female age	years	40.86	
Female schooling	years	13.09	
Household members 0-18	count	1.79	
Males over 18	count	1.33	
Females over 18	count	1.27	
Minority	dummy	0.22	Non-Jewish
Location			
Jerusalem	dummy	0.11	
North	dummy	0.18	
Haifa	dummy	0.12	
Center	dummy	0.26	
Tel Aviv	dummy	0.16	Excluded category
South	dummy	0.17	
Size of locality			
Population over 200	dummy	0.30	Excluded category
Population 50 to 200	dummy	0.26	
Population 10 to 50	dummy	0.24	
Population up to 10	dummy	0.19	

Table 3. Results of total and source-specific income generating regressions

	Total income			Male income			Female income			Other income		
Variable	Coeff.	t-val.		Coeff.	t-val.		Coeff.	t-val.		Coeff.	t-val.	
Male age	162.68	2.60	**	169.71	3.99	**	64.15	2.97	**	-71.18	-2.72	**
Male age squared	-1.54	-2.24	*	-1.65	-3.52	**	-0.73	-3.08	**	0.84	2.93	**
Male schooling	99.85	5.35	**	66.58	5.23	**	10.59	1.64		22.67	2.90	**
Female age	70.28	3.51	**	24.38	1.79		18.74	2.71	**	27.16	3.24	**
Female schooling	257.73	10.74	**	114.05	6.97	**	108.33	13.05	**	35.35	3.52	**
Household members 0-18	-700.37	-13.37	**	-394.09	-11.03	**	-190.52	-10.51	**	-115.76	-5.27	**
Males over 18	-520.11	-4.40	**	-556.30	-6.90	**	-240.06	-5.87	**	276.26	5.58	**
Females over 18	-954.65	-7.33	**	-724.95	-8.17	**	-242.33	-5.38	**	12.64	0.23	
Minority	-589.50	-2.45	*	-156.92	-0.96		-256.79	-3.09	**	-175.79	-1.74	
Jerusalem	-2022.82	-6.54	**	-1027.80	-4.87	**	-394.51	-3.69	**	-600.52	-4.63	**
North	-1661.77	-5.80	**	-802.04	-4.11	**	-290.34	-2.93	**	-569.39	-4.74	**
Haifa	-1225.36	-4.35	**	-450.00	-2.34	*	-242.60	-2.49	*	-532.76	-4.51	**
Center	-229.53	-1.02		56.87	0.37		-19.36	-0.25		-267.03	-2.84	**
South	-1536.53	-6.11	**	-729.87	-4.26	**	-188.12	-2.16	*	-618.54	-5.87	**
Population 50 to 200	-886.06	-4.24	**	-462.23	-3.25	**	-200.18	-2.77	**	-223.65	-2.56	*
Population 10 to 50	-562.29	-2.76	**	-193.70	-1.39		-200.69	-2.84	**	-167.90	-1.96	*
Population up to 10	-118.36	-0.45		-45.51	-0.25		-59.92	-0.66		-12.93	-0.12	
Intercept	-2102.94	-1.68		-2049.19	-2.40	*	-1147.21	-2.65	**	1093.46	2.08	*
R^2	0.2754			0.1855			0.2134			12.41		
F(17,3479)	77.78			46.60			55.51			28.99		

Notes: * 5% significance; ** 1% significance.

Table 4. Decomposition results of the Gini by income determinants

Variable	Total income			Male income			Female income			Other income		
	Fraction	t-val.		Fraction	t-val.		Fraction	t-val.		Fraction	t-val.	
Intercept	-0.0000	-0.05		0.0000	0.01		0.0000	0.02		0.0000	0.08	
Male age	0.1176	1.96	*	0.1229	2.77	**	0.0488	2.89	**	-0.0371	-3.90	**
Male age squared	-0.0968	-1.49	*	-0.1059	-2.22	*	-0.0496	-2.98	**	0.0358	3.88	**
Male schooling	0.0341	4.16	**	0.0231	3.94	**	0.0035	1.66		0.0045	2.66	**
Female age	0.0589	3.74	**	0.0213	2.05	*	0.0157	2.70	**	0.0074	2.17	*
Female schooling	0.1311	10.04	**	0.0579	5.98	**	0.0541	11.07	**	0.0010	0.43	
Household members 0-18	0.1642	12.17	**	0.0918	11.17	**	0.0447	11.91	**	0.0068	3.13	**
Males over 18	0.0016	0.87		0.0018	1.12		0.0007	0.95		-0.0011	-1.10	
Females over 18	0.0069	2.77	**	0.0054	2.84	**	0.0018	2.44	**	-0.0018	-3.16	**
Minority	0.0278	3.12	**	0.0075	1.31		0.0128	2.77	**	-0.0008	-0.51	
Jerusalem	0.0207	4.38	**	0.0110	3.66	**	0.0042	3.08	**	0.0014	2.15	*
North	0.0434	4.69	**	0.0216	3.98	**	0.0080	3.01	**	0.0026	1.63	
Haifa	-0.0041	-2.27	*	-0.0014	-1.65		-0.0008	-1.80		-0.0002	-0.70	
Center	-0.0048	-0.66		0.0014	0.27		-0.0006	-0.31		-0.0012	-0.89	
South	0.0136	3.22	**	0.0063	2.64	*	0.0016	1.64		0.0010	2.16	*
Population 50 to 200	-0.0120	-3.30	**	-0.0065	-2.94	**	-0.0028	-2.32	**	-0.0001	-0.19	
Population 10 to 50	-0.0036	-2.36	*	-0.0012	-1.36		-0.0013	-2.16	*	-0.0003	-0.75	
Population up to 10	0.0035	0.50		0.0017	0.37		0.0020	0.65		0.0015	0.99	
Total	0.5020			0.2587			0.1428			0.0192		

Notes: * 5% significance; ** 1% significance.

Table 5. Marginal effects of income determinants on the Gini

Variable	Total income			Male income			Female income			Other income		
	Effect	t-val.		Effect	t-val.		Effect	t-val.		Effect	t-val.	
Male age	-0.0011	-1.79		-0.0009	-1.96	*	-0.0000	-0.09		0.0001	0.93	
Male schooling	-0.0010	-5.19	**	-0.0007	-4.83	**	-0.0001	-1.71		-0.0001	-2.78	**
Female age	-0.0022	-3.97	**	-0.0008	-2.09	*	-0.0006	-2.76	**	-0.0003	-2.18	*
Female schooling	-0.0024	-9.54	**	-0.0010	-5.70	**	-0.0010	-11.59	**	-0.0000	-0.43	
Household members 0-18	0.0018	14.04	**	0.0010	12.63	**	0.0005	12.29	**	0.0000	3.14	**
Males over 18	0.0006	3.86	**	0.0006	7.24	**	0.0003	5.98	**	-0.0004	-12.39	**
Females over 18	0.0011	8.20	**	0.0008	9.18	**	0.0003	6.63	**	-0.0003	-9.25	**
Minority	0.0522	3.12	**	0.0134	1.31		0.0233	2.81	**	-0.0014	-0.50	
Jerusalem	0.1780	5.95	**	0.0942	4.67	**	0.0355	3.80	**	0.0118	2.16	*
North	0.1333	5.92	**	0.0687	4.38	**	0.0259	3.19	**	0.0083	1.70	
Haifa	0.0876	4.00	**	0.0363	2.29	*	0.0208	2.38	*	0.0058	0.82	
Center	0.0119	0.67		-0.0039	-0.26		0.0022	0.32		0.0044	0.89	
South	0.1200	5.72	**	0.0604	3.69	**	0.0156	1.85		0.0108	2.44	**
Population 50 to 200	0.0803	2.96	**	0.0418	2.77	**	0.0180	2.29	*	0.0009	0.21	
Population 10 to 50	0.0432	2.71	**	0.0168	1.38		0.0174	2.37	*	0.0033	0.82	
Population up to 10	0.0082	0.49		0.0042	0.36		0.0050	0.66		0.0038	1.00	

Notes: * 5% significance; ** 1% significance

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