Cultural Differences and the Economic Performance of Minorities and Immigrants

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Abstract

The economic outcomes of a minority group may be adversely affected by the cultural differences between it and the majority group. On the other hand, cultural differences may lead a minority group to concentrate in enclaves, which can offset to some extent the negative effect of cultural discrimination. We examine how the relative size of a minority group and cultural differences between groups can affect economic outcomes. We begin by specifying a simple theoretical framework and then characterize an economy with four ethnic groups that differ culturally and in size**.** We then test the effect of these differences on economic outcomes. The results indicate that the difference in earnings between native Jews and Ethiopian immigrants and between native Jews and Israeli Arabs is due to taste-based discrimination.

Keywords: Wage differences, ethnic group, minorities, cultural discrimination.

Introduction

The economic outcomes of a minority group relative to the majority group and to other minority groups is determined by a number of factors. We consider two of the most important ones: cultural differences and size.

Cultural differences affect both assimilation and economic outcomes. The majority group has an advantage over a minority group in that it is the absorbing group while the minority group is the absorbed group. The majority is often antagonistic towards the minority and blames them for unemployment and low wages (Epstein and Gang, 2009). Cultural differences affect all groups but have a stronger (negative) effect on the majority.

Cultural discrimination refers to discrimination against individuals with a background or culture that is different from that of the majority group. They are discriminated against because they maintain a different lifestyle and do not always fit in to the society.

The size of a minority group has a positive effect on its economic outcomes. A larger minority group will likely have larger enclaves, which give it the ability to generate greater mutual benefits for its residents. For example, Edin, Fredriksson and Åslund (2003) found that living in an enclave improves labor market outcomes for low-skilled immigrants. They also found that the positive effect of enclaves increases with the skill base, occupational or professional experience, social capital and other resources of its residents. Thus, higher-skilled immigrants will gain more from living in an enclave.

One of the channels through which enclaves affect economic outcomes is the "network effect". Portes (1987), Lazear (1999) and Card (1990) found that an enclave serves as a platform for networking, thus increasing the opportunities for gainful trade in the labor market. Thus, living in an enclave can improve earnings, especially for recent immigrants and for individuals who have difficulty integrating into the labor market. Furthermore, the size of a minority group can offset the negative effect of cultural discrimination.

Foner (1985) found that it is preferable for a black immigrant to live in New York rather than London, since New York has a larger black population and there is less discrimination. Kohler (2012a) found that in Switzerland minority groups who are culturally more distant from the natives experience greater economic discrimination.

Kohler found that Muslim communities are no different in this regard: their specificity resides more in the stronger discrimination they face in the labor market than in "cultural

differences" separating them from natives Kohler (2012b) found that the average wage differences between immigrants and natives are larger in the German region and that the returns to factors of wage-earning migrants are lower in the German region for most immigrant groups.

The goal of the analysis is to determine how the size of a minority group and the cultural differences between it and the majority group can affect economic outcomes. We begin by specifying a simple theoretical framework and then characterize an economy with four ethnic groups that differ culturally and in size. This is meant to capture the situation in Israel, which is characterized by four main ethnic groups: native Jews, Jewish immigrants from the Former Soviet Union (FSU), Jewish immigrants from Ethiopia and Israeli Arabs. The first three groups are similar in terms of culture, since they are all Jews, while Israeli Arabs have their own separate culture. The groups also differ in size: native-born Jews number about 4,100,000 (53 percent of the total population); FSU immigrants number about 1,000,000 (13 percent); immigrants from Ethiopia number about 140,000 (1.8 percent); and Israeli Arabs number about 1,587,000 (20.5 percent).

The FSU and Ethiopian immigrants do not live in enclaves, as a result of the deliberate policy of the government to disperse them throughout the country and thus prevent the formation of enclaves. The geographic distribution of these immigrants is thus very similar to that of the general population. In contrast, Israeli Arabs do live in enclaves.

Chacko and Cheung (2010) examined US Census data for the year 2000 and found that there are only 64,453 immigrants from Ethiopia living in the US and that they are overwhelmingly concentrated in Washington, DC (according 22% of this population in the entire U.S. Ethiopians also have a significant presence in Los Angeles (where there is an Ethiopian population of 4501 according to the Census data).

Based on cultural differences and size, one would expect native Jews to have the most favorable economic outcomes, followed (though not closely) by FSU immigrants. However, it is unclear who should come next – Ethiopian immigrants or Israeli Arabs. Thus, although Israeli Arabs have a larger population than Ethiopian immigrants, their culture is less similar to that of the majority.

In order to compare Israeli Arabs to Ethiopian immigrants, we first need to examine the wage gaps between the various groups. Chiswick (1978) and Carliner (1981) were among the first to examine the wage gap between natives and immigrants. Their results indicate that

immigrants earn less than natives at first but that over time wage gaps narrow and after about 15 years immigrants in fact earn more than natives.

Following are the main variables that have been proposed to explain the narrowing of the wage gap over time, along with the relevant references:

1. Fluency in the local language (which is a type of cultural difference) – Chiswick (1991), McManus (1985), McManus, Gould and Welch (1983), Dustmann and Van-Soest (2001), Dustmann (1994), Carliner (2000), Tainer (1988), Kossoudji (1988) and Grenier (1984).
2. Enclaves – Tienda and Lii (1987) found that the earnings losses experienced by black, Hispanic and Asian men living in enclaves are highest among college graduates and lowest among individuals without a high school education. College-educated whites gained most from living in an area with a high minority concentration. Berman, Lang and Siniver (2003) obtained similar results for FSU immigrants in Israel.

Kritz, Gurak and Lee (2013) showed that immigrants were less likely to migrate to a new destination if they live in enclaves or where the minority groups have a rate of population growth. Nonetheless, highly educated immigrants or immigrants who speak English fluently are more likely to migrate to new destinations. Pedace and Kumar (2014) examined how immigrant enclaves influence labor market outcomes. They found that immigrants appear to be using networks to improve their labor market position. For other immigrants, however, the enclave is providing social benefits, but at a cost of lower earnings and/or fewer employment opportunities.

Funkhouser (2000) found that there is movement from the core of the primary enclave to its periphery, and to areas with low concentrations of immigrants. It is significant that many of these changes in location occur quite late in the assimilation process.

There is also an extensive literature on the economic outcomes of immigrants in Israel. Chiswick (1998), Beenstock and Chiswick and Repetto (2001) and Chiswick and Repetto (2001) found that wage gaps between FSU immigrants and native Israelis narrow with years since migration and that fluency in Hebrew raises immigrants' wages.

Cohen-Goldner and Eckstein (2008, 2010) found that the wages of FSU immigrants increase with degree of fluency in Hebrew and with vocational training and that vocational training not only raises immigrants' wages but also increases their chance of finding a job. Friedberg (2000) found that the return on schooling for an immigrant who studied abroad is lower than for an immigrant who studied in Israel. Epstein and Hizler (2006) found that immigrants who decided

to “follow the crowd” (i.e. settle in an area with a high proportion of immigrants) were better absorbed in their locale, which improved their initial absorption in the country. However, it was found that in the long run this had an adverse effect on their absorption in Israel.

While most studies in Israel have focused on FSU immigrants, research in the US has compared the earnings of natives to those of immigrants from a variety of countries. In particular, it has concentrated on wage gaps between black immigrants on the one hand and native whites and black natives on the other. Butcher (1994) found that the wages of black immigrants in the US are similar to those of black natives but that the rate of employment among black immigrants is higher than among black natives. Daneshvary and Schwer (1994) found that non-black immigrants earn 22.1 percent more than black immigrants and that black natives earn 8.7 percent more than black immigrants. Furthermore, they found that non-black immigrants earn more than black natives. Dodoo and Baffour (2002) found that white immigrants from Africa earn 80 percent more than black immigrants from Africa in terms of annual wages and 48 percent more in terms of hourly wages. In addition, they found that more than 90 percent of the wage gap remains unexplained after taking into account such parameters as schooling, occupation, etc. Model (1991) found that black immigrants in the US earn 12 percent less than black natives, 39.4 percent less than white immigrants and 41 percent less than native whites. Mason and Austin (2011) found that the wages of native whites are higher than those of black immigrants and black natives and that black immigrants earn somewhat more than black natives. They also examined the wage gap between native whites and black natives. Couch and Daly (2003) found that the wages of native whites are about 31 percent higher than those of black natives. Cancio, Evans and Maume (1996) found that wage gaps due to discrimination have grown over time. Smith and Welch (1977) found that the wage gap between whites and blacks has narrowed. Blau and Beller (1992) found that the wage gap between black women and white women have narrowed significantly, which is also true of the wage gap between black men and white men, though to a lesser extent. Card and Krueger (1992) attempted to explain the narrowing of the wage gap between whites and blacks from 40 percent in 1960 to 25 percent in 1980. They found that the improved quality of schools with high concentrations of black students explains about 20 percent of the narrowing of the wage gap between whites and blacks.

As mentioned, cultural differences, such as language, customs and color, and the size of a minority group (which in some cases can be viewed as an enclave) affect wage gaps between the

different groups. We start by specifying a simple theoretical model and then test the differences between the various groups.

Ethiopian Jewish immigrants in Israel

Most of the immigrants from Ethiopia immigrated to Israel in two waves (in 1984 and 1991) with the assistance of the Israeli Government. On their arrival, the immigrants from Ethiopia suffered from culture shock. Many of them, especially those who came from remote villages, had never used an electric appliance or seen a TV. Most had been farmers and potters. Thus, the Ethiopian immigrants encountered totally unfamiliar social, economic and religious norms and values.

For the majority of Ethiopian immigrants, the process of adjustment has been very difficult. An unambiguous indicator of the traumatic nature of their absorption in Israel is their relatively high rate of suicide (which is seven times higher that the average for the population).

Due to their lack of skills, the Ethiopian community suffers from high rates of unemployment. Low educational attainment and a low standard of living may explain the problem of delinquency among young Ethiopians. Nonetheless, the younger generation who were born in Israel is more successfully absorbed in the Israeli economy, particularly as a result of having been educated in the Israeli school system.

According to a report published by the Bank of Israel:

(1) The incidence of poverty amongst Ethiopian families is estimated at about 51.7 percent compared with 15.8 percent in the general population.

(2) The rate of participation in the labor force is about 65.7 percent among adult Ethiopians compared to about 82.5 percent in the general Israeli population.

(3) The rate of unemployment among Ethiopians is estimated at about 13.2 percent compared to 7.4 percent for the general population.

(4) Only about 34 percent of Ethiopians meet the requirements to be accepted to an institution of higher education as compared to about 83 percent of the general population.

The Model

Assume an economy with two groups: a majority group (*L*) and a minority group (*M*). These might be the local population and a group of immigrants, two religious groups (such as Christians and Muslims), two groups of different color (whites and blacks), etc.

Each group is assigned a culture index $I\left(I \subset \left(\underline{I}, \bar{I}\right)\right)$ which places them on a common scale. The majority group's index will be denoted by I_L and the minority group's by I_M. Each group is of a different size, denoted by *L* for the majority and *M* for the minority.

It is assumed that average wage of a group is a function of two main variables: the difference between the culture indexes and the relative size of the groups.

The wage in the majority group is determined by the following function:

$W_L = W\left(\left|I_L - I_M\right|, \dfrac{L}{M+L}\right)$ while the wage in the minority group is determined by:

$W_M = W\left(\left|I_M - I_L\right|, \dfrac{M}{M+L}\right)$.

It is assumed that for the majority group:

$$\frac{\partial W_L}{\partial\left|I_L - I_M\right|} < 0, \ \ and \ \ \frac{\partial W_L}{\partial\left(\dfrac{L}{M+L}\right)} > 0 \qquad (1)$$

In other words, as cultural differences between the two group increase (in other words, the minority group is less assimilated), the wages (in both groups) will decrease (see Venturini, 2004). In addition, the wage of the majority group increases with its size relative to the minority group.

For the minority group:

$$\frac{\partial W_M}{\partial\left|I_M - I_L\right|} < 0, \ \ and \ \ \frac{\partial W_M}{\partial\left(\dfrac{M}{M+L}\right)} > 0 \qquad (1')$$

according to analogous arguments.

A possible explanation of the negative effect of cultural differences on the wage of the majority group is the unwillingness of its members to work alongside members of the minority group, which will negatively affect the economic outcomes of both groups. On the other hand, if the majority group is sufficiently large relative to the minority group, then a member of the minority group will have no choice but to work alongside members of the majority group. Thus, the relative size of the majority group may reduce the effect of cultural differences on the group's wages. Conversely, the closer the groups are in size the greater will be the effect of cultural differences. Formally:

$$\frac{\partial^2 W_M}{\partial |I_M - I_L| \partial \left(\frac{M}{M+L} \right)} < 0 \quad and \quad \frac{\partial^2 W_L}{\partial |I_L - I_M| \partial \left(\frac{L}{M+L} \right)} < 0 \qquad (2)$$

Therefore, the economic outcomes of the majority group are affected primarily by its size while those of the minority group are affected both by its size and cultural differences.

There are three groups in the population: the majority (L) and two minority groups (Group 1 and Group 2) with culture indexes I_L, I_1 *and* I_2. Extending the model presented above, the wage functions of the two minority groups become:

$$W_1 = W\left(|I_L - I_1|,\ |I_1 - I_2|,\ \frac{M_1}{L + M_1 + M_2} \right) \qquad (3)$$

and

$$W_2 = W\left(|I_L - I_2|,\ |I_2 - I_1|,\ \frac{M_2}{L + M_1 + M_2} \right)$$

Assume that minority group 1 is closer to the majority group in terms of culture than minority group 2, i.e. $|I_L - I_1| < |I_L - I_2|$ and that minority group 1 is smaller than minority group 2, i.e. $L_1 < L_2$.

The question is then which of the two groups will have higher earnings. Minority group 1 is closer in terms of culture to the majority than minority group 2 while minority group 2 is larger than minority group 1. It is therefore possible for members of minority group 2 to earn less than members of minority group 1 if the following condition holds:

$$W\left(\left|I_L - I_1\right|,\ \left|I_1 - I_2\right|,\ \frac{M_1}{L + M_1 + M_2}\right) < W\left(\left|I_L - I_2\right|,\ \left|I_2 - I_1\right|,\ \frac{M_2}{L + M_1 + M_2}\right) \quad (4)$$

where

$$\left|I_L - I_1\right| < \left|I_L - I_2\right|$$

$$L_1 < L_2$$

Thus, if minority group 2 is sufficiently large, this can compensate for its lack of cultural similarity to the majority group. This is because a large minority group is better able to create networks, in which members provide support for one another and thus stimulate employment and production within the group. Moreover, a larger minority group may maintain its identity to a greater extent and will be less assimilated. Thus, the benefit of maintaining one's culture will outweigh that of assimilating. This is consistent with the discussion in the literature of assimilation and the efforts invested by minority groups to maintain their heritage and prevent assimilation (see, for example, Epstein and Gang (2009) who present a model in which the minority benefits by being different from the native population and may invest effort to prevent assimilation).

Empirical Analysis

We test the model using data for Israel. We consider four groups: the majority consisting of native Jews and three minority groups – immigrants from the FSU, Israeli Arabs and Ethiopian immigrants.

The three minority groups can be ranked with respect to their cultural similarity to the majority group as follows (from most to least similar): FSU immigrants, Ethiopian immigrants and Israeli Arabs. They are ranked by size as follows (from largest to smallest): Israeli Arabs (about 1,587,000 or 20.5 percent of the population), FSU immigrants (about 1,000,000 or 13

percent of the population) and Ethiopian immigrants (about 140,000 or about 1.8 percent of the population). Thus, even though Israeli Arabs are the least similar to the majority group in terms of culture, they are the largest minority group and have the potential of generating employment within their enclave**.**

Description of the data

The data was taken from the Income Survey for 2008 which was carried out by the Central Bureau of Statistics. The sample includes a total of 20,049 individuals, of which 11,754 (58.63%) are employed. Of the 12,276 native Jews, 7636 (62.20%) are employed; of the 2520 Israeli Arabs, 819 (32.50%) are employed; of the 4875 FSU immigrants, 3158 (64.78%) are employed; and of the 378 Ethiopian immigrants, 141 (37.30%) are employed (see table 1 below). The following variables were used in the estimation: salary income during the previous month, number of days worked during the previous month (those who didn't work at all were treated as missing values), age, gender, education, work experience, years since migration and marital status. A description of the variables accompanies table 1. As can be seen, native Jews have the highest earnings followed by FSU immigrants, Israeli Arabs and Ethiopian immigrants, in descending order. The average age of the sample is 39, with FSU immigrants having the highest average age (40) and Ethiopian immigrants the lowest (32). Native Jews and FSU immigrants have the highest average years of education (14), followed by Israeli Arabs (12 years) and Ethiopian immigrants (only 6 years). The rest of the descriptive data is presented in table 1 below.

Table 1: Descriptive Statistics

	All	Native Jews	FSU Immigrants	Ethiopian Immigrants	Israeli Arabs
Variable	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**
Ln_W_Day	5.528 (0.742)	5.608 (0.739)	5.358 (0.721)	4.923 (0.635)	5.272 (0.534)
Age	39.437 (11.928)	36.863 (10.853)	40.466 (12.981)	32.903 (14.181)	35.542 (11.567)
Education	13.799 (3.253)	14.023 (2.910)	13.959 (2.920)	6.272 (5.295)	11.794 (3.549)
Exp	19.638 (12.114)	16.839 (10.979)	21.238 (12.079)	20.631 (18.307)	16.763 (11.296)
Exp2	532.365 (532.127)	404.117 (433.611)	596.945 (538.234)	759.918 (950.143)	408.455 (488.669)
Ysm	13.016 (9.748)	-	13.232 (8.368)	12.631 (5.941)	-
Ysm2	436.851 (639.121)	-	245.122 (387.518)	194.751 (186.336)	-
Gender (percent)	0.49	0.47	0.46	0.47	0.74
Marital Status (percent)	0.68	0.66	0.68	0.41	0.64
N	11754	7636	3158	141	819

Note:

The data was taken from the Income Survey for 2008 which is carried out by the Central Bureau of Statistics.

Standard deviations appear in parentheses.

Definition of variables:

Incsalpm = Salary income during the past month

Wdayspmn = Number of days worked during the past month. Those who didn't work at all during the past month were treated as missing values in the data.

Ln_W_Day = Ln(Incsalpm/ Wdayspmn),

Gender = a dichotomous variable, where 1 indicates male and 0 indicates female.

Age = continuous variable (in years)

Education = continuous variable (in years)

Exp = Age–6–years of schooling (indicates post-schooling experience)

Exp2 = Exp^2

Ysm = Years since migration; a continuous variable (in years)

Ysm2 = Ysm^2

Marital Status = a dichotomous variable, where 1 indicates married and 0 indicates a different status.

Estimation

A wage equation was estimated separately for each group, i.e. native Jews, FSU immigrants, Israeli Arabs and Ethiopian immigrants, in order to determine whether the parameters vary between them (Table 2). The dependent variable for all groups was the log of the daily wage. A wage equation was also estimated for the sample as a whole using OLS[1] with interactions (Table 3). The results are typical of those reported in the literature. Thus, married individuals have a higher average wage than single individuals; men earn more on average than women; the return on schooling is positive and significant[2]; and work experience has a positive effect on wages. The regression's goodness of fit is significant.

Table 4 presents wage equations for only FSU and Ethiopian immigrants, which also include years since migration (YSM) and years since migration squared (YSM^2) as explanatory variables. These two variables are significant for FSU immigrants, though not for Ethiopian immigrants. A possible explanation may be the smaller number of years since migration for Ethiopian immigrants, such that the overall effect is dominated by the effect of experience. Since years since migration is higher for FSU migrants, it becomes possible to distinguish between the two effects. It is also possible that we are unable to distinguish between experience and YSM for the Ethiopian immigrants due to the small sample (141 observations).

Table 2: Cross-Section Earnings Estimates

All groups

	Regressions							
Variable	**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**
Intercept	3.567 (0.081)*	3.562 (0.076)*	3.564 (0.076)*	3.586 (0.071)*	3.602 (0.068)*	3.648 (0.046)*	3.663 (0.041)*	3.679 (0.040)*
Gender	0.439 (0.015)*	0.439 (0.015)*	0.439 (0.015)*	0.439 (0.015)*	0.439 (0.015)*	0.439 (0.015)*	0.440 (0.014)*	0.441 (0.014)*
Marital Status	0.203 (0.018)*	0.203 (0.018)*	0.204 (0.018)*	0.202 (0.017)*	0.202 (0.017)*	0.203 (0.017)*	0.204 (0.017)*	0.204 (0.017)*
Education	0.079 (0.003)*	0.080 (0.003)*	0.080 (0.003)*	0.080 (0.003)*	0.079 (0.003)*	0.078 (0.002)*	0.078 (0.002)*	0.077 (0.002)*
Exp	0.018 (0.004)*	0.018 (0.004)*	0.018 (0.004)*	0.016 (0.003)*	0.016 (0.003)*	0.015 (0.003)*	0.015 (0.003)*	0.014 (0.003)*
Exp2	-0.0003 (0.00008)*	-0.0003 (0.00008)*	-0.0003 (0.00008)*	-0.0003 (0.00007)*	-0.0003 (0.00007)*	-0.0003 (0.00006)*	-0.0003 (0.00006)*	-0.0003 (0.00006)*
Ysm	0.017 (0.003)*	0.017 (0.003)*	0.016 (0.003)*	0.017 (0.003)*	0.017 (0.003)*	0.017 (0.002)*	0.015 (0.002)*	0.017 (0.002)*
Ysm2	-0.0001 (0.00005)*	-0.0001 (0.00005)*	-0.0001 (0.00005)*	-0.0001 (0.00005)*	-0.0001 (0.00005)*	-0.0001 (0.00004)*	-0.00009 (0.00004)*	-0.0001 (0.00003)*
Russian	0.118 (0.102)	0.123 (0.097)	0.121 (0.097)	0.099 (0.094)	0.083 (0.092)	-	-	-
Ethiopian	0.285 (0.272)	0.290 (0.270)	0.211 (0.229)	0.185 (0.227)	-	-	-	-
Arab	0.094 (0.124)	0.111 (0.078)	0.109 (0.078)	0.059 (0.050)	0.054 (0.049)	0.033 (0.044)	-	-
Edu_Russian	-0.022 (0.005)*	-0.023 (0.004)*	-0.023 (0.004)*	-0.023 (0.004)*	-0.022 (0.004)*	-0.019 (0.003)*	-0.020 (0.003)*	-0.018 (0.002)*
Edu_Ethiopia	-0.048 (0.014)*	-0.049 (0.014)	-0.051 (0.014)*	-0.051 (0.014)*	-0.042 (0.008)*	-0.042 (0.008)*	-0.043 (0.008)*	-0.044 (0.008)*
Edu_Arab	0.001 (0.007)	-	-	-	-	-	-	-
Exp_Russian	0.005 (0.006)	0.005 (0.006)	0.005 (0.006)	0.007 (0.004)	0.007 (0.004)	0.009 (0.004)*	0.009 (0.004)*	0.010 (0.004)*
Exp_Ethiopia	0.028 (0.015)	0.028 (0.014)	0.028 (0.014)	0.030 (0.014)*	0.039 (0.010)*	0.038 (0.010)*	0.037 (0.010)*	0.037 (0.010)*
Exp_Arab	-0.005 (0.007)	-0.005 (0.007)	-0.006 (0.007)	-	-	-	-	-

Exp2_Russian	-0.0003 (0.0001)*	-0.0003 (0.0001)*	-0.0003 (0.0001)*	-0.0003 (0.0001)*	-0.0003 (0.0001)*	-0.0003 (0.00009)*	-0.0003 (0.00009)*	-0.0004 (0.00009)*
Exp2_Ethiopia	-0.0006 (0.0003)*	-0.0006 (0.0003)*	-0.0006 (0.0003)*	-0.0007 (0.0002)*	-0.0008 (0.0002)*	-0.0008 (0.0002)*	-0.0007 (0.0002)*	-0.0007 (0.0002)*
Exp2_Arab	0.0003 (0.0001)*	0.0003 (0.0001)*	0.0003 (0.0001)*	0.0001 (0.00005)*	0.0001 (0.00005)*	0.0001 (0.00005)*	0.0002 (0.00004)*	0.0002 (0.00004)*
Ysm_Russian	0.017 (0.004)*	0.017 (0.004)*	0.018 (0.004)*	0.017 (0.004)*	0.017 (0.004)*	0.019 (0.004)*	0.020 (0.004)*	0.013 (0.001)*
Ysm_Ethiopia	-0.009 (-0.017)	-0.009 (0.017)	-	-	-	-	-	-
Ysm2_Russian	-0.0001 (0.00009)	-0.0001 (0.00009)	-0.0001 (0.00009)	-0.0001 (0.00009)	-0.0001 (0.00009)	-0.0001 (0.00008)	-0.0001 (0.00008)	-
Ysm2_Ethiopia	0.0005 (0.0003)	0.0005 (0.0003)	0.0003 (0.0001)*	0.0003 (0.0001)*	0.0003 (0.0001)*	0.0003 (0.0001)*	0.0003 (0.0001)*	0.0003 (0.0001)*
R^2	0.380	0.380	0.380	0.380	0.379	0.379	0.379	0.379

Note:

Dependent variable: Ln_W_Day

Standard errors appear in parentheses.

* indicates significance at 0.05 level.

Table 3: Cross Section Earnings Estimates

by Ethnic Group

Variable	Native Jews	FSU immigrants	Ethiopian immigrants	Israeli Arabs
	I	II	III	IV
Intercept	3.390 (0.039)*	3.809 (0.061)*	3.505 (0.178)*	3.678 (0.081)*
Gender	0.421 (0.013)*	0.439 (0.021)*	0.598 (0.082)*	0.389 (0.035)*
Marital Status	0.154 (0.016)*	0.263 (0.024)*	0.080 (0.101)	0.089 (0.041)*
Education	0.104 (0.002)*	0.073 (0.003)*	0.059 (0.010)*	0.082 (0.004)*
Exp	0.043 (0.002)*	0.022 (0.003)*	0.067 (0.012)*	0.019 (0.004)*
Exp2	-0.0007 (0.00006)*	-0.0005 (0.00007)*	-0.001 (0.0002)*	-0.00015 (0.0001)
R^2	0.352	0.242	0.482	0.356
N	**7636**	**3158**	**141**	**819**

Note:

Dependent variable: Ln_W_Day

Standard errors appear in parentheses.

* indicates significance at 0.05 level.

Table 4: Cross Section Earnings Estimates

FSU and Ethiopian Immigrants

Variable	FSU immigrants	Ethiopian immigrants
	I	II
Intercept	3.683 (0.063)*	3.720 (0.224)*
Gender	0.436 (0.020)*	0.585 (0.081)*
Marital Status	0.248 (0.023)*	0.126 (0.098)
Education	0.056 (0.003)*	0.031 (0.012)*
Exp	0.022 (0.003)*	0.050 (0.013)*
Exp2	-0.0006 (0.00007)*	-0.001 (0.0002)*
Ysm	0.035 (0.003)*	0.011 (0.014)
Ysm2	-0.0002 (0.00007)*	0.0003 (0.0002)
R^2	0.321	0.527
N	3158	141

Note:

Dependent variable: Ln_W_Day.

Standard errors appear in parentheses.

* indicates significance at 0.05 level.

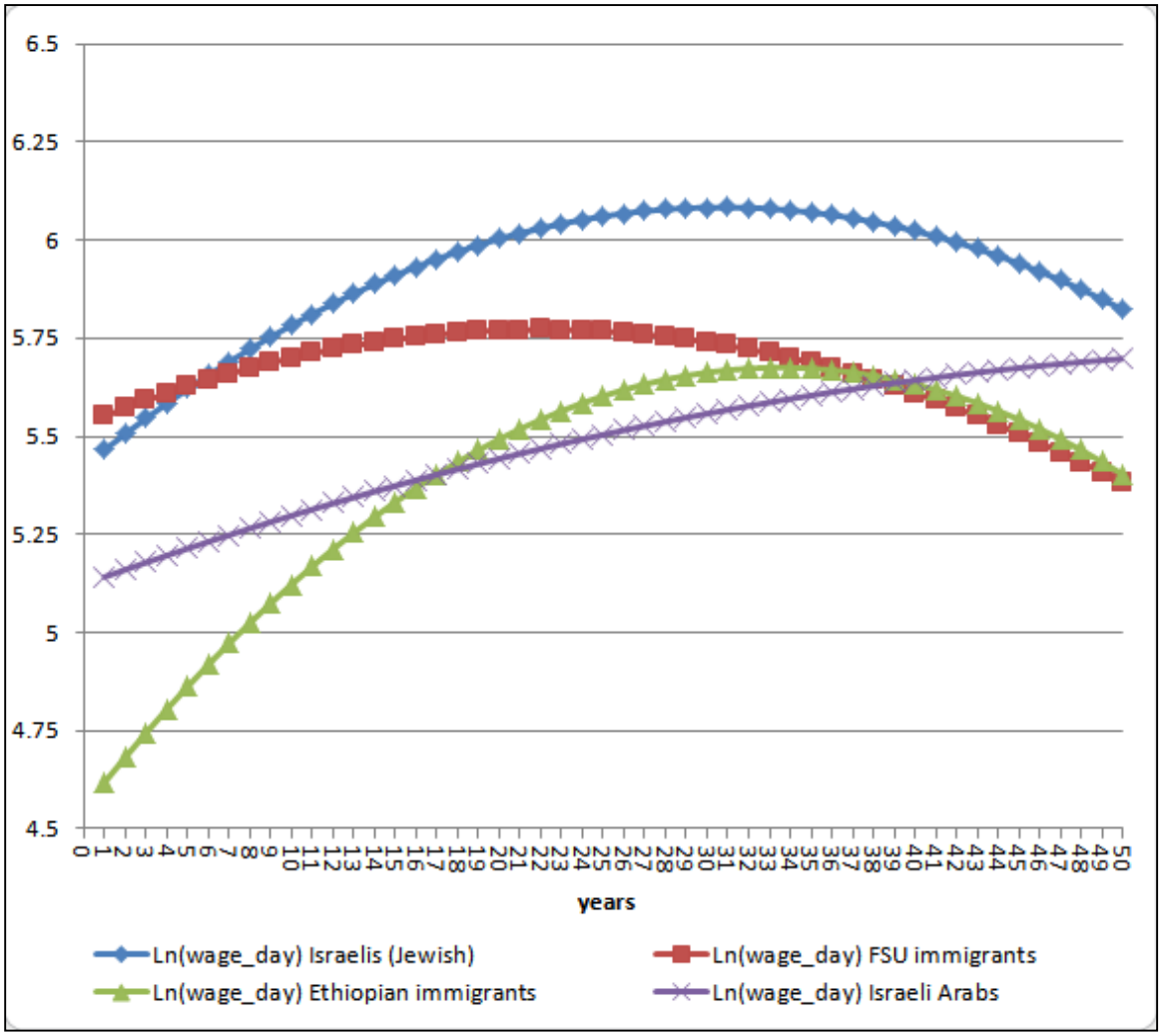
Results

The estimation results allow us to make the following observations:

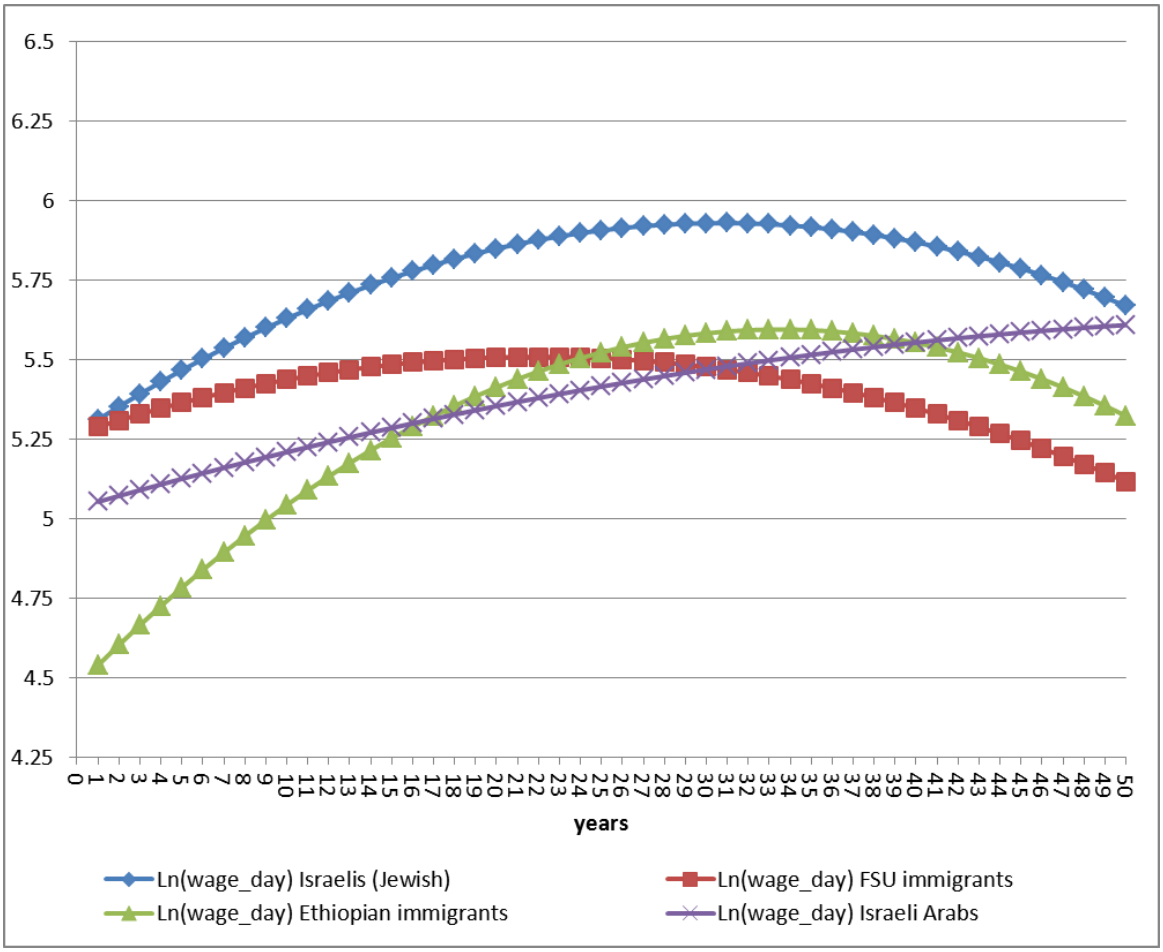
1. On average, native Jews earn the highest wages followed by FSU immigrants, Israeli Arabs and Ethiopian immigrants (see table 1).
2. The return on education is highest for native Jews, followed by Israeli Arabs, FSU immigrants and Ethiopian immigrants (table 3). A possible reason is that both native Jews and Israeli Arabs are educated in the Israeli school system while FSU immigrants and Ethiopian immigrants may have been partly or entirely educated outside of Israel. It is also possible that Arabs tend more to live in enclaves and thus can generate employment for themselves.
3. The wage profile of an Ethiopian immigrant is steeper than that of an FSU immigrant; however, the starting point of the FSU immigrant is superior to that of the Ethiopian immigrant and as a result the wage of an Ethiopian immigrants converges with that of an FSU immigrant only after 25 years for men (Figure 1a and 1b) and 30 years for women (see Figure 1c and 1d).
4. The wage profile of native Jews is steeper than that of Israeli Arabs and since the starting point of Israeli Arabs is inferior to that of native Jews, the wages of the two groups never converge. The explanation may be discrimination against Israeli Arabs.
5. The wage profile of Ethiopian immigrants is steeper than that of Israeli Arabs though the starting point of Israeli Arabs is superior to that of Ethiopian immigrants. Thus, the wage of a male Ethiopian immigrant converges with that of a male Israeli Arab after 17 years (see Figures 1a and 1b) while that of a female Ethiopian immigrant never converges with that of a female Israeli Arab (see Figures 1c and 1d).
6. The wage of an Israeli Arab converges with that of an FSU immigrant only after about 30 years, for both men and women (see Figures 1a-d). This again may be due to discrimination.

7. The results obtained for Israel are quite similar to those for the US. As mentioned, native whites earn the highest wages in the US, followed by white immigrants, black immigrants and black natives. In most cases, the results show that black immigrants are more successful than black natives. Therefore, it may possible to draw an analogy to the case of Israeli Arabs in comparison to Ethiopian immigrants.
8. The wage profile of an Ethiopian immigrant is steeper than that of a native Jew and since the starting point of native Jews is significantly higher than that of an Ethiopian immigrant, the wage of an Ethiopian immigrant never converges with that of a native Jew. Moreover, the peak wage reached by an Ethiopian immigrant is almost identical to the starting point of a native Jew (see figure 1a-d). The reason again may be discrimination.

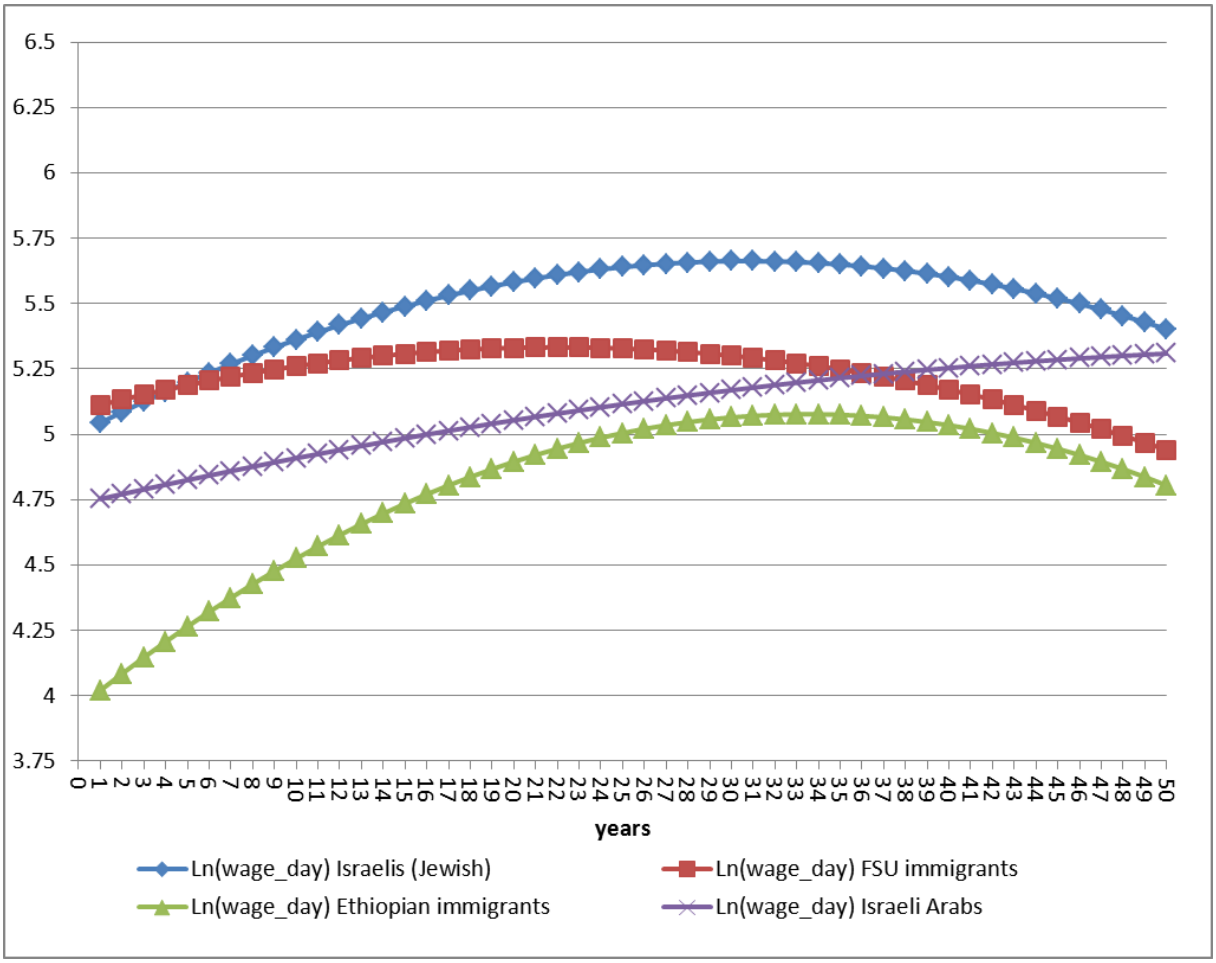
<u>Figure 1a:</u> The Earnings Profile of Ethnic Groups - Married Males



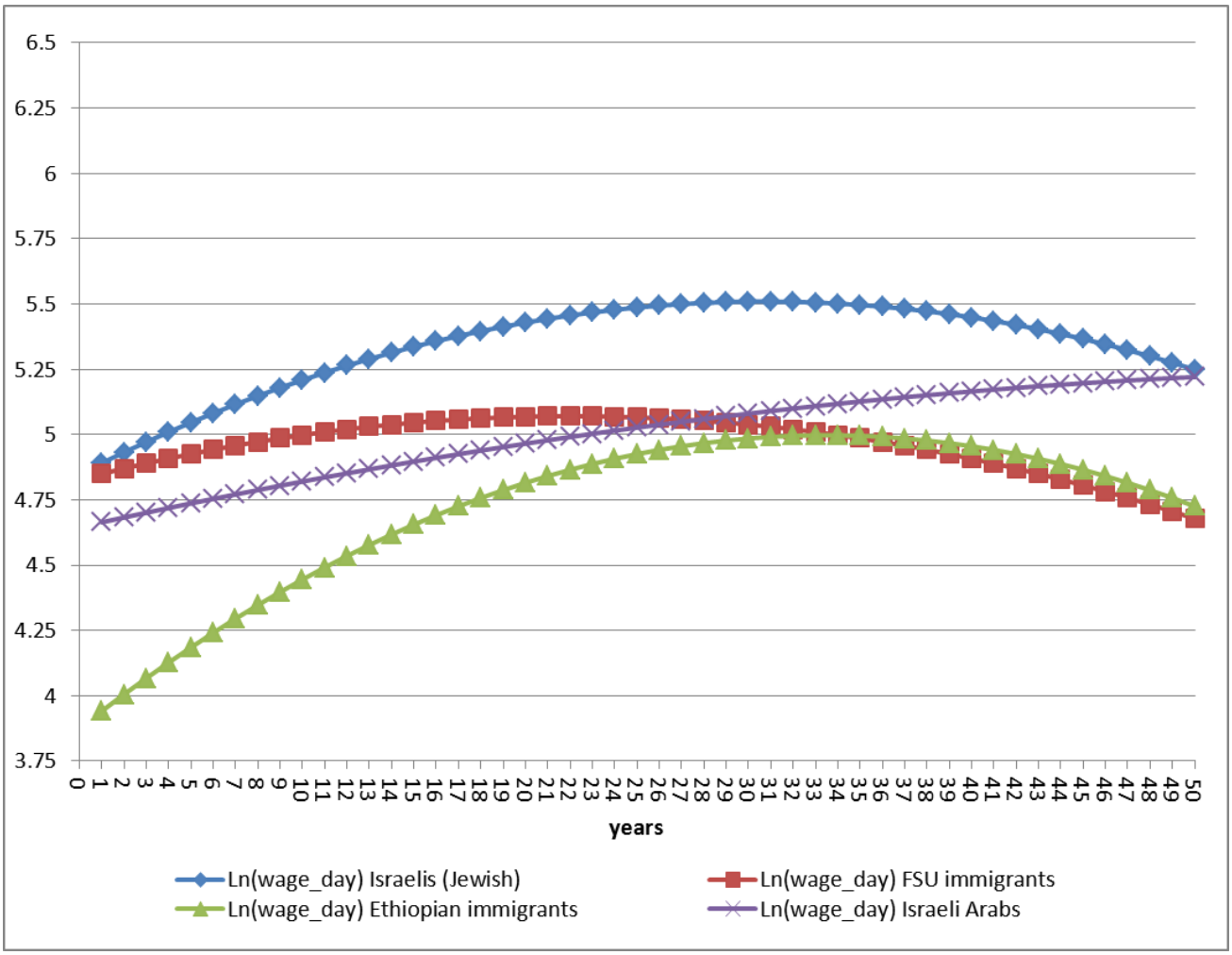
<u>Figure 1b:</u> The Earnings Profile of Ethnic Groups - Single Males



<u>Figure 1c:</u> The Earnings Profile of Ethnic Groups - Married Females



<u>Figure 1d:</u> The Earnings Profile of Ethnic Groups - Single Females



As mentioned, native Jews earn the highest wages in Israel, followed by FSU immigrants (who are comparable to white immigrants in the US), Israeli Arabs (who are comparable to black natives) and Ethiopian immigrants (who are comparable to black immigrants). In other words, to the extent that the groups are comparable, the same ranking is obtained for both Israel and the US. An explanation may involve the effect of group size (enclaves). Thus, Israeli Arabs have a greater tendency to live in large enclaves and as a result generate jobs for one another. This will positively affect their income and return on education.

Oaxaca-Blinder Decomposition

In order to better understand the differences between the groups, an Oaxaca-Blinder decomposition was carried out. As can be seen from the results presented in Table 5 and Table 6, the results presented above are very similar to those obtained from the Oaxaca-Blinder decomposition analysis. The return to education is highest for native Jews, followed by FSU immigrants, Israeli Arabs and Ethiopian immigrants. The effect of work experience on wages is higher for Ethiopian immigrants than for the other groups. Finally, years since migration have a larger effect on income for Ethiopian immigrants than for FSU immigrants.

Table 5: Oaxaca-Blinder Decomposition

Group	Total gap	Explained	Unexplained /Residual
	I	II	III
Native Jews - FSU immigrants	0.250	-0.048	0.257
Native Jews - Ethiopian immigrants	0.685	-0.048	-0.608
Native Jews - Israeli Arabs	0.336	0.127	0.192
FSU immigrants - Israeli Arabs	0.086	0.50	-0.025
FSU immigrants - Ethiopian immigrants	0.435	0.587	-1.390
Israeli Arabs - Ethiopian immigrants	0.349	0.539	-1.451

Table 6: Oaxaca-Blinder Decomposition

	Native Jews - FSU immigrants	Native Jews - Ethiopian immigrants	Native Jews - Israeli Arabs
	I	**II**	**III**
Total gap	0.250	0.685	0.336
Gender	0.004	0.000	-0.113
Marital Status	-0.003	0.038	0.003
Education	0.006	0.806	0.231
Exp	-0.189	-0.163	0.003
Exp2	0.134	0.248	0.003
Unexplained /Residual	0.257	-0.608	0.192

Table 6 – continued: Oaxaca-Blinder Decomposition

	FSU immigrants - Israeli Arabs	FSU immigrants - Ethiopian immigrants	Israeli Arabs - Ethiopian immigrants
	IV	**V**	**VI**
Total gap	0.086	0.435	0.349
Gender	-0.122	-0.004	0.105
Marital Status	0.010	0.066	0.020
Education	0.158	0.404	0.452
Exp	0.098	0.013	-0.073
Exp2	-0.094	0.097	0.035
Ysm	-	0.021	-
Ysm2	-	-0.010	-
Unexplained /Residual	-0.025	-1.390	-1.451

A two-stage Heckman estimation was also carried out in which the probability of being employed was estimated in the first stage and the wage equations were estimated in the second. The results were similar to those obtained from the simple OLS regressions (results not shown).

Conclusions

Cultural differences between ethnic groups can affect economic outcomes. The extent of cultural differences between a minority group and the majority group will increase the wage gap between them. On the other hand, the size of a minority group positively affects its economic outcomes. The results indicate that a minority group that is less similar to the majority group in terms of culture but which has a large population (enclave) may achieve higher wages than a minority group that is more similar to the majority group but has a smaller population.

The analysis examined the case of four ethnic groups in Israel: native Jews, which constitute the majority, and three minority groups – FSU immigrants, Israeli Arabs and Ethiopian immigrants.

The culture of Ethiopian immigrants, who are Jewish, is closer to that of the majority than that of Israeli Arabs while the Israeli Arab population is much larger than that of Ethiopian immigrants (1,587,000 vs. 140,000). The results show that on average Israeli Arabs earn higher wages than Ethiopian immigrants even though they are less similar to the majority in terms of culture. This is probably due to the size of their population, which facilitates networking, the generation of jobs within the group and mutual assistance between its members. This is consistent with the prediction of the theoretical model that the size of a group plays an important role in determining its wages. Thus, as the size of a group increases, positive externalities appear that enable the group to provide employment for its own members. This will generate income for the group even though its culture has little similarity to that of the majority or that of the other minority groups. In contrast, the FSU immigrants have achieved more positive economic outcomes than the other two minority groups due to a larger population and a culture that is similar to that of the majority.

Dan Suan (2008) has observed that "Israeli Arabs constitute about one-fifth of the population. They have no representation in the economic elite, the government elite, the military elite or the cultural elite." The discrimination against Israeli Arabs in the labor market has two components: wage discrimination and job discrimination.

Job discrimination is reflected in the fact that the proportion of Arab men in prestigious professions is 60 percent less than the proportion of Jewish men. Thus, for example, even though Arabs constitute about 20 percent of the population, only 3,251 Arabs were employed in public service in 2005, which represents only 5.7 percent of the employees in that sector.

Miari, Nevuani and Hateb (December 2011) looked at the time it takes for a worker to find a job during a period of economic growth and the time it takes until a worker is laid off during a recession. Their findings show that Arab workers are the first to be laid off in a recession and the last to be hired during a period of growth.

Fenter (1998) found that the integration of Ethiopian Jews in Israel has not been overly successful. The insufficient attention paid by the Israeli government to the issue has produced inequalities, both economic and social. Nash (2002) found that the challenges facing Ethiopian immigrants have been exacerbated by racist attitudes on the part of some elements of Israeli society and the official establishment.

In conclusion, the differences in earnings between native Jews and Ethiopian immigrants and between native Jews and Israeli Arabs appear to be due to state-based discrimination.

BIOGRAPHY

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Erez Siniver's area of expertise is Labor Economics, Education Economics, and Behavioral Economics. His most recent publication are:

"The Effect of Behavioral Codes and Gender on Honesty" (with Yuval Arbel, Ronen Bar-El, Yossef Tobol), Journal of Economic Behavior and Organization, Forthcoming

"Is there a Motherhood Wage Penalty for Highly-Skilled Women?" (with Dalit Gafni), The B.E. Journal of Economic Analysis and Policy, Forthcoming.

"All-You-Can-Eat Buffet:Entry Price, the Fat Tax and Meal Cessation" (with Gideon Yaniv), The B.E. Journal of Economic Analysis and Policy, 2012 iss.1(Topics) Article 16.

"Why Is Elite Undergraduate Education Valuable? Evidence from Israel" (with Kevin Lang), Labour Economics, 18, December 2011, 767-777.

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Endnotes

[1] Ordinary least squares (OLS) or linear least squares is a method for estimating the unknown parameters in a linear regression model, with the goal of minimizing the differences between the observed responses in some arbitrary dataset and the responses predicted by the linear approximation of the data. The estimation of the unknown variables provides estimates for the coefficients and for various distribution parameters such as the variance. These are not the actual values in the population but rather estimates based on the data.

[2] A significant parameter has a real effect on the dependent variable. There is a probability that this is not the case, which is reported in the tables as the significance level.