

## **Self-selection and economic assimilation of immigrants: The case of Iranian immigrants arriving to three countries during 1979-1985**

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### **Introduction**

The determinants of a successful economic assimilation of immigrants at their destination countries have long served as one of the key research questions in the field of international migration. The two main determinants that were often offered for the level of immigrants' economic assimilation are first, patterns of their self-selection from their source countries (Chiswick, 1978; Borjas, 1985), and second, the characteristics of the host countries, namely governmental policies of admission and integration, and contexts of reception (e.g., Portes and Rumbaut 1990). Clearly, knowing better the determinants of immigrants' economic assimilation have important policy implications (e.g., Borjas, 1990; Card, 2005).

Upon arrival at their destinations, immigrants earn, on average, less than natives of similar attributes. They are not familiar with the new labor market; they have limited access to information and to social ties; they do not have full command of the language and their occupational skills are not always transferable to the new economic system and at times they even face discrimination. Consequently, immigrants are at a disadvantage when compared to native-born workers. However, with the passage of time in the host society, most immigrants experience earnings growth that is faster than that of similar natives. Indeed, after a certain period of time in the host society immigrants were found, many times, to close the earnings gaps with comparable native-born populations, especially those with high levels of human capital (Borjas 1990; 1994, 2000; Chiswick 1978, 1979).

Immigrants' self-selection is a key determinant of their economic assimilation. Immigrants who are positively selected from their population of origin integrate better into the host economy than immigrants who are negatively self-selected. There is a distinction between patterns of self-selection on observed and unobserved attributes. Patterns of immigrants' self-selection to host countries on observed characteristics are estimated, mainly, by documenting their education levels, but also other observed attributes, such as age upon arrival, marital status etc. Some studies have also compared self-selection of immigrant groups on unmeasured attributes that are supposed to affect economic assimilation (e.g., Borjas, 1990; Cohen and Haberfeld, 2007, Haberfeld, 2011). Positive selectivity on such unmeasured attributes is used to explain earnings assimilation of some immigrant groups who are not only successful in closing the initial earnings gaps with natives, but actually found to have higher earnings than those of natives of the same measured characteristics (Chiswick 1978). Likewise, negative self-selection is used to explain cases where immigrants fail to significantly

narrow the earnings gap with natives of similar observed skills (Borjas, 1987; 1990; 1994).

The conventional approach towards evaluating immigrants' economic assimilation is to estimate their assimilation rate using standard earnings models, in which variation in the earnings of natives and immigrants is attributed to human capital, demographic, and labor market characteristics. Following Chiswick (1978), assimilation rates are the mean annual rates of immigrants' earnings growth relative to those of natives of similar observed attributes. Essentially, assimilation rates are composed of two different components. The first is the immigrants' average annual earnings growth resulting from their accumulated experience in their destination labor market. The second is any other factor, not accounted for in the model, which is related to both immigrant status and earnings. This is, in fact, the residual difference between the earnings growth of natives and immigrants that is captured by the "immigrant" independent variable and attributed to unmeasured variables. Accordingly, it is agreed that immigrant groups showing higher rates of assimilation than other immigrant groups are considered to be more positively self-selected on both - their observed and unobserved attributes.

The second determinant of immigrants' economic assimilation is those characteristics of the host country that facilitate (or hinder) successful integration of newcomers. The main dimensions that are relevant in this context are governmental migration policies and market structure. Government's migration policy is critical to immigrants' economic assimilation because it can facilitate incorporation by providing financial resources and fewer legal constraints that accelerate integration. The second dimension involves the country-specific labor market (e.g. demand for specific occupations and specific skills, or returns on education) and the economic cycle of the country's economy. These features are critical as they affect labor market outcomes of newcomers in the host countries. These two dimensions of the context of reception interact with immigrants' own resources thus leading to different outcomes (Portes and Rumbaut 1990). The different modes of immigrants' incorporation into host-societies are thus a result of both individual characteristics (i.e. human capital attributes and unobserved attributes relevant to economic assimilation) and structural arrangements (contexts of reception) that circumscribe the life chances, the economic opportunities, and ultimately the economic successes of immigrants.

The present study is designed to evaluate the combined impact of both factors - immigrant's patterns of self-selection and the characteristics of the host countries - on immigrants' economic assimilation. The situation to be studied was characterized elsewhere as a natural experiment (Cohen and Haberfeld, 2007): immigrants originated from *one* country and immigrated during the *same period* to three *different destination countries*. We study immigrants who left Iran right after the Islamic revolution, and arrived during 1979-1985 to the US, Israel, and Sweden. The key element in this situation is the choice that many of those immigrants were given between these three destination countries. Sweden had the least restrictive policy by granting immigrant or refugee statuses to Iranian immigrants who decided to leave Iran during that period. The US had a more restrictive policy, but still, it allowed many of the Iranian immigrants to arrive into the country. In fact, the largest group of

immigrants who left Iran during that period settled in the US. Israel's Law of Return has provided free entry to Jewish immigrants and their family members since the establishment of the state in 1948. Put differently, the Iranian Jews could choose to migrate to all three countries, while the non-Jewish immigrants had a choice between the US and Sweden. Such a situation allows us to compare three immigrant groups that probably differ in characteristics that are correlated with both observed and unobserved attributes. Furthermore, the three destination countries differ in their migration policies and labor market characteristics. Consequently, the explanatory power of the impact of immigrants' self-selection combined with the impact of country-specific characteristics on economic assimilation is high due to the experiment-like situation.

## Background

The present study focuses on native-born Iranians who left Iran after the Islamic revolution of 1978-1979. While earlier waves of Iranian immigrants consisted, mainly, of students and people associated with the Shah's monarchy, the post-revolution wave contained primarily exiles, political refugees, and a small proportion of asylum seekers. The exiles were disproportionately members of religious and ethnic minorities, such as the Bahai'is, Jews, Armenians, and Assyrians. Also in the later wave were young men who wanted to avoid military service during the Iran-Iraq war, followed by young women and families who came for educational and political reasons (Hakimzadeh and Dixon, 2006; Naghdi, 2010; Sabagh and Bozorgmehr, 1986; Utas, 1988).

There is no exact figure of the number of Iranians who left their country after the Islamic revolution. Estimates range between 1.5 to several million immigrants (Mossayeb and Shirazi, 2006). Of those, about 75,000-150,000 (mostly immigrants, but also a fraction of refugees and asylum seekers)<sup>1</sup> arrived in the US during 1979-1985 (Bozorgmehr and Sabagh, 1988; Hakimzadeh and Dixon, 2006; Mobasher, 2007)<sup>2</sup>. Modarres (1998) argues that the core

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<sup>1</sup> An immigrant is defined as a foreign-born person who seeks a legal permission (in the case of legal immigrants) to settle at a destination country. The distinction between the statuses of a refugee and an asylum seeker is not clear-cut and it differs from one country to another. The US defines a refugee as a foreign-born person who is displaced abroad (i.e., located outside her country of origin) and is unwilling or unable to go back to her country of origin because of a fear for her life or freedom. Usually, refugees' requests for entering into the US are considered abroad. An asylum seeker is defined as a foreign-born person who meets the definition of a refugee, but is already in the US and she seeks admission at a port of entry (The US Immigration and Nationality Act). Similarly, the UN definition of a refugee does not make a distinction between a refugee and an asylum seeker, and both are evaluated based on their fear for their life or freedom (United Nations Convention Relating to the Status of Refugees, 1951).

<sup>2</sup> A major source of the differences in the estimated numbers of Iranian immigrants who arrived in the US during that period is the difficulty to distinguish between immigrant and non-immigrant (mainly students) Iranians. For example, Modarres (1998: Figures 1-2) reports that approximately 180,000 non-immigrant and 70,000 immigrant Iranians arrived in the US between 1979 and 1985. What complicates things is the fact that many of those who initially arrived as non-immigrants changed their status to immigrants in later years.

Iranian population that arrived in the US until the 1980s was composed of non-immigrants students who came there to acquire their higher education. A second segment of the Iranian population in the US was the students' family members who came along with them. The third major group of Iranians in the US is that of exiles, who began to arrive during the early 1980s.

After the revolution, the weight of immigrants has naturally increased, as compared to the weight of non-immigrant students within the Iranian population arriving in the US. More than 135,000 Iranian immigrants settled in the US during 1980, of whom, about two-thirds arrived initially as non-immigrants (mainly students).

Israel received during the same period 15,000-20,000 Jewish immigrants (Israel, 2010). Interestingly, a larger number of Jews (estimated at 25,000-30,000) who left Iran following the revolution preferred the US over Israel as their destination. Sweden's share during the same period stood on, approximately, 6,000 Iranian immigrants, who were given residence permit as refugees or based on family unification (*Befolkningsförändringar, 1980-1986; Iran - Bakgrundsinformation..., 1985; Tema invandrare, 1991*).

Obviously, it is difficult to determine whether the Iranians belonging to the 1979-1985 immigrant cohort were refugees or economic immigrants. On the one hand, many of them left their home country due to discrimination, lack of educational opportunities, war, and prosecution. On the other hand, their motives to migrate can be perceived as economical. They searched for better education and employment opportunities. However, since we are interested in comparing the three immigrant groups, and we assume that every Iranian immigrant could choose during 1979-1985 between two or three destination countries, such a classification is less acute in our case.

Not much research has been conducted on the self-selection and economic assimilation of post-revolution Iranian immigrants. No study has been conducted in Israel, and very few in Sweden (Rosholm, Scott and Husted, 2001; Bevelander and Lundh, 2007; Dahlstedt and Bevelander 2010; Dahlstedt 2011). Most of the existing studies were conducted in the US, and their findings indicate that these immigrants were positively self-selected from their population of origin and that they were successfully integrated into the American labor market. In fact, a major reason for people to leave Islamic Iran was the declining quality of the higher-education system in Iran, and moving away from merit towards alignment-with-the-new-regime criteria for admission to that system (Mossayeb and Shirazi, 2006). Consequently, those who looked for better education opportunities for themselves and their children, outside Iran were mostly qualified urban and minority populations. The Iranian immigrants in the US were found, indeed, to have much higher-than-natives' levels of education (Bozorgmehr and Sabagh, 1988; Hakimzadeh and Dixon, 2006; Mossayeb and Shirazi, 2006; Naghdi, 2010). About one half of Iranians in the US have an academic degree, as compared to 15-25 percent among natives. In Sweden, Iranian immigrants were on average better educated than natives, too.

Similar findings were recorded about the occupational distribution of the Iranian immigrants. A majority of them have high-status occupations (i.e., managerial, professional, and technical

occupations). As expected, these highly educated immigrants who have lucrative occupations chose to reside in the major urban areas in all three destination countries. For example, 41 percent of the foreign-born Iranians in the US lived in 2000 in Los Angeles (Hakimzadeh and Dixon, 2006). This combination of educational, occupational, and geographical characteristics explain the relative high income levels of Iranian immigrants in the US, levels that are higher than those of natives.

It is interesting to note that the share of self-employed among foreign-born Iranians is exceptionally high - almost double than the same rate among native-born Americans (Bozorgmehr and Sabagh, 1988; Hakimzadeh and Dixon, 2006). The present paper refers to salaried workers only. Consequently, we should be aware of a possible self-selection process among Iranians into salaried work. If indeed this is the case, then we should expect the salaried Iranians to be of lower average “quality” (however defined) than their self-employed counterparts. Consequently, our results about the self-selection and assimilation of Iranian immigrants might be downward biased.

## **Expectations**

We expect that the most intense pattern of positive self-selection will be found among the immigrants who migrated to the US. This country was the most attractive out of the three destinations during the 1980s for highly qualified Iranians for two reasons. First, it offered the highest returns on human capital and high-status occupations – as was indicated then by its most unequal income distribution (Borjas, 1990). Second, the US offered the best educational system to those Iranians who perused educational opportunities for themselves and for their children.

The other immigrants were faced with two options that had some common attributes. Both Israel and Sweden had welfare networks designed to help their citizens, and arriving immigrants in particular (although the Swedish system was more generous). In addition, both were then relatively small economies that offered moderate returns on human capital and high-status occupations. Such characteristics attract the less “qualified”, self-assured and motivated immigrants. Within the category of these two destinations, Iranian Jews enjoyed an advantage because they were faced with two choices, while the non-Jews were left with the Swedish option only. Their better choice, combined with the higher welfare benefits in Sweden lead us to expect that the pattern of self-selection among the Iranians who arrived in Israel was more positive than that among their Sweden-bound counterparts.

If indeed our expectations about the patterns of self-selection will be found as correct, then we expect that the economic assimilation of the Iranian immigrants in the US will be found to be the most successful, followed by that of the Iranians in Israel. We expect to find the least successful economic assimilation among the Iranian immigrants in Sweden.

## Data and Analyses

To analyze Iranian immigrants who came to the US during 1979-85 at the age of 22 or higher upon arrival, the 5% 1990 and 2000 Public Use Microdata files (PUMS) of the US census have been used. Iranian immigrants in the PUMS were identified using country of birth and time of arrival in the US. Both the 1990 and 2000 PUMS have been used in order to track the earnings growth of the 1979-1985 cohort during its first 15-21 years in the US, relative to a sample of native-born Americans benchmark (the sample of US natives is a random sample of 10 percent from the 5 percent PUMS, i.e., 0.5% of the total native population). For this cohort there are earnings observations in both 1990 (when immigrant were at the age of 27-55) and 2000 (when they were 37-65 years of age). These procedures have yielded 1,081 salaried immigrant men and 573 immigrant women in the 1990 census, and 468 men and 401 women in 2000.

The analyses of Iranian immigrants who came to Israel rely on data drawn from the 20% demographic samples of the 1983 and 1995 Israeli censuses of population. The two census files contain the precise year of immigration, and the two census samples have been used in order to track the earnings growth of the 1979-1985 cohort in its first 11-17 years in Israel, relative to a benchmark of native-born Israeli Jews. For this cohort there are earnings observations in Israel in both 1983 and 1995. Consequently, its earnings assimilation in Israel can be compared to the earnings assimilation of the 1979-1985 cohort in the US and Sweden during approximately the same period. These selection procedures have yielded 99 salaried immigrant men and 57 immigrant women at the age of 25-48 in the 1983 Israeli census and 80 men and 76 women at the age of 32-60 in 1995.

The analyses of Iranian immigrants who arrived in Sweden are based on data drawn from the 1990 and 2000 Swedish registers.<sup>3</sup> These data sources contain data about the entire Swedish population. The two files contain the precise immigrants' year of arrival, and the two registers have been used in order to track the earnings growth of the 1979-1985 cohort during its first 15-21 years in Sweden, relative to a benchmark of the native-born Swedish salaried people. For this cohort there are earnings observations in Sweden in both 1990 and 2000. Consequently, its earnings assimilation in Sweden can be compared to the earnings assimilation of the 1979-1985 cohort in the US and Israel during approximately the same period. These selection procedures have yielded 2,366 salaried immigrant men and 728 immigrant women at the age of 27-55 in the 1990 Swedish register and 1,572 men and 588 women at the age of 37-65 in 2000.

In all three countries, the Iranians immigrants are compared to a benchmark group which includes all native-born salaried workers. Clearly, there is a large variation in the earnings of different native-born demographic groups. For example, In the US, white, non-Hispanic, native-born Americans compose the most successful group in the US labor market and its earnings are not subject to racial or ethnic-based market discrimination against its members. The equivalent group in Israel is that of Israeli-born Jews to immigrant fathers born in

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<sup>3</sup> GILDA database, Dept. of Human and Economic Geography, University of Gothenburg.

European countries. This group is known to be the most successful in the Israeli labor market (Haberfeld and Cohen, 1998; 2007). In contrast, the Swedish native-born population is relatively homogeneous, and there are almost no group-related socio-economic differences based on ethnic origin.<sup>4</sup> Clearly, the choice of the benchmark groups might have a major impact on the results. However, since we are interested in the economic assimilation of Iranians immigrants with respect to the native population in the three host countries, we chose to compare the immigrants to the entire native population.

Analyses in all countries include salaried workers at the ages of 37-65 in 2000 (the US and Sweden) or 32-65 in 1995 (Israel), who worked 5 hours or more per month, had had positive earnings. Finally, in order to ensure that the migration decision was made by adult immigrants who came to their destination with skills acquired prior to their migration from Iran, the analyses were limited to immigrants arriving when they were at least 22 years old.

The comparison between the self-selection patterns and economic assimilation of Iranian immigrants in the three host countries is based on three types of analyses. First, we compare the descriptive statistics of the immigrants across the three countries. We pay special attention to the education levels, as measured by both the average years of schooling of the various immigrant groups and by the share of those who have an academic degree. Education levels serve us as the main indicators of self-selection patterns. The main indicator of economic assimilation in our study is the mean earnings across the immigrant groups – relative to the mean earnings of the native-born population.

Second, we estimate earnings models for the immigrant groups in the three countries. These models are based on the standard immigrants' assimilation model developed by Chiswick, and are designed to estimate the annual rate of immigrants' earnings assimilation in each country.

Finally, we decompose the differences between the US, Israel and Sweden in mean 2000 (1995 in Israel) earnings gaps between natives and Iranian immigrants who arrived in the three countries 15-20 years earlier (during 1979-1985). These decompositions follow the Juhn, Murphy, and Pierce (1991) method for decomposing a difference in differences. The across-country total differences in natives-to-immigrants earnings gaps are decomposed into a portion due to the relative differences in natives' and immigrants' attributes (both observed and unobserved) across countries, and a portion due to differences across countries in market structures namely, returns on observed and unobserved earnings determinants.

All analyses are conducted separately within each host country for man and woman immigrants.

## **Results**

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<sup>4</sup> Note though that 6 % of the native population in 1990 were descendants to labor migrants arriving in 1945-1990 from other Nordic and European countries (*Folkmängd 31 dec 1990*, Table 2.12).

## 1. Descriptive statistics

Tables 1 (for men) and 2 (for women) present descriptive statistics of all observed variables for natives and immigrants in the US, Israel and Sweden 10-15 years (15-20 years in Israel) after immigrants' arrival from Iran.

**<Insert Tables 1 and 2 here>**

Interestingly, all three groups of Iranian men (as well as Iranian women in the US) have higher education levels than their native counterparts. However, Iranian immigrants who chose the US stand out. They have higher levels of human capital than all other groups included in the analyses - the US, Israeli and Swedish native benchmark groups, and their immigrant counterparts who chose to go to Israel or to Sweden. Their schooling levels are, by far, the highest of all groups, regardless of gender, as measured both – by the proportion of those having an academic degree and by years of schooling. For example, 72 percent of the Iranian men in the US have an academic degree as compared with 33 and 19 percent among Iranian men in Israel and Sweden respectively. Consequently, the share of Iranian immigrants with high-status occupations (professional, technical and managerial) in the US is the highest of all groups. The youngest group of immigrants is that in Sweden (34-35 years of age).

Labor force participation rate of the Iranian immigrants in the US is the highest (together with native-born Swedish men) of all groups and it stands on more than 91 percent. This rate is higher than that of native-born US men by about five percentage points. In the other two comparisons, native men show higher rates of labor force participation than their Iranian counterparts by approximately five percent. Among women, natives show much higher rates of participation than do immigrants. This gap is particularly large in Israel.

Two more figures are worth noting. First, the rate of self-employed Iranian men is exceptionally high in the US (29%) and Israel (34%). Second, part-time employment is very high among Iranian women (and native Israeli women), and among Iranian men in Sweden (37%).<sup>5</sup>

The superiority of the Iranians who chose the US is manifested by their earnings levels. While Iranians in Israel and Sweden earned significantly less than the natives in these two countries, Iranians of both gender groups earned more than native-born Americans 5-10 years after they arrived to the US.

Table 3 demonstrates the relative success of the Iranian immigrants who chose to migrate to the US. In 1990, after 10-15 years since their arrival to that country, both man and woman

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<sup>5</sup> Note however that this variable in the Swedish case was constructed from earnings since information about the annual working time was not available. Part-time work was indicated for individuals who were in the labor force and earned less than 60,000 SEK.



immigrants experienced not only full earnings assimilation, but they also surpassed their native benchmark. Furthermore, their earnings advantage grew up even more ten years later (in 2000).

**<Insert Table 3 here>**

Unexpectedly, the Iranian immigrants who arrived in Sweden assimilated more successfully than their counterparts who arrived in Israel. Not only that, while the immigrants in Sweden improved their earnings position between 1990 and 2000 relative to natives, the immigrants' position in Israel has been stable (for men) or has even deteriorated (for women) between 1983 and 1995. It is important to emphasize, however, that in both countries Iranian immigrants have not reached full earnings assimilation.

## 2. Earnings models

Tables 4-6 present results of the standard assimilation model of immigrants' earnings (Chiswick, 1978) in the three countries. The dependent variable in all models is the natural logarithm of monthly earnings, and the vector of the independent variables includes an indicator of part-time employment<sup>6</sup>, age (and its squared term), an indicator for marital status, years of schooling, an indicator for a college degree, an indicator of immigrant status, and number of years at country of destination. An indicator for the presence of young children was added to the women's models.

**<Insert Tables 4-6 here>**

Interesting across-country differences in the assimilation process of Iranian immigrants in the US, Israel and Sweden can be easily observed. Starting with the two specific migration variables – the indicator of an immigrant (which captures the earnings penalty of immigrants right upon their arrival at the destination country) and the average annual immigrants' earnings growth above and beyond that of natives of similar attributes (the "assimilation rate" as captured by the YSM coefficient) – we see that only two out of the six immigrant groups suffered earnings loss upon arriving to the host countries. These groups are immigrant men who arrived in the US and Sweden. All three groups of immigrant women, as well as immigrant men who arrived in Israel did not experience a similar earnings penalty, and consequently, did not experience earnings growth faster than that of natives. Of the two groups that were found to be inferior to natives of similar attributes, only immigrant men in the US showed a significant assimilation rate (of about three percent per year). Immigrant men in Sweden are found to be in the worst position of all six groups of immigrants. The fact that they did not experience a positive assimilation rate indicates that they will never close the initial earnings gap between them and native-born Swedish men.

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<sup>6</sup> We used an indicator rather than number of working hours because the Swedish data did not have this information.

In contrast to natives in the US and Israel, highly educated Iranian immigrants do not receive an earnings premium on their degrees. In Sweden, however, Iranian immigrants enjoy a much higher premium on a college diploma than do natives. In all three countries, immigrants receive returns similar to those received by natives on each year of schooling. Finally, and in contrast to natives in the three countries, all groups of immigrants are not compensated for their labor market experience (as captured by the age variable). In sum, Iranian immigrants are compensated only partially for their human capital. Some possible reasons that might explain this difference are, for example, immigrants' accumulated past experience that is not relevant to the host-country labor market, devaluation of Iranian diplomas by host-country employers, and market discrimination against Iranian immigrants.

### 3. Decompositions

Finally, we apply the method offered by Juhn et al. (1991) for decomposing the across-country difference in the native-to-immigrants earnings gaps for identifying the impact of immigrants' measured and unmeasured earnings determinants on the between-country differences as well as the impact of differences in market structures on those between-country differences in native-to-Iranian immigrant 2000 (1995 in Israel) earnings differentials. These earnings reflect 15-20 (in the US and Sweden) or 10-15 (in Israel) years of immigrants' experience at destination. To this end, earnings models of native-born men and women in each country are first estimated separately. The dependent variable in each equation is the 2000 (in the US and Sweden) or the 1995 (in Israel) (ln) monthly earnings. The list of earnings determinants includes years of schooling, academic degree, age and its squared term, and indicators for part-time employment, being married and the presence of a young child (for women only)<sup>7</sup>.

The results of the earnings equations for natives are used to decompose the between-country difference in native-to-immigrant earnings gaps. Tables 7-9 provide detailed results of these decompositions.

**<Insert Table 7 here>**

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<sup>7</sup> Some scholars call for a correction of possible sample selection bias when estimating women's wage models by referring to women's wage offers rather than actual wages. The most widely used correction is that developed by Heckman (1980). However, "although the Probit selection model is ingenious, its value in practice is controversial" (Little and Schenker, 1995, p. 57). The most serious problem with this model is its lack of robustness (e.g., Manski, 1989). A relatively small departure from its assumptions (e.g., normality) or in the way that selection occurs (Winship & Mare 1992) may lead to large biases in the estimates. Another practical problem associated with this model is that of identification. In order to get stable estimates, it is necessary to have some variables that are used exclusively in the probit equation and not used in the wage (Y) equation. Theoretically, it is very difficult, of course, to find explanatory variables that determine wage offers but not wages. For these reasons, more and more researchers often intentionally avoid using the two-step probit model (e.g., Blau, 1998, p. 128).

Starting with the comparison between Iranian immigrants in the US and Israel (Table 7), the inter-country difference in earnings differentials (column 1)<sup>8</sup> is decomposed into two main components. The first (column 4) is the portion of the difference due to differences between the mean measured (column 2) and unmeasured (column 3) attributes of the two immigrant groups (relative to natives) in the two countries. The second component (column 7) is the portion of the difference in earnings gaps due to dissimilarities in the earnings structures of the two countries. Like the first component, this one too is made up of two parts. The first (column 5) is between-country differences in returns to observed characteristics, and the second (column 6) is differences in returns to unobserved characteristics (differences in residual inequality) between the two countries. Finally, the bootstrap method for deriving confidence intervals for each of these decomposed components is applied. This method allows us to test the hypothesis whether the difference between the US and Israel in the immigrant-to-native differentials on their unobserved attributes has an impact that is significantly different from zero on the total between-country difference in differentials.

The results of the decomposition of the difference between Israel and the US are clear. The major source of the between-country difference in the earnings gaps between natives and immigrants is the inter-country difference in the unobserved and (to a lesser degree) observed attributes of immigrants. There is a total difference of 0.731 log points between Israel and the US in the earnings gap between native and immigrant men (column 1), namely the gap between native and immigrant men's earnings in Israel is larger by 0.731 (0.637 for women) log points than the equivalent gap in the US. Put differently, based on earnings means only, Iranian immigrants to Israel did much worse (relative to natives) than did immigrants to the US.

Recall that this total gap between the two countries is decomposed into two main components – a portion attributed to the differences between the two countries in the native-to-immigrant differences in mean attributes (column 4), and a portion attributed to the differences between the two countries in market returns to natives (column 7). The effect of the market structure component (column 7) is found to be very small (although statistically different from zero). In other words, differences in market structures between the US and Israel are found to have a minor effect on the better assimilation of Iranian immigrants in the US than the assimilation of their immigrant counterparts in Israel. The entire difference between the two countries can be attributed to the differences between them in the native-to-immigrant difference in mean attributes.

This difference is further broken down into two components – the first is attributed to the relative difference between Israel and the US in natives' and immigrants' observed characteristics (column 2), and the second to the relative difference between these two countries in natives' and immigrants' unobserved characteristics (column 3). It can be seen that the contribution of the between-country difference in native-to-immigrant differential in

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<sup>8</sup> The reference country is the US, and the reference group within countries is that of immigrants. Consequently, the decomposition is conducted on the following difference in differentials:  $[D_{(nb-imm)IS}] - [D_{(nb-imm)US}]$ .

the unobserved attributes is larger than that of the between-country difference in the differential in observed attributes. 0.542 log points (column 3) out of the 0.731 (74%) between-country total difference in earnings gaps between native and immigrant men (column 1) are attributed to the higher gap in Israel than in the US of the natives-to-immigrants unobserved earnings determinants. A similar result is found when looking at women. There, 0.385 log points out of the total of 0.637 (60%) difference between Israel and the US are the result of the difference between Israel and the US in the native-to-immigrant women difference in unobserved characteristics. These results indicate that Iranian immigrants to the US belong to a much more selective group than their immigrant counterparts in Israel regarding unobserved earnings determinants. Their more intense positive self-selection on unmeasured earnings-enhancing characteristics is manifested in their better earnings assimilation, as compared with the assimilation of Iranian immigrants in Israel.

We can conclude that Iranian immigrants to the US score higher on the unobserved attributes than their Israeli counterparts. Clearly, we do not know what these unmeasured attributes are. What we do know, however, is that higher levels of these attributes among immigrants to the US are the main reason for their better economic assimilation in the US as compared to the assimilation of immigrants in Israel. The remaining inter-country differences for men and women are the result of inter-country differences in the native-to-immigrant observed earnings determinants (column 2). Here, again, Iranian immigrants to the US score higher on the observed attributes than their Israeli counterparts. It indicates that the more intense positive self-selection of immigrants to the US was not limited to unobserved earnings determinants. In sum, the group of Iranian immigrants to the US is found to be superior to the group of Iranian immigrants to Israel on both unobserved and observed earnings determinants. The differences in market structures between Israel and the US offset by little (7.2 and 3.3 percent for men and women respectively – columns 5-7) the impact of the more intense self-selection of Iranians to the US on their better earnings assimilation when compared with their immigrant counterparts in Israel.

Table 8 presents results of a similar decomposition of the difference between the US and Sweden in native-to-immigrant earnings gaps.

**<Insert Table 8 here>**

These results resemble those for Israel. Most of the better assimilation of Iranian immigrants in the US than in Sweden can be attributed to their higher levels of earnings determinants. A difference of 0.456 in mean attributes of Iranian immigrants in the US and Sweden (column 4) out of a total gap of 0.486 log points in native-to-immigrant men's earnings (column 1) is found to be the main component of the difference in native-to-immigrant earnings gaps in the US and Sweden. Similar to Israel, the difference in unobserved characteristics between the immigrants in the US and Sweden (relative to natives) has a larger impact than the difference in the observed ones (0.355 vs. 0.101 log points respectively – columns 2 and 3).

The results for women indicate a much smaller difference between the US and Sweden in the native-to-immigrant earnings gap (0.143 log points only – column 1). However, similar to their male counterparts, Iranian immigrant women to the US score much better on the unobserved earnings determinants than their immigrant counterparts who chose Sweden as their destination (column 3). In sum, the group of Iranian immigrants to the US is found to be superior also to the group of Iranian immigrants to Sweden on their earnings determinants, mainly on the unobserved ones. Combining the decompositions results for the differences between the US on the one hand, and Israel and Sweden on the other, we can conclude with a very high level of confidence that the group of Iranian immigrants who left Iran during 1979-1985 to the US had the highest level of earnings-enhancing attributes, mainly unobserved. The differences in market structure between the US and the other two countries had a minor impact on the better earnings assimilation of Iranian immigrants in the US. Interestingly, differences between the structures of the US and the Swedish labor markets were detected. As expected, returns on the measured earnings determinants were higher in the US than those in Sweden, and helped the highly-educated Iranians there to assimilate better (column 5). However, this difference was cancelled out by the higher returns on unobserved attributes identified in Sweden (column 6).

There is one more comparison needed for rank ordering the two less-successful groups of Iranian immigrants – those who arrived in Israel and Sweden. Table 9 does exactly that.

**<Insert Table 9 here>**

The results, presented in Table 9, indicate that the self-selection of Iranian immigrants to Sweden was more positive than that to Israel. The native-to immigrant differences in average earnings determinants in Sweden were found to be smaller than those in Israel, leading to a better earnings assimilation of Iranian immigrants in Sweden than in Israel (column 4). The contribution of the across-country differences in the native-to immigrant observed and unobserved attributes to the better assimilation in Sweden was found to be almost the same – both among men and women (columns 2-3). It is worth noting that part of the smaller difference in earnings determinants between natives and immigrants in Sweden is the relatively lower human capital levels of natives in Sweden, as compared to the human capital levels of natives in Israel (and the US), as can be seen in Tables 1-2<sup>9</sup>.

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<sup>9</sup> There are two more important differences between Sweden and Israel. First, the rate of unemployment is relatively high among immigrants in Sweden. It should be noted, though, that this rate was calculated on the number of individuals who were in the labor force on December 31<sup>st</sup>, 1990 (or 2000) and who received some unemployment benefits during that year. Since some of those who received unemployment allowances were employed by the end of the year, the rate in Tables 1 and 2 is upward biased. As a comparison, the Swedish Labour Force Survey of 2001 indicate an unemployment rate of 10.8 % for Iranian men (arriving in Sweden 1996 or earlier) and 3.6% for native men, while the corresponding figures for women were 17.2% for Iranians and 3.1 % for natives. Second, the fraction of self-employed immigrants is relatively small in Sweden compared with Israel (and the US). It is quite possible that if there are processes of self-selection of immigrants into employment in general, and into self-employment particularly, then our results, which are based on (employed) salaried workers only, are biased.

Similar to the US-Sweden comparison, difference in market structures between Israel and Sweden had an impact on the rate of immigrants' assimilation in both countries. Higher returns in Israel on observed earnings-enhancing attributes helped the immigrants there to better assimilate, while higher returns on unobserved characteristics in Sweden cancelled out a part of this impact.

To summarize, the “most qualified” immigrants – both on observed and unobserved variables - who left Iran right after the Islamic revolution, arrived in the US. Their positive self-selection led them to reach complete earnings assimilation with natives there. The two other groups of Iranian immigrants studied – those who arrived in Israel and Sweden did not achieve full earnings assimilation with natives. Of these two groups, Iranian immigrants in Sweden showed better assimilation than their counterparts in Israel. The market structure played a certain role in immigrants' earnings assimilation in Sweden only.

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**Table 1: Means (s.d) of variables – Iranian immigrant and native men - in the US, Israel and Sweden**

(Salaried workers who worked 5 hour per months or more, with positive earnings, and at the age of 27-65 (in the US and Sweden) or 32-65 (in Israel); Immigrants arrived at destination at the age of 22or more during 1979-1985)

Variable		US		Israel		Sweden	
		Natives	Immigrants	Natives	Immigrants	Natives	Immigrants
Labor Force Participation Rate	%	86.73	91.45 ***	87.94	82.20 **	91.83	87.41 ***
Unemployment Rate	%	4.61	3.97 *	1.31	1.03	3.92	24.86 ***
Self-Employed	%	14.28	28.58 ***	22.25	33.94 ***	7.62	8.05
LN(earnings)	mean	7.720	7.806 ***	8.684	8.166 ***	11.954	11.198 ***
	sd	(0.707)	(0.706)	(0.707)	(0.832)	(0.572)	(0.814)
Earnings (USD, NIS, SEK)	mean	2,876	3,105 ***	7,469	4,756 ***	177,427	96,788 ***
	sd	(3,514)	(2,648)	(5,792)	(3,886)	(92,025)	(68,236)
LN(monthly hours of work)	mean	5.082	5.066	5.283	5.151 **	-	-
	sd	(0.500)	(0.498)	(0.362)	(0.526)		
Monthly hours of work	mean	175.1	175.1	206.9	190.1 ***	-	-
	sd	(55.5)	(59.1)	(53.9)	(63.0)		
Part-time employment	%	7.01	10.57 ***	8.22	14.94 **	6.00	37.00 ***
Age	mean	41.61	39.09 ***	41.79	46.49 ***	43.36	34.00 ***
	sd	(10.29)	(7.86)	(7.55)	(8.28)	(10.26)	(5.38)
Years of schooling	mean	13.15	15.65 ***	13.02	12.69	10.87	12.16 ***
	sd	(2.63)	(2.64)	(3.18)	(4.17)	(3.09)	(2.38)
BA+	%	25.68	71.65 ***	24.47	33.33 *	14.00	19.00 ***
Years Since Migration	mean	-	9.19	-	14.80	-	6.78
	sd	-	(1.51)	-	(1.68)	-	(2.11)
Married	%	74.11	72.77	89.70	95.40 ***	61.00	47.00 ***
PTM	%	29.94	57.13 ***	37.71	22.99 ***	-	-
N (earnings variable)	N	199,825	1,164	31,262	87	1,530,188	2,366

The difference in means between natives and immigrants is significantly different from zero at:

\* p<.10

\*\* p<.05

\*\*\* p<.01

**Source:** The 5% IPUMS, the 1990 US census; The 1995 Israeli Census; the 1990 Swedish Register

The sample of US natives is a random sample of 10% from the 5% IPUMS Census, i.e. 0.5% of the total native population

**Table 2: Means (s.d) of variables – Iranian immigrant and native women - in the US, Israel and Sweden**

(Salaried workers who worked 5 hour per months or more, with positive earnings, and at the age of 27-65 (in the US and Sweden) or 32-65 (in Israel); Immigrants arrived at destination at the age of 22or more during 1979-1985)

Variable		US		Israel		Sweden	
		Natives	Immigrants	Natives	Immigrants	Natives	Immigrants
Labor Force Participation Rate	%	67.97	57.39 ***	77.19	52.43 ***	88.30	74.77 ***
Unemployment Rate	%	4.74	7.05 ***	3.26	13.42 ***	5.57	22.49 ***
Self-Employed	%	7.65	16.01 ***	7.65	6.19	3.65	3.75 ***
LN(earnings)	mean	7.144	7.235 ***	8.073	7.546 ***	11.491	10.997 ***
	sd	(0.780)	(0.744)	(0.719)	(0.749)	(0.619)	(0.780)
Earnings (USD, NIS, SEK)	mean	1,670	1,826 **	4,044	2,454 ***	114,024	77,737 ***
	sd	(1,794)	(1,427)	(2,923)	(1,871)	(56,260)	(52,783)
LN(monthly hours of work)	mean	4.773	4.715 **	4.883	4.836	-	-
	sd	(0.704)	(4.715)	(0.469)	(0.579)		
Monthly hours of work	mean	139.5	134.8 **	144.1	144.6	-	-
	sd	(59.6)	(64.5)	(51.9)	(68.8)		
Part-time employment	%	28.76	33.11 **	52.63	49.35	16.00	45.00 ***
Age	mean	41.50	39.69 ***	41.60	43.99 ***	43.56	35.04 ***
	sd	(10.16)	(7.63)	(7.17)	(6.20)	(10.13)	(6.03)
Years of schooling	mean	13.18	14.46 ***	13.37	11.60 ***	10.99	11.75 ***
	sd	(2.27)	(2.88)	(2.91)	(3.53)	(2.85)	(2.60)
BA+	%	22.54	52.08 ***	23.29	14.29 **	13.00	13.00
Years Since Migration	mean	-	8.82	-	14.84	-	6.32
	sd	-	(1.71)	-	(1.84)	-	(1.74)
Married	%	65.92	69.38 **	81.44	81.82	64.00	69.00 **
Has an own child under age 5	%	13.48	16.97 **	25.19	12.00 ***	20.92	44.51 ***
PTM	%	34.41	38.44 **	39.92	15.58 ***	-	-
N (earnings variable)	N	184,659	601	33,467	77	1,460,164	728

The difference in means between natives and immigrants is significantly different from zero at:

\* p<.10

\*\* p<.05

\*\*\* p<.01

**Source:** The 5% IPUMS, the 1990 US census; The 1995 Israeli Census; the 1990 Swedish Register

The sample of US natives is a random sample of 10% from the 5% IPUMS Census, i.e. 0.5% of the total native population

**Table 3: Immigrants-to-natives mean earnings ratios by country, gender and year of survey**

(Salaried workers who worked 5 hour per months or more, with positive earnings, and at the age of 27-55 (in the US and Sweden in 1990) or 25-48 (in Israel in 1983), and 37-65 (in the US and Sweden in 2000) or 32-60 (in Israel in 1995); Immigrants arrived at destination at the age of 22-50 during 1979-1985)

<u>US arrivals</u>	<u>Men</u>		<u>Women</u>	
	<u>1990</u>	<u>2000</u>	<u>1990</u>	<u>2000</u>
<b>Immigrants-to-natives ratio (all)</b>	1.08	1.26	1.07	1.20
<b>N of immigrants</b>	1,081	468	573	401
<b>Immigrants-to-natives ratio (with at least BA)</b>	0.82	0.95	0.87	0.97
<b>N of immigrants</b>	788	314	303	209

  

<u>Israel arrivals</u>	<u>Men</u>		<u>Women</u>	
	<u>1983</u>	<u>1995</u>	<u>1983</u>	<u>1995</u>
<b>Immigrants-to-natives ratio (all)</b>	0.66	0.65	0.78	0.61
<b>N of immigrants</b>	99	80	57	76
<b>Immigrants-to-natives ratio (with at least BA)</b>	0.61	0.63	0.51	0.70
<b>N of immigrants</b>	23	29	4	11

  

<u>Sweden arrivals</u>	<u>Men</u>		<u>Women</u>	
	<u>1990</u>	<u>2000</u>	<u>1990</u>	<u>2000</u>
<b>Immigrants-to-natives ratio (all)</b>	0.55	0.84	0.68	0.99
<b>N of immigrants</b>	2,366	1,572	728	588
<b>Immigrants-to-natives ratio (with at least BA)</b>	0.52	0.77	0.65	1.01
<b>N of immigrants</b>	454	545	97	173

**Source:** The 5% IPUMS, the 1990 and 2000 US censuses; The 1983 and 1995 Israeli Censuses; the 1990 and 2000 Swedish Registers

The sample of US natives is a random sample of 10% from the 5% IPUMS Census, i.e. 0.5% of the total native population

**Table 4: Earnings regressions - Iranian immigrants and natives: the US**

(Salaried workers who worked 5 hour per months or more, with positive earnings, and at the age of 37-65;  
Immigrants arrived at destination at the age of 22or more during 1979-1985)

Variables	Men			Women		
	All	Natives	Immigrants	All	Natives	Immigrants
Part-time employment	-0.835** (0.007)	-0.834** (0.007)	-1.165** (0.124)	-0.761** (0.004)	-0.760** (0.004)	-0.918** (0.083)
Age	0.052** (0.003)	0.052** (0.003)	0.050 (0.067)	0.048** (0.003)	0.049** (0.003)	-0.009 (0.079)
Age squared	-0.001** (0.000)	-0.001** (0.000)	-0.000 (0.001)	-0.000** (0.000)	-0.000** (0.000)	0.000 (0.001)
Married	0.234** (0.004)	0.234** (0.004)	0.148 (0.089)	-0.044** (0.004)	-0.044** (0.004)	-0.161 (0.085)
Years of schooling	0.067** (0.001)	0.067** (0.001)	0.079** (0.022)	0.091** (0.001)	0.091** (0.001)	0.107** (0.023)
BA+ academic degree	0.261** (0.006)	0.262** (0.006)	0.093 (0.124)	0.191** (0.006)	0.192** (0.006)	0.025 (0.119)
Immigrant	-0.597* (0.240)			-0.375 (0.245)		
YSM	0.031* (0.013)			0.019 (0.014)		
Has own child under age 5				0.091** (0.009)	0.090** (0.009)	0.458* (0.180)
Constant	5.740** (0.074)	5.736** (0.074)	5.679** (1.683)	5.338** (0.076)	5.336** (0.076)	6.773** (1.960)
Adjusted R2	0.247	0.247	0.243	0.323	0.323	0.350
Number of observations	152,592	152,124	468	149,194	148,793	401

\*\* p<0.01, \* p<0.05

Source: The 5% IPUMS, 2000 US Census

**Table 5: Earnings regressions - Iranian immigrants and natives: Israel**

(Salaried workers who worked 5 hour per months or more, with positive earnings, and at the age of 32-65;  
Immigrants arrived at destination at the age of 22or more during 1979-1985)

Variables	Men			Women		
	All	Natives	Immigrants	All	Natives	Immigrants
Part-time employment	-0.563** (0.012)	-0.564** (0.012)	-0.432* (0.201)	-0.550** (0.007)	-0.550** (0.007)	-0.675** (0.128)
Age	0.079** (0.004)	0.079** (0.004)	0.026 (0.111)	0.057** (0.005)	0.057** (0.005)	0.110 (0.138)
Age squared	-0.001** (0.000)	-0.001** (0.000)	-0.000 (0.001)	-0.001** (0.000)	-0.001** (0.000)	-0.001 (0.001)
Married	0.261** (0.011)	0.260** (0.011)	0.875** (0.333)	0.034** (0.009)	0.033** (0.009)	0.415* (0.171)
Years of schooling	0.082** (0.002)	0.082** (0.002)	0.111** (0.025)	0.099** (0.002)	0.099** (0.002)	0.084** (0.022)
BA+ academic degree	0.109** (0.012)	0.110** (0.012)	-0.025 (0.208)	0.052** (0.011)	0.051** (0.011)	0.385 (0.212)
Immigrant	-0.228 (0.572)			-1.116 (0.588)		
YSM	-0.021 (0.038)			0.048 (0.039)		
Has own child under age 5				0.040** (0.009)	0.040** (0.009)	0.292 (0.200)
Constant	5.400** (0.102)	5.409** (0.102)	5.462* (2.624)	5.531** (0.110)	5.533** (0.110)	3.860 (3.149)
Adjusted R2	0.283	0.282	0.413	0.309	0.308	0.499
Number of observations	31,349	31,262	87	32,933	32,858	75

\*\* p<0.01, \* p<0.05

Source: The 1995 Israeli Census

**Table 6: Earnings regressions - Iranian immigrants and natives: Sweden.**

(Salaried workers who worked 5 hour per months or more, with positive earnings, and at the age of 37-65;  
Immigrants arrived at destination at the age of 22or more during 1979-1985)

Variables	Men			Women		
	All	Natives	Immigrants	All	Natives	Immigrants
Part-time employment	-2.058** (0.002)	-2.058** (0.002)	-1.983** (0.037)	-1.722** (0.001)	-1.722** (0.001)	-1.739** (0.052)
Age	0.050** (0.000)	0.050** (0.000)	0.006 (0.032)	0.039** (0.000)	0.039** (0.000)	-0.012 (0.045)
Age squared	-0.001** (0.000)	-0.001** (0.000)	0.000 (0.032)	0.000** (0.000)	0.000** (0.000)	0.000 (0.045)
	0.113** (0.001)	0.113** (0.001)	0.095** (0.025)	-0.022** (0.001)	-0.022** (0.001)	0.057 (0.037)
Years of schooling	0.048** (0.000)	0.048** (0.000)	0.030** (0.006)	0.045** (0.000)	0.045** (0.000)	0.027** (0.008)
BA+ academic degree	0.106** (0.001)	0.106** (0.001)	0.217** (0.038)	0.085** (0.001)	0.085** (0.001)	0.232** (0.053)
Immigrant	-0.372** (0.085)			-0.141 (0.156)		
YSM	0.007 (0.005)			0.004 (0.010)		
Has own child under age 5				-0.163** (0.001)	-0.163** (0.001)	-0.156** (0.052)
Constant	10.697** (0.007)	10.697** (0.007)	11.771** (0.730)	10.730** (0.007)	10.730** (0.007)	12.010** (1.048)
Adjusted R2	0.587	0.587	0.687	0.680	0.680	0.690
Number of observations	1,594,530	1,592,958	1,572	1,520,957	1,520,369	588

\*\* p<0.01, \* p<0.05

Source: The 2000 Swedish Register

**Table 7: Decomposition of the differences between Israel and the US in mean (ln) earnings gaps between natives and Iranian immigrants who arrived during 1979-1985<sup>a</sup>**

(Salaried workers who worked 5 hour per months or more, with positive earnings, and at the age of 32-65 (Israel) or 37-65 (the US); Immigrants arrived at destination at the age of 22or more during 1979-1985)

	<b>Total difference in differences between Israel and the US<sup>b</sup></b>	<b>Due to relative difference in natives' and immigrants' measured characteristics</b>	<b>Due to relative difference in natives' and immigrants' unmeasured characteristics</b>	<b>Due to difference in mean group-specific</b>	<b>Due to difference between Israel and the US in returns to observed characteristics</b>	<b>Due to difference between Israel and the US in returns to unobserved characteristics</b>	<b>Due to difference between Israel and the US in market structure characteristics</b>
	<b>1 (4+7)</b>	<b>2</b>	<b>3</b>	<b>4 (2+3)</b>	<b>5</b>	<b>6</b>	<b>7 (5+6)</b>
<b>Men</b>	0.731*** (0.107)	<b>0.261***</b> (0.061)	<b>0.542***</b> (0.078)	<b>0.803***</b> (0.110)	-0.037** (0.015)	-0.035*** (0.007)	-0.072*** (0.015)
<b>Women</b>	0.637*** (0.099)	<b>0.286***</b> (0.061)	<b>0.385***</b> (0.075)	<b>0.671***</b> (0.102)	-0.012 (0.014)	-0.021*** (0.005)	-0.033** (0.016)

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>a</sup>The independent variables included in the earnings equations used for the decomposition are part-time employment indicator., age and its squared term, marital status, years of schooling, academic degree, years since migration and child under age 5 (for women only).

The decomposition is based on the relative ranks of the residuals and the inverse residual distribution functions (nonparametric).

$$^b[D_{(nb-imm)IS}] - [D_{(nb-imm)US}]$$

**Source:** The 2000 US Census and the 1995 Israeli Census

**Table 8: Decomposition of the differences between Sweden and the US in mean (ln) earnings gaps between natives and Iranian immigrants who arrived during 1979-1985<sup>a</sup>**

(Salaried workers who worked 5 hour per months or more, with positive earnings, and at the age of 37-65; Immigrants arrived at destination at the age of 22or more during 1979-1985)

	<b>Total difference in differences between Sweden and the US<sup>b</sup></b>	<b>Due to relative difference in natives' and immigrants' measured characteristics</b>	<b>Due to relative difference in natives' and immigrants' unmeasured characteristics</b>	<b>Due to difference in mean group-specific</b>	<b>Due to difference between Sweden and the US in returns to observed characteristics</b>	<b>Due to difference between Sweden and the US in returns to unobserved characteristics</b>	<b>Due to difference between Sweden and the US in market structure characteristics</b>
	<b>1 (4+7)</b>	<b>2</b>	<b>3</b>	<b>4 (2+3)</b>	<b>5</b>	<b>6</b>	<b>7 (5+6)</b>
<b>Men</b>	0.486*** (0.050)	<b>0.101***</b> (0.022)	<b>0.355***</b> (0.040)	<b>0.456***</b> (0.047)	<b>0.159***</b> (0.012)	-0.128*** (0.008)	0.031** (0.013)
<b>Women</b>	0.143*** (0.055)	0.029 (0.028)	<b>0.103**</b> (0.051)	<b>0.132**</b> (0.060)	0.065*** (0.014)	-0.055*** (0.014)	0.010 (0.019)

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>a</sup>The independent variables included in the earnings equations used for the decomposition are part-time employment indicator., age and its squared term, marital status, years of schooling, academic degree, years since migration and child under age 5 (for women only).

The decomposition is based on the relative ranks of the residuals and the inverse residual distribution functions (nonparametric).

$$^b[D_{(nb-imm)Swd}] - [D_{(nb-imm)US}]$$

**Source:** The 2000 US Census and the 2000 Swedish Register



**Table 9: Decomposition of the differences between Israel and Sweden in mean (ln) earnings gaps between natives and Iranian immigrants who arrived during 1979-1985<sup>a</sup>**

(Salaried workers who worked 5 hour per months or more, with positive earnings, and at the age of 32-65 (Israel) or 37-65 (Sweden); Immigrants arrived at destination at the age of 22or more during 1979-1985)

	<b>Total difference in differences between Sweden and Israel<sup>b</sup></b>	<b>Due to relative difference in natives' and immigrants' measured characteristics</b>	<b>Due to relative difference in natives' and immigrants' unmeasured characteristics</b>	<b>Due to difference in mean group-specific</b>	<b>Due to difference between Sweden and Israel in returns to observed characteristics</b>	<b>Due to difference between Sweden and Israel in returns to unobserved characteristics</b>	<b>Due to difference between Sweden and Israel in market structure characteristics</b>
	<b>1 (4+7)</b>	<b>2</b>	<b>3</b>	<b>4 (2+3)</b>	<b>5</b>	<b>6</b>	<b>7 (5+6)</b>
<b>Men</b>	0.244*** (0.075)	<b>0.159***</b> (0.051)	<b>0.169***</b> (0.062)	<b>0.328***</b> (0.075)	<b>-0.195***</b> (0.015)	0.111*** (0.008)	<b>-0.083***</b> (0.017)
<b>Women</b>	0.495*** (0.095)	<b>0.255***</b> (0.051)	<b>0.263***</b> (0.067)	<b>0.518***</b> (0.091)	-0.076*** (0.019)	0.053*** (0.012)	-0.023 (0.022)

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>a</sup>The independent variables included in the earnings equations used for the decomposition are part-time employment indicator., age and its squared term, marital status, years of schooling, academic degree, years since migration and child under age 5 (for women only).

The decomposition is based on the relative ranks of the residuals and the inverse residual distribution functions (nonparametric).

$$^b [D_{(nb-imm)IS}] - [D_{(nb-imm)Sw}]$$

**Source:** The 1995 Israeli Census and the 2000 Swedish Register