

Linguistic and Economic Adjustment among Immigrants in Israel

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1. Introduction

The integration of immigrants into host society is a long and multi-stage process (Eisenstadt, 1954; Gordon, 1964; Hirschman, Kasinitz, and DeWind, 1999; Park, 1950; Warner and Srole, 1945). To do it successfully immigrants need to acquire several assets (Alba and Nee, 2003). Pivotal among them are language (Kulkarni and Hu, 2014; Lopez, 1999), labor-market experience (Borjas, 1982; Chiswick, 1979), and citizenship (Portes and Rumbaut, 1996). These three are not independent of each other; rather, language acquisition may abet the other two because as a form of human capital it facilitates the channeling of qualifications into maximum returns (Chiswick and Wenz, 2006; Extra, Spotti, and van Averment, 2009; Grenier, 1982; Shields and Price, 2002). Each of the three assets, and certainly all three together, are likely to boost other dimensions of social and cultural integration (Alba and Logan, 1993; Bean and Stevens, 2003; Kritiz and Gurak, 2005; Martinovic et al., 2009; Stevens and Swicegood, 1987).

The purpose of this article is to investigate the adjustment of immigrants in their new country. It focuses on Israel, of which the overwhelming majority of the Jewish population is composed of immigrants or the children of immigrants who arrived from very different parts on the globe (Goldscheider, 2002). We first assess the determinants of proficiency in the local dominant language, namely Hebrew. We then introduce language as an explanatory factor in labor-market income. These insights are explored comparatively among immigrants from different countries or areas of

origin. To this end we utilize data from a survey of immigration absorption carried out by the Israeli Central Bureau of Statistics in 2010.

The motivation for this study is threefold. One is to overcome a major lacuna in the last two Israeli censuses from 1995 and 2008 which, despite a large influx of immigration to Israel since 1990 from the Former Soviet Union (hereafter: FSU), Ethiopia, and western countries, did not include any questions on language use or skills. A second motivation is that our data cover a long duration of immigrants in Israel of up to twenty years. We can decompose the immigrants into several countries or areas of origin; this includes a separate group of immigrants from Ethiopia who arrived in two major waves in 1983 and 1991. Hence the first time that their language proficiency is evaluated by official statistics. Thirdly, we are able to evaluate the effect of immigration factors rarely measured in official data: explicit reasons for migration (push factors and pull factors), linguistic distance between the origin language and Hebrew, and language instruction for new immigrants. That has implications for policy and can guide other countries that condition visas or citizenship on language skills. Overall, this study stands at the intersection of demography (immigration), culture (language), and economics (earnings), with the last-mentioned reflecting also well-being, which is likely to impact on family formation, family stability, fertility, and parents' investment in their children's human capital.

Notably, the Israeli Law of Return entitles Jews and their kin to immigrate to the country and receive citizenship automatically upon arrival (Gavison, 2009). From this perspective, all immigrants in Israel begin the absorption process, including language acquisition and labor-market attainment, from a similar point of departure regarding citizenship.

2. Theoretical Background

Linguistic adjustment is not spread evenly among immigrants. It is affected by factors that fall under three mechanisms: "exposure" to the local language, "efficiency" in learning a new language, and "economic incentives" that encourage the acquisition of linguistic skills (Chiswick and Miller, 1995; Mesch, 2003; van Tubergen and Kalmijn, 2009). The components of each may be associated with more than one mechanism.

Exposure relates to opportunities to learn the new language, which are affected by pre-immigration conditions (Chiswick and Miller 1995; 2007; Stevens, 1999), post-immigration patterns of settlement, and individual affinities. This includes, among other things, learning the language of the destination country at origin; learning it upon arrival by attending government-sponsored courses; age at immigration; duration in the new country; reasons for migration (pull or push) that also reflect the intention to stay; the presence of children who bring the new language home from school; for married persons, spouse's place of birth hence his/her mother tongue; and nativity concentration.

Efficiency denotes the process through which exposure to the destination language is converted into language proficiency (Chiswick and Repetto, 2000). The younger people are when they begin to learn a new language hence, age at immigration, the faster they will be able to master its grammar, syntax, and vocabulary. It is positively associated with education that equips people to study generally and to study languages particularly. Language acquisition by immigrants is also likely to be affected by the distance between the home and the host languages. It is easier to learn a new language that is close to one's mother tongue than one that is very distant.

Economic incentives, in turn, view language as a form of human capital that enhances productivity in the labor market and in consumption (Chiswick and Miller, 2007). As

such, men, more than women, will rush to acquire the new language as an aid in finding a job (whereas gender gaps will be especially higher for those who are married). A similar gap exists between the well-educated and the poorly educated because the former have more opportunities in the labor market. The same obtains for employees vs. the self-employed as well as people who arrived at younger ages, a variable that proxies for the time in which they may gain social and economic returns from an investment in acquiring a new language. Further on the latter logic, proficiency is expected to be lower for immigrants who may return to their origin country than among immigrants which because of political barriers there is little or no return migration (Beenstock, 1996).

That proficiency in the local vernacular enhances economic attainment has been demonstrated in studies by economists and other social scientists (Chiswick and Miller, 2015; Chiswick and Reppeto, 2000; McManus, 1985; Grenier, 1984). As Sherrie Kussoudji concludes, language is "[...] a specific skill necessary for mobility in the labor market" (1988: 225). These findings are consistent across immigration countries as diverse as the U.S. (Chiswick and Wenz, 2006), Canada (Boyd, DeVries and Simkin, 1994), Australia (Chiswick and Miller, 1995; Waxman, 2001), and Israel (Chiswick and Reppeto, 2000). (For comparisons among these four countries, see: Chiswick and Miller, 1995). Whether the investigation concerns speaking abilities or reading capacity, language is found to be positively associated with employment status (Waxman, 2001), type of occupation (Cohen-Goldner and Eckstein, 2008), and earnings (Chiswick and Wenz, 2006). Often, however, it is linked to other individual characteristics triggering correlations that may weaken its effect on economic patterns (Berman, Lang, and Silver, 2003). Likewise, the strength of the effect of language varies among studies and even within a single investigation by the immigrant's

national origin (Takenaka, Makamuro, and Ishida, 2015). Notably, earnings are also affected by the international transferability of schooling, foreign labor market experience, and other forms of human capital (Chiswick and Wenz, 2006). Hence, immigrants may follow different trajectories in their economic adjustment depending on their country of origin.

3. Language Acquisition by Immigrants in Israel: Literature Review

Much attention has been called to the linguistic assimilation of immigrants in Israel. The resulting literature emphasizes the use of census data for immigration during Israel's first thirty-five years (until 1983) and, for lack of linguistic information in later censuses, sample surveys by the Central Bureau of Statistics, research institutes, or independent scientific initiatives thereafter. The shift in data sources affected the nature of the data analyses: from large samples allowing detailed differentiation among immigrants by countries or small geographic agglomerates, to rough classification by continents of origin; or investigation of immigrants from a single country.

Chiswick and Repetto (2000) used the 1972 Israeli census data to focus on working-age male immigrants. Their findings elicited by various multivariate techniques (OLS, logit, multinomial) were generally consistent, suggesting that education, duration in Israel, young age at immigration, and having children at home – especially if born in Israel – increased the use of Hebrew. By contrast, living in an area with a large concentration of origin-language peers and having gotten married abroad, attenuates daily use of Hebrew. Immigrants from Asia/Africa were more likely to speak Hebrew than peers from Eastern Europe; being from Western Europe, the USA, or other Anglophone countries, deters the use of Hebrew. Speaking Hebrew as a sole or

principle language increases annual gross income by 13 percent. Speaking English on a daily basis is even more strongly associated with earnings due to the status of English as an international language.

A simultaneous analysis of data from the 1972 census and a 1970s panel survey on immigration absorption (Beenstock, Chiswick, and Repetto, 2001) yielded an assessment of the effect of language distance irrespective of country of origin. These insights postulate that while being of Asian/African origin decreases Hebrew skills, Arabic speakers are the most fluent of all in Hebrew. Immigrants who completed a language training program were significantly more proficient after both one year and three years in Israel. Those weaker in Hebrew upon arrival remained at a disadvantage three years later. After one year in the country, gender differences began to emerge, immigrant women trailing male counterparts.

In 1998, Chiswick largely replicated his aforementioned analysis in conjunction with Repetto using 1983 Israeli census data. His analysis largely confirmed earlier observations from the 1972 census and revealed that the effect of nativity concentration increases commensurate with age at immigration but decreases with level of education and duration in Israel. Likewise, immigrants' use of Hebrew can be ranked by place of origin: northern-Africa at the top, followed by Asia, Eastern-Europe, Western-Europe, the FSU, and Anglophone countries. Those who use Hebrew as a sole or major language out-earn those who use it less often by 11 percent. The highest income reward accrues to those who use Hebrew as their primary language and English as a secondary language.

Beenstock (1996) also used a 1969-1983 panel survey. His conditional probability models show that immigrants who "could speak well on arrival are likely to achieve a higher level of Hebrew skill after a year in Israel relative to immigrants who could not

speak well on arrival" (11). Other positive determinants at the end of the first year are education, youth, participation in a Hebrew instruction program (with an additional improvement by completing the course), an occupation that entails intensive use of Hebrew, and origin other than North America. The level of Hebrew after three years' duration was conditional on the language skills attained by the end of the first year. Transitional probability models from one level of Hebrew to a higher level yielded similar results. Both equations refute the argument that adult immigrants acquire the destination language through their children.

Several studies relating solely to Soviet/FSU immigrants (Beenstock and Ben Menahem, 1997; Mesch, 2003; Remennick, 2004) concur about the positive effect of education, young age at immigration, and duration on Hebrew skills. Additional variables that were tested in only one or two of these studies and were found to enhance Hebrew proficiency include pre-immigration Hebrew knowledge, professional work in Israel, two Jewish parents, having resided in a major city in the FSU, and school-aged children at home. Remennick shows that the effect of duration is significant only for young immigrants (aged 55 and below) and suggests that elderly immigrants are socially isolated, outside the labor force, and inclined to retain ethnicity. Contrary to his expectations, Mesch found that ethnic concentration does not deter acquisition of the new language and proactive motivations for immigration do not speed the learning of Hebrew. Interestingly, while according to Beenstock and Ben Menahem women learn Hebrew faster than men, Remennick did not find gender to be a significant predictor.

Two recent articles analyzed data from the 2010/11 Immigrant Absorption Survey carried out by the Central Bureau of Statistics. Rajzman, Semyonov, and Geffen (2015) found that, all other things being equal, immigrants from Middle Eastern and

north African countries and from Europe and America are likely to have a better command of Hebrew than Soviet/FSU immigrants and immigrants from Ethiopia are the least proficient. Concurrently, immigrants whose mother tongue is Spanish or French are more likely to report a high level of Hebrew fluency than counterparts from other linguistic backgrounds. The authors speculate that the Spanish- and French-speaking communities in Israel are small and, hence, of low ethnic concentration allowing rapid integration. Likewise, many Francophone immigrants, being of north-African background, have some acquaintance with or past exposure to Arabic, the language closest to Hebrew among all origin languages. That English is a lingua franca in Israel may explain the "slow process of English speakers' language acquisition" (1). Other factors positively associated with good command of Hebrew are being employed, prestigious occupation, education, duration, pre-immigration knowledge of Hebrew, post-immigration Hebrew training, young age at immigration, involvement in social networks populated by Israelis, and Israeli identity. Although the probabilities of the independent variables show similar directionality among all immigrant groups, their levels vary whereas Ethiopians have the lowest probabilities to exhibit good command in Hebrew. In a follow-up study, Semyonov, Raijman, and Maskileysen (2014) show that better Hebrew implies higher earnings.

South African immigrants who "imported" Hebrew are likely to improve their fluency in the language once in Israel (Raijman, 2013). Improvement in Hebrew proficiency also showed a dependency relationship with young age at arrival, having native-born friends, taking governmental-sponsored Hebrew training, education, ideological motivation for immigration to Israel, and a strong sense of Israeliness. After these affinities are controlled for, gender, partner's ethnicity, and the presence of children at home did not exhibit a statistically significant effect on fluency in Hebrew.

Knowledge of Hebrew among Soviet/FSU immigrant men (Cohen-Goldner and Eckstein, 2008) and women (Cohen-Goldner and Eckstein, 2010) delivered a positive return in the form of better wages. Positive effects were found for different occupational categories. Among men, however, the coefficients were higher for white-collar jobs than for blue-collar jobs whereas among women the opposite was the case. Proficiency in English, in turn, increased wages only among those holding white-collar jobs. Hebrew skills among Soviet immigrant men, whether measured at time of arrival or after a few years in Israel, have a small and overall insignificant effect on earnings (Weiss, Saur, and Gotlibovski, 2003). Likewise, Hebrew fluency has no effect on wage growth of Soviet/FSU immigrants who work in low-skill occupations (Berman, Lang, and Siniver, 2003). For computer technicians and software engineers, in contrast, Hebrew is pivotal in attaining wage convergence with natives.

The above studies largely agree about several individual characteristics that are important determinants of linguistic adjustment in Israel. To a large extent, these characteristics coincide with the perspectives of exposure, efficiency, and economic incentives. Yet, these studies often introduced ties with natives and local identity as independent factors that rather than determining Hebrew-language proficiency, may be the outcome of language skills (endogeneity). Such variables may blur the true effect of other explanatory variables. Models of these types were adopted by, among others, Rajman et al (2015), who used the same data that we use here. However, we excluded variables that reflect social and cultural integration. A second difference between our study and Rajman et al. is the treatment of mother-tongues: rather than introducing several major languages as dummy variables, we used all languages and measured the distance of each of them from Hebrew. Third, we assessed the effects of

reasons for immigration (push/pull) that unequivocally reflect pre-immigration conditions. Fourth, we empirically examine the relations between nativity concentration and language proficiency. Moving to the second part of our research on the determinants of earnings, rather than introducing ethnic origin as an independent variable as Semyonov et al. (2014) did, we analyzed each ethnic group separately, advancing the understanding of inter-group variation in the relations between language and earnings. The findings of this investigation are discussed in the context of previous studies on the linguistic adjustment of immigrants in Israel and in reference to the general empirical and theoretical literature on this topic.

4. Data, Variables, and Models

4.1 The 2010/11 Immigration Absorption Survey (IAS)

This analysis is based on data from the 2010/11 Immigration Absorption Survey (IAS) taken by the Israeli Central Bureau of Statistics. The survey was concerned with immigrants who arrived in Israel between 1990 and 2007. The respondents are a representative sample of the population included in the most recent Israeli census from 2008.

The survey is a stratified sample which attempted to create homogenous groups in regard to variables that correspond with the survey's aims namely, evaluation of the social and economic integration of immigrants and their views on different aspects of life in the host country; as well as to enable estimation in various profiles. The stratification of the sample made use of three variables: age, period of immigration, and country of origin. Strata (layers) were determined by the intersection of these variables. Overall, 120 sampling strata were defined.

The data were collected through three major methods, namely mail, internet, and telephone. Respondents were aged 26 to 74 at the time of the survey. The sample is comprised of 3,952 men and women (592 from Ethiopia, 329 from rest Asia/Africa, 2,528 from FSU, and 503 from rest Europe/America) reflecting a response rate of 81%.¹

4.2 Variables

We address two dependent variables separately. The first is the respondent's ability to speak Hebrew. Respondents were asked: "To what extent are you fluent in Hebrew?" They could check either "very fluent", "fluent", "mediocre", "weak", or "don't know at all". The second variable is earnings, i.e., the respondents' gross salary income from work in the last year. Absolute values in local currency (the New Israeli Sheqel/NIS) were inverted to their natural log.²

The explanatory variables for Hebrew-language proficiency were clustered into three major blocks. They are defined as immigration factors, socio-demographic characteristics, and linguistic background. Immigration factors included age at immigration, duration in Israel, and reasons for immigration. Age at immigration is decomposed into eight dummy intervals: 6-14, 15-19, 20-24, 25-34, 35-44, 45-54, 55-64, and age at immigration 65 and over as the reference category. Because the survey was carried out in 2010 on a sample of immigrants that were already in the country in 2008 (see section 2.1 above), the shortest duration is of three years. The data file provided by CBS already classified this variable according to 3-5 years, 6-8, 9-12, 13-16 and 17-20; the first category was set as the reference. The reason for emigration

¹ We are aware of the potential confounding effects of pooling males and females. Yet, this was done here because of the relatively small sample size which is further reduced when analyzing immigrants from each country/area of origin separately.

² In 2008, the annual average of the exchange rate was 3.58 NIS to the USD.

from the country of origin variable is based on respondents choosing one main reason among the following: "lack of individual safety in native country", "antisemitism in native country", "the political situation in native country" which are coded as push factors; "Zionism", "the desire to live as a Jew in a Jewish State", "desire to advance professionally or economically", and "desire to ensure children's future" which are considered pull factors; and "decisions made by parents, spouse or other family member", "immigration of family members or friends", "could not immigrate to any other country", and "other reason" are defined as other reasons (the reference category).

The socio-demographic characteristics are gender, marital status, and education. Gender was set to 1 if the respondent was female; male was the reference category. Marital status distinguished between currently married immigrants (reference category), formally or previously married but not currently married (separated/divorced, widowed), and singles. Education was decomposed into five dummy variables: up to high school without matriculation (the reference category), high school graduation with matriculation, post-secondary diploma, baccalaureate degree, and master degree or above.

Linguistic background includes participation in intensive government-sponsored Hebrew language instruction for new immigrants (ulpan), language distance, and nativity concentration. All three are continuous measures. Ulpan indicates the number of months of attendance ranging from 0 to 12 and above. Linguistic distance was developed by Isphording and Otten (2014) and reflects the distance from Hebrew of a myriad of other languages. The measure ranges from low score (easy to learn) of 1.00 to a high score (hard to learn) of 102.0. Each respondent was assigned the linguistic distance between his/her mother tongue and Hebrew. A measure of nativity

concentration is also included in the model. It is measured as the percentage of immigrants from a given area/country in a given district out of the total immigrant population in that area. In each district, all respondents from a given country or area of origin were assigned a similar value of nativity concentration.

When assessing the determinants of earnings, language proficiency is introduced as an explanatory variable distinguishing between those with no command in Hebrew at all (reference category), weak, mediocre, fluent, and very fluent. We excluded language distance and ulpan which the literature does not consider as determinants of earnings. By contrast, we incorporate two new variables: type of employment namely, whether the respondent is employed or self-employed (reference category); and occupation status: a ten point scale for occupations of the one-digit classification in the 2008 Israeli census. Although occupation is strongly associated with education, evaluation of the role of occupation is essential in any investigation of earnings variation across social and ethnic groups (Haberfeld, 1993).

Summary statistics of the independent variables appear in Table 1.

4.3 Models

To evaluate the robustness of the above working hypotheses, we applied multivariate analyses: ordinal logistic regression for language proficiency, and ordinary least-square (OLS) for earnings. The model for language includes immigration factors, socio-demographic characteristics, and language background variables. Separate models were estimated for each origin group; as well as an integrated model of the entire sample thus identifying the role of country/area of origin as distinct from language-of-origin effects (see: Beenstock, Chiswick, and Repetto, 2001).

The basic linguistic model may be formulated as follows:

$$\text{LANG}_j = \alpha_j + \beta_1 X_1 + \dots + \beta_9 X_9 + e$$

were LANG, the dependent variable, is the odds of having a particular score in Hebrew or less, i.e., $\text{prob}(\text{score} \leq j) / \text{prob}(\text{score} > j)$ where j goes from one to four (the number of levels of language proficiency minus 1), α_j is the threshold values, and $\beta_1 \dots \beta_9$ are the estimated coefficients for the independent variables (X), and e is the residual.

The associations are presented as logit coefficients that express the probability for lower/higher scores of the trait, namely command in Hebrew, with a (one-unit) change in the respective independent variable. A negative coefficient indicates that an explanatory variable is likely to result in a lower score of language proficiency; a positive coefficient attests to the likelihood of higher scores. A "pseudo- R^2 (Nagelkerke R^2) is a measure of the model's overall explanatory power.

The modeling of the effect of Hebrew language skills on earning adopts the "human capital earnings function. It links the natural logarithm of earnings to immigration factors, socio-demographic characteristics, Hebrew-language proficiency, and employment attributes. Here, as well, we present separate equations for each immigrant group and a combined model for the immigrant population as a whole. The model for earnings is formulated as follows:

$$\text{LNEARN}_i = a + b_1 X_1 + \dots + b_i X_i + e$$

were LNEARN, the dependent variable, is the predicted amount of (ln)earnings, "a" is a constant, b is the unstandardized coefficient (amount of addition to, or subtraction

from, constant earnings for a one-point change in X), X is the observed value of the respective independent variable, and e is the residual or prediction error. We employed the method of entering all the independent variables into the multiple regression equations (a "confirmatory perspective"). The explanatory power of the model is provided by the coefficient of determination R^2 .

5. Analysis Results

5.1 Descriptive Overview

Figure 1 presents the distribution of proficiency in Hebrew among the total immigrant population in the sample overall and for each of four subgroups of immigrants in Israel separately. Overall, in 2010, some 42% reported fluency or strong fluency in Hebrew almost equally divided between the two categories. Another one-fourth (26.5%) had medium fluency in Hebrew; the remaining one-third had weak proficiency (21.5%) or none at all (9.9%). This profile, however, masks substantial inter-group variations. Immigrants from Ethiopia, for example, languish at the weak end of Hebrew proficiency while those from Europe and America rest at the strongest. Thus, only 11% of immigrants from Ethiopia reported that they speak Hebrew fluently and 17.7% described their Hebrew as very fluent (28.7% jointly); the rates among European and American immigrants were 33% and 28.8%, respectively (61.8% jointly).³ In other words, the proportion of immigrants who speak Hebrew fluently or very fluently is more than twice as high among those from Europe and America than among counterparts from Ethiopia. Immigrants from the rest of Asia/Africa and those from the FSU fall somewhere in between, with a moderate level

³ In the data and in this paper "European and American" refers to immigrants from all of Europe, except the FSU, and from North, Central, and South America.

of Hebrew. Thus, approximately half of immigrants from elsewhere in Asia/Africa (49.4%) described their Hebrew as fluent or very fluent, and 41.2% of immigrants from the FSU did the same.

(Figure 1, about here)

The differences among immigrant subgroups are especially salient shortly after arrival in Israel (Figure 2). Three to five years after immigration, the proportion of immigrants from Europe/America who spoke Hebrew fluently or very fluently was twice that of immigrants from the rest of Asia/Africa or the FSU and four times higher than that of Ethiopian immigrants. Over time, all subgroups, hence the total immigrant population as well, experienced improvement in speaking Hebrew. The differences between subgroups narrowed during this process. Thus, after seventeen to twenty years in the country, less than twice the share of immigrants from Europe/America, as compared with those from Ethiopia, spoke Hebrew fluently or very fluently; and the differentials relative to immigrants from the rest of Asia/Africa and the FSU were only 9.1 and 12.6 percentage points, respectively.

(Figure 2, about here)

Attention is now directed to the second dependent variable, labor-market income. The average gross annual income from work in Israel in 2008 was 84,412 NIS (Figure 3). In this respect, substantial differences among immigrant groups were found. Immigrants from Ethiopia earned the least (55,582 NIS) and their counterparts from the rest of Europe and the Americas earn twice as much (116,430 NIS). Immigrants from rest of Asia and Africa earned only a little less than immigrants from Europe/America. Soviet immigrants were situated in the middle (81,399NIS) and strongly influenced the mean because they accounted for some two-thirds of the sample.

(Figure 3, about here)

5.2 Determinants of Hebrew-Language Proficiency

What may explain these intra-group differences and inter-group variations in language proficiency? To what extent are they determined by immigration factors, socio-demographic characteristics, and language background? And what is the overall power of these variables to explain variation in command of Hebrew among immigrants in Israel?

A major determinant of Hebrew-language proficiency in all groups is age at immigration (Table 2). Proficiency is greater among adults the younger the age at immigration. The relationship is not linear; the marginal effect is stronger at younger ages and weakens as age at immigration increases. Interestingly, the relations are stronger among immigrants from Ethiopia and the FSU than for those who arrived from the rest of Asia/Africa and the rest of Europe/America, suggesting that older Ethiopian and Soviet immigrants have specific difficulties in learning the new language. Duration improves language proficiency: each addition of three to four years in the country increases the ability to speak Hebrew by approximately one-fifth (0.2) to two-fifth (0.4) of the unit. Duration contributes more than twice as much to immigrants from the rest of Asia/Africa as it does for immigrants from Ethiopia or the FSU. For immigrants from the rest of Europe/America, duration does not play a significant role in proficiency in Hebrew. The reasons for immigration, be they push or pull, are not significant for the acquisition of Hebrew among immigrants in Israel.

(Table 2, about here)

Immigrant women exhibit lower levels of Hebrew than their male counterparts. Judging by the size of the coefficient, gender differences are especially salient among

immigrants from Ethiopia. This is probably associated with the patriarchal social orientation of this population group. Immigrant women from the FSU are outliers. They have a higher level of proficiency than immigrant men in acquiring the new language, presumably reflecting their strong motivation to work (Rebhun 2008). Insofar as marital status has significant effects, it shows that singles (from Ethiopia and the rest of Europe/America) speak Hebrew more fluently than those who are married. Being unassisted, singles must learn the new language quickly to take care of the various aspects of absorption. Higher education is positively associated with language proficiency. With very few exceptions, proficiency in Hebrew improves commensurate with education. At each level of schooling, the coefficients are higher for immigrants from Ethiopia than for immigrants from other areas, most conspicuously in regard to the very small sample of people with master degree or higher. One explanation for this may be the internal distribution of the reference category, those with secondary school with no matriculation or less. Immigrants from Ethiopia are disproportionally concentrated at the levels of primary education or no education at all as against a more even distribution or concentration at the secondary school level among the other immigrant groups. Another interpretation is that Ethiopian immigrants exhibit larger variations than other immigrants in the efficiency of the levels of education for learning a new language. To put it differently, the sub-matriculation qualifications that they acquired in primary, middle, or high school, whether acquired in Ethiopia or in Israel, were not effective for the acquisition of Hebrew, while among other immigrants the tools they received in similar stages of education were much more useful.

The Hebrew-language instruction program provided by the host authorities (ulpan) seems to help. Each month in ulpan improves fluency in Hebrew by 0.15 on a 1-5

scale. Thus, approximately seven months of ulpan should pass the attendee from the level of Hebrew at which he/she started to the next level. Ulpan is of greatest importance for immigrants from the rest of Asia/Africa and FSU and somewhat less important, but significant nevertheless, for immigrants from Ethiopia. That the effect of ulpan on the Hebrew proficiency of immigrants from the rest of Europe and America is insignificant suggests that they arrive with relatively good Hebrew and that the ulpan syllabus is not tailored to immigrants who have such language qualifications. In line with expectation, the greater is the distance between home language and host language the weaker is the command of the latter.

All other factors being equal, immigration from Ethiopia or the FSU is associated with being less fluent in Hebrew than members of the reference group, composed of immigrants from the rest of Europe and America (integrated model). The differences vis-a-vis immigrants from the rest of Asia and Africa are not significant. Immigrants from the rest of Asia/Africa and the rest of Europe/America share a rather strong religious identification that probably involved enrollment in Jewish schools, familiarity with the Jewish prayer-book, and early visits to Israel (especially among those from the rest of Europe and America), hence some pre-immigration knowledge of Hebrew; Jews in Ethiopia and the FSU, in contrast, were limited in their exposure to Judaism generally and in particular to Hebrew in their origin countries.

The independent variables were efficient in explaining variations in Hebrew proficiency. They accounted for approximately half (47%-48%) of the variation for immigrants from the rest of Asia/Africa and rest of Europe/America, and for almost two-thirds (64%) of the variation for immigrants from Ethiopia and the FSU. Whether judged by the direction and the magnitude of the coefficients or by the explained

variations, the separate analysis of the immigrant groups was important, revealing unique patterns in the acquisition of Hebrew by immigrants' country or area of origin.

5.3 Determinants of Earnings

Another important aspect of immigrants' adjustment is earnings. The analysis is restricted to people who worked throughout the entire reference year, were not enrolled in school or in the military, and reported positive labor income. These restrictions somewhat reduced the sample size of each immigrant group (Table 3).

Among Ethiopian immigrants, two determinants of earnings - gender, and class of worker – are paramount. The coefficient in the first column implies that, net of other characteristics, Ethiopian women earned about 40 percent less than their male counterparts. Class of worker indicates that those who are self-employed earn less than the employees. At the significance level of $p < 0.10$, those Ethiopians who moved to Israel due to religious or ideological pull factors are likely to earn less than immigrants who reporting having come for "other" reasons. The stronger Jewish identification among the former may involve willingness to compromise on well-being, hence earnings.

(Table 3, about here)

The earnings of immigrants from the rest of Asia and Africa, are also mainly affected by gender and an employment attribute, namely occupation. Being male increases earnings as does being in a higher status occupation. Many variables figure importantly in the earnings model of Soviet immigrants. Younger age at immigration is positively associated with earnings. Unlike Ethiopians, those from the FSU who immigrated to Israel due to pull factors are likely to out-earn those who indicated "other" reasons. Both being a woman and being unmarried (singles or ex-married) are

found to decrease earnings. In this equation, both employment attributes of being employee and having a higher occupational rank, are positively associated with earnings. Soviet immigrants who are very fluent in Hebrew have an earnings advantage over those who speak no Hebrew at all (at $p < .010$). Immigrants from the rest of Europe and the Americas who reached Israel due to pull factors out-earn other peer immigrants. Immigrant women originally from Europe and America earn less than immigrant men from the same origin areas. This group of immigrants obtains a higher return on education; this is true for immigrants with high school matriculation as well as a baccalaureate degree, and more strongly, both in terms of the magnitude of the coefficient and the level of statistical significance, for immigrants with advanced academic degrees (masters or higher). That only the education of immigrants from the rest of Europe and America is rewarded economically may trace to differences in appreciation of schooling, relevance of schooling between origin country and destination country (Israel), and greater employer familiarity with the significance of foreign schooling for immigrant workers' productivity.

When all immigrant groups were integrated into one model, it is discovered that while strong fluency in Hebrew increases earnings, less linguistic achievements do not affect earnings significantly. It was also found that nativity concentration is rewarded by slightly higher earnings. We speculate that under such spatial conditions immigrants may work in businesses run by peers from the same origin country or area and can more efficiently negotiate their earnings than people who work for natives. Another explanation may be that a high concentration proxies for a pressure group of people of common background who join forces to improve their returns. Perhaps the most salient finding is the disadvantage of Ethiopian immigrants: when key factors of immigration, socio-demography, employment, and language are held constant, they

earn less than their peers from other countries. Remember that Ethiopians are different in the Israeli social and cultural landscape in their skin color. Overall, the insights from this analysis are that two immigrant groups are significantly at a disadvantage: women, and Ethiopians.

Despite the often small number of variables that have statistically significant effect, the models were able to explain a rather high proportion of the variation in earnings. However, they did so differently among the immigrant groups. The least efficient model was that for immigrants from Ethiopia, with an explanatory power of 19.4%, as against that for immigrants from the rest of Asia and Africa, with more than twice this power (44%). For each group of immigrants from the FSU and the rest Europe/America, the model yielded an R^2 of approximately 30%.

6. Conclusions

This article explored the determinants of destination-language proficiency among immigrants in Israel, and further asked how linguistic qualifications are channeled into economic returns, i.e., labor-market earnings. The study was comparative, introducing separate models for immigrants according to country or area of origin. To this end, we used data from the 2010 Immigrant Absorption Survey, which inquired into reasons for immigration, settlement patterns, and adjustment to the new country including language, hence filling a major lacuna of the two last censuses (from 1995 and 2008), which ignored this topic.

Immigrants who were initially poor in Hebrew proficiency – those from Ethiopia, the rest of Asia/Africa, and the FSU - advanced more quickly than their counterparts from rest of Europe and the Americas, who were more fluent in Hebrew shortly after arrival. Although the inter-group gaps narrowed over time they remained salient even

twenty years after immigration. This is seen in both the descriptive findings and the multivariate analysis, with the former immigrant groups showing positive and statistically significant coefficients with longer duration. The younger the immigrants were when they reached Israel, the more effectively they mastered the new language. Consistently among all immigrant groups, women are at a linguistic disadvantage relative to men. Secular education and the study of Hebrew in special programs sponsored by the Israeli government are positively associated with fluency. When all immigrant groups are integrated into one model, language distance is found to inhibit the acquisition of good command of the destination language. Regardless of key immigration and individual characteristics, immigrants from Ethiopia and the FSU are less articulate in Hebrew than their counterparts from the rest of Europe and America. This empirical evidence largely accords with the "Standard Theoretical Model". Exposure, reflected here through enrollment in a special program for new immigrants, age at immigration, and duration, enhances Hebrew-language proficiency. Exceptions are the reasons for immigration: the assumption that people who immigrated to a new country due to pull factors will be more determined to adjust to their new environment i.e., to learn the local language more quickly, does not find support. These people likely to originate in English-speaking or other western societies thus have the option for return migration. Furthermore, "English has become a valued international language and is a lingua franca in many countries, including Israel" (Chiswick, 1998: 264). We also speculate that people who move to their historical and religious homeland, although indicating push factors or other considerations, nevertheless have some pre-immigration attachment to their destination country, or that such an attachment evolves shortly after settlement, blurring inter-group differences in the rhythm of linguistic adjustment. Efficiency, proxied here by age at immigration and

education, was helpful in learning Hebrew. Likewise, language distance had a negative effect on the command of the host language hence, smaller distance increases proficiency. Economic incentives, which are assumed to operate especially among people of a specific socio-demographic profile, those who arrive at young ages, men, and the well-schooled, proved to be robust.

That fluency in the local language is likely to increase earnings is true for the immigrant population at large but not for each immigrant group separately. We suspect that the lack of statistical significance for Hebrew among each group derives from strong inter-relations between Hebrew proficiency and other independent variables (multicollinearity); this was overcome after all immigrants were consolidated into one group. Two attributes that increase earnings are class of worker (employee) and occupation. Immigrant women should expect to earn less than immigrant men. Irrespective of individual characteristics, the group affiliation of being from Ethiopia is negatively associated with earnings, raising the possibility of disadvantages for people arriving from one of the poorest countries in the world and perhaps also some racial discrimination.

[The final version of the paper will discuss the results in the context of previous studies on linguistic and economic adjustment of immigrants in Israel].

7. References

Alba, Richard D. and John, Logan. 1993. "Migration Proximity to Whites in Suburbs: An Individual-Level Analysis of Segregation". *American Journal of Sociology* 98: 1388-1427.

Alba, Richard D. and Victor, Nee. 2003. *Rethinking the American Mainstream: Assimilation and Contemporary Immigration*. Cambridge, MA: Harvard University Press.

- Bean, F. D. and G. Stevens. 2003. *America's Newcomers and the Dynamics of Diversity*. New York: Russell Sage Foundation.
- Beenstock, Michael. 1996. 'Failur to Absorb: Remigration by Immigrants to Israel'. *International Migration Review* 30(4): 950-978.
- Beenstock, Michael. (1996). "The Acquisition of Language Skills by Immigrants: The Case of Hebrew in Israel". *International Migration* 34(1): 3-30.
- Beenstock, Michael and Yitzhak, Ben Menahem. (1997). "The Labour Market Absorption of CIS Immigrants to Israel: 1989-1994". *International Migration* 35(2): 187-224.
- Beenstock, Michael, Barry R. Chiswick, and Gaston L. Repetto. (2001). "The Effect of Linguistic Distance and Country of Origin on Immigrant Language Skills: Application to Israel". *International Migration* 39(3): 33-60.
- Berman, E., K. Lang, and E. Siniver. 2003. "Language-Skill Complementary: Returns to immigrant Language Acquisition". *Labor Economics* 10(3): 265-290.
- Borjas, G. J. 1982. "The Earnings of male Hispanic Immigrants in the United States". *Industrial and Labor Relations Review* 35(3): 343-353.
- Boyd, Monica, J. DeVries, and K. Simkin. 1994. "Language, Economic Status and Integration". In: H. Adelman, A. Borowski, M. Burstein, and L. Foster (eds.), *Immigration and Refugee Policy: Australia and Canada Compared*. Carlton: Melbourne University Press, vol. II, pp. 549-577.
- Central Bureau of Statistics. 2008. *Statistical Abstract of Israel, 2008*. Jerusalem.
- Central Bureau of Statistics, 2014. *Statistical Abstract of Israel, 2014*. Jerusalem
- Chiswick Barry R. 1979. "The Economic Progress of Immigrants: Some Apparently Universal Patterns. In: W. Fellner (ed.), *Contemporary Economic Problems*. Washington: American Enterprise Institute, pp. 357-399.

Chiswick, Barry R. (1998). "Hebrew Language Usage: Determinants and Effects on Earnings among Immigrants in Israel". *Journal of Population Economics* 11: 253-271.

Chiswick Barry R. and Paul W. Miller. 1995. "The Endogeneity between Language and Earnings: International Analyses". *Journal of Labor Economics* 13: 246-288.

Chiswick Barry R. and Paul W. Miller. 2007. *The Economic of Language: International Analysis*. London: Routledge.

Chiswick Barry R. and Paul W. Miller. 2015. "International Migration and the Economics of Language". In: Barry R. Chiswick and Paul M. Miller (eds.), *Handbook of the Economics of International Migration*. Elsevier, pp. 211-269.

Chiswick, Barry R. and G. Repetto. 2000. "Immigrant Adjustment in Israel: Literacy and Fluency in Hebrew and Earnings". In S. Slobodan (ed.) *International Migration: Trends, Policy and Economic Impact*. New York: Routledge, pp. 204-228.

Chiswick Barry R. and M. Wenz. 2006. "The Linguistic and Economic Adjustment of Soviet Jewish Immigration in the United States, 1980 to 2000". *Research in Labor Economics* 24: 179-216.

Cohen, Yinon, Haberfeld, Yitzhak, and Tali, Kristal. 2004. *Ethnicity and Mixed Ethnicity: Educational Gaps among Israeli-Born Jews*. Discussion Paper No. 5-2004, Tel-Aviv University: The Pinhas Sapir Center for Development.

Cohen-Goldner, S. and Z. Eckstein. (2008). "Labor Mobility of Immigrants: Training Experience, Language, and Opportunities". *International Economics Review* 49(3): 837-872.

Cohen-Goldner, S. and Z. Eckstein. (2010). "Estimating the Return to Training and Occupational Experience: The case of Female Immigrants". *Journal of Econometrics*, 156: 86-105.

Dahan, Momi. 2013. "The Israeli Economy: Has the Melting Pot Succeeded?" *Economic Quarterly* 60(1-4): 107-152;

DellaPergola, Sergio. 1984. "On the Differential Frequency of Western Migration to Israel". *Studies in Contemporary Jewry*. Oxford and New York: Oxford University Press, vol. 1, pp. 292-315.

DellaPergola, Sergio. 2004. "Demography in Israel at the Dawn of the Twenty-First Century". In: Uzi Rebhun and Chaim I. Waxman (Eds.), *Jews in Israel: Contemporary Social and Cultural Patterns*. Hanover and London: University Press of New England/Brandeis University Press, pp. 20-44.

DeelaPergola, Sergio. 2009. "International Migration of Jews. In: Eliezer Ben-Rafael and Yitzhak Sternberg (Eds.), *Transnationalism: Diasporas and the Advent of A New (Dis)order*. Leiden and Boston: Brill, pp. 213-236.

Eisenstadt, Shmuel N. 1954. *The Absorption of Immigrants*. London: Routledge and Paul.

Extra, G., M.A. Spotti, and P. van Averment, ed. 2009. *Language Testing, Migration, and Citizenship*. London and New York: Continuum.

Friedlander, Dov, Barbara, Okun, Zvi, Eisenbach, and L. Elmakias. 2002. "Immigration, Social Change, and Assimilation: Educational Attainment among Birth Cohorts of Jewish Ethnic Groups in Israel, 1925-69 to 1965-69". *Population Studies* 56(2): 135-150.

Gavison, Ruth. 2009. *60 Years to the Law of Return: History, Ideology, Justification*. Jerusalem: Metzilah Center (in Hebrew).

Goldscheider, Calvin. 2002. *Israel's Changing Society: Population, Ethnicity, & Development*. Boulder, CO: Westview Press (Second edition).

- Gordon, Milton M. 1964. *Assimilation in American Life: The Role of Race, Religion, and National Origin*. New York: Oxford University Press.
- Grenier, G. 1984. "The Effects of Language Characteristics on the Wages of Hispanic-American Males". *The Journal of Human Resources* 19: 35-52.
- Grenier, G. 1982. *Language as Human Capital: Theoretical Framework and Application to Spanish-Speaking Americans*. Ph.D. Dissertation. Princeton, NJ: Department of Economic, Princeton University.
- Haberfeld, Y. 1993. "Immigration and Ethnic Origin: The Effect of Demographic Attributes on Earnings of Israeli Men and Women". *International Migration Review* 27(2): 286-305.
- Herzk, Theodore. 1934. *The Jewish State: An Attempt at a Modern Solution to the Jewish Question*, translation Sylvie d'Avigdor, 2nd edition, London.
- Hirschman, Charles, Philip, Kasinitz, and Josh, DeWind. 1999. "Immigrant Adaptation, Assimilation, and Incorporation", In: Charles Hirschman, Philip Kasinitz, and Josh DeWind (eds.) *The Handbook of International Migration: The American Experience*. New York: Russell Sage Foundation, pp. 127-136.
- Isphording, Ingo E. and Sebastian, Otten. (2014). "Linguistic Barriers in the Destination Language Acquisition of Immigrants". *Journal of Economic Behavior and Organization* 105: 30-50.
- Kossoudji, S. 1988. "English Language Ability and the labor Market Opportunities of Hispanic and East Asian Immigrant men". *Journal of Labor Economics* 6(2): 205-228.
- Kritz, Marry M. and Douglas T. Gurak. 2005. "Immigration and a Changing America". In: R. Farley and J. Haaga (eds.), *The American People: Census 2000*. New York: Russell Sage Foundation, pp. 259-301.

- Kulkarni, Veena S. and Xiao han Hu. 2014. "English language Proficiency among the Foreign Born in the United States, 1980-2007: Duration, Age, Cohort Effects". *International Migration Review* 48(3): 762-800.
- Lopez, David E. 1999. "Social and Linguistic Aspects of Assimilation Today". In: Charles Hirschman, Philip Kasinitz, and Josh DeWind (eds.) *The Handbook of International Migration: The American Experience*. New York: Russell Sage Foundation, pp. 212-222.
- Martinovic, B., F. van Tubergen, and I. Maas. 2009. "Dynamics of Interethnic Contact: A Panel Study of Immigrants in the Netherlands". *European Sociological Review* 25: 303-318.
- McManus, W. 1985. "The Labor Market Costs of Language Disparity: An Interpretation of Hispanic Earnings Differences". *American Economic Review* 75: 818-827.
- Mesch, Gustavo S. 2003. "Language Proficiency among New Immigrants: The Role of Human Capital and Societal Conditions". *Sociological Perspectives* 46(1): 41-58.
- Park, Robert R. 1950. *Race and Culture*. Glencoe: Free Press.
- Portes, Alejandro and Ruben G. Rumbaut. 1996. *Immigrant America: A Portrait*. Berkeley: University of California Press (2nd edition).
- Raijman, Rebeca. (2013). "Linguistic Assimilation of First-Generation Jewish South African Immigrants in Israel". *Journal of International Migration and Integration* 14(4): 615-636.
- Raijman, Rebeca, Moshe, Semyonov, and Rona, Geffen. (2015, forthcoming). "Language Proficiency among Post-1990 Immigrants in Israel". *Journal of Ethnic and Migration Studies*.

- Rebhun, Uzi. 2008. "A Double Disadvantage? Immigration, Gender, and Employment Status in Israel". *European Journal of Population* 24(1): 87-113.
- Rebhun, Uzi. 2009. "Immigration, Ethnicity, and Housing-Success Hierarchies in Israel". *Research in Social Stratification and Mobility* 27: 219-243.
- Remennick, Larissa. (2004). "Language Acquisition, Ethnicity and Social Integration among Former Soviet Immigrants of the 1990s in Israel". *Ethnic and Racial Studies* 27(3): 431-454.
- Semyonov, Moshe, Rebeca, Rajiman, and Dina, Maskileyson. (2015). "Ethnicity and Labor Market Incorporation of Post-1990 Immigrants in Israel". *Population Research and Policy Review* 34(3): 331-359.
- Shields, M. and S. W. Price. 2002. "The Effect of Language Fluency on the Wages of Immigrant Men in England". *Journal of Population Economics* 15: 171-185.
- Stevens, G. 1999. "Age at immigration and Second Language Proficiency among Foreign-Born Adults". *Language in Society* 28: 555-578.
- Stevens, G. and G. Swicegood. 1987. "The Linguistic Context of Ethnic Endogamy". *American Sociological Review* 52: 73-82.
- Takenaka, Ayumi, makiko, Nakemuro, and Kenji, Ishida. (forthcoming, 2015). "Negative Assimilation: How Immigrants Experience Economic Mobility in Japan". *International Migration Review*.
- Van Tubergen F. and M. Kalmijn. 2005. "Destination-Language Proficiency in Cross-National Perspective: A Study of Immigrant Groups in Nine Western Countries". *American Journal of Sociology* 110: 1412-1457.
- Warner, W. Lloyd and Leo Srole. 1945. *The Social Systems of American Ethnic Groups*. New Haven, CT: Yale University Press.

Waxman, Peter. 2001. "The Economic Adjustment of Recently Arrived Bosnian, Afghan, and Iraqi Refugees in Sydney, Australia". *International Migration Review* 35(2): 472-505.

Weiss, Yoram, Robert M. Sauer, and Menahem, Gotlibovski. (2003). "Immigration, Search, and Loss of Skill". *Journal of Labor Economics* 21(3): 557-591.

Table 1.
Definitions and Summary Statistics for Analysis Variables

Variable^a	Definition	Percentages/ Mean (SD)
Age at immigration		
6-14	=1 for 6-14 years old at immigration	7.2
15-19	=1 for 15-19 years old at immigration	7.0
20-24	=1 for 20-24 years old at immigration	9.6
25-34	=1 for 25-34 years old at immigration	20.2
35-44	=1 for 35-44 years old at immigration	19.5
45-54	=1 for 45-54 years old at immigration	17.7
55-64	=1 for 55-64 years old at immigration	16.5
Tenure^b	Years spent in Israel	3.65 (1.23)
Main reason for immigration		
Push factors	=1 for main reason for immigration – push factors	9.6
Pull factors	=1 for main reason for immigration – pull factors	56.2
Country/Area of Origin		
Ethiopia	=1 for born in Ethiopia	15.7
Rest Asia/Africa	=1 for born in rest Asia/Africa	5.9
All FSU	=1 for born in FSU	66.9
Rest Europe/America	=1 for born in rest of Europe/America	11.5
Gender		
Female	=1 for female	56.1
Marital status		
Single	=1 for single persons	9.9
Separated/divorced/ Widowed	=1 for separated /divorced /widowed persons	20.1
Education		
MA or above	=1 for MA or higher	18.0
BA or equivalent	=1 for BA degree	18.9
Post-secondary diploma	=1 for post-secondary education	20.2
High-School matriculation	=1 for high school matriculation	16.6
Linguistic distance	Linguistic distance between mother tongue and Hebrew	98.01(3.84)
Nativity concentration	Percentage of persons with a particular mother tongue living in each district of Israel	21.16 (11.20)
Hebrew language studies (Ulpan)	Months spent in Hebrew language studies (ulpan)	2.69 (2.10)
Class of worker		
Employee	=1 for employed	91.7
Occupation	Scale of occupation classification	5.095 (2.63)

^a Reference categories are as follow: age at immigration – 65 years old and over; main reason for immigration – other; country/area of origin – rest Europe/America; gender – male; marital status – married; education - secondary school without matriculation or less; class of work – self-employed.

^b The mean of 3.65 is between category 3 and category 4 of the variable duration, namely between 9-12 years in Israel and 13-16 years in Israel.

Figure 1.
Hebrew Speaking Fluency by Country/Area of Origin

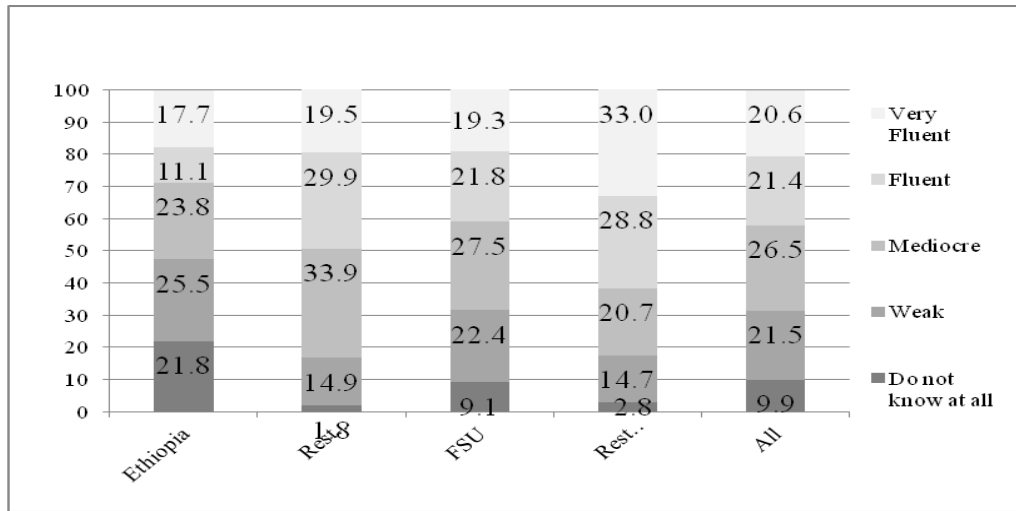


Figure 2.
Hebrew Speaking Fluency by Country/Area of Origin and Tenure

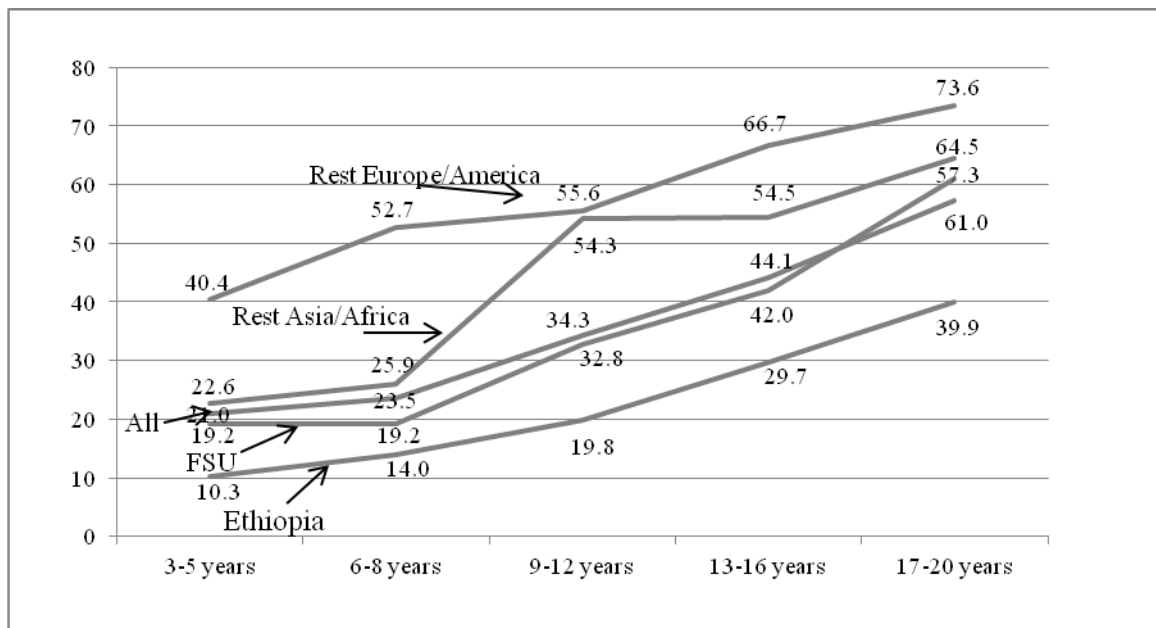


Figure 3.
Mean Annual Earnings among Immigrants in Israel, 2010

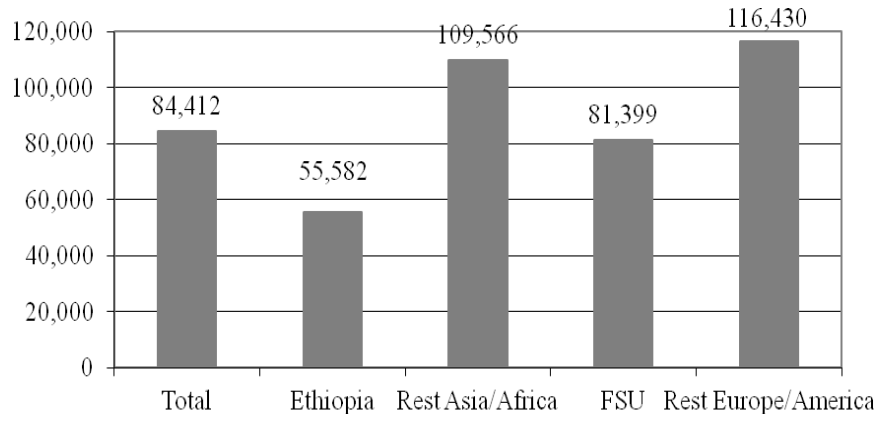


Table 2.

Ordered Logit Coefficients from the Regression of Hebrew-Speaking Proficiency on Immigration Factors, Sociodemographic Characteristics, and Language Background among Immigrants in Israel, 2010

Independent Variables ^a	Ethiopia	Rest Asia/Africa	FSU	Rest Europe/Americas	Integrated Sample
<i>Immigration factors</i>					
Age at immigration					
6-14	7.808*** (1.314)	5.007** (1.657)	8.684*** (.431)	4.378*** (1.065)	7.775*** (.352)
15-19	5.423*** (1.195)	2.891* (1.479)	7.182*** (.377)	4.675*** (1.052)	6.029*** (.300)
20-24	5.287*** (1.177)	3.472** (1.111)	5.858*** (.349)	3.159*** (0.747)	4.897*** (.277)
25-34	4.155*** (1.148)	2.184* (1.057)	4.614*** (.326)	2.130** (0.707)	3.744*** (.259)
35-44	3.133** (1.147)	1.327 (1.007)	3.411*** (.321)	1.530* (.695)	2.737*** (.256)
45-54	1.806 (1.148)	-0.347 (0.984)	2.262*** (.316)	0.327 (.698)	1.606*** (.255)
55-64	1.376 (1.157)	-0.116 (0.944)	0.775* (.304)	-0.373 (.688)	0.549* (.249)
Tenure	0.218*** (0.066)	0.393** (0.124)	0.242*** (0.041)	-0.057 (.051)	0.229*** (.030)
<i>Main reason for immigration</i>					
Push factors	-0.847 (1.423)	-0.479 (.586)	0.123 (.134)	-0.161 (.491)	0.050 (.123)
Pull factors	-0.155 (.302)	0.346 (.343)	0.074 (.091)	0.051 (.241)	0.038 (.078)
<i>Sociodemographic characteristics</i>					
<i>Gender</i>					
Female	-1.308*** (.199)	-0.646* (.312)	0.315*** (.089)	-0.452* (.213)	-0.103 (.071)
<i>Marital status</i>					
Single	1.437** (.462)	-0.473 (.645)	-0.068 (.174)	0.956* (.444)	0.229 (.145)
Ex-married/ widowed	0.087 (.237)	-0.267 (.440)	0.059 (.103)	0.050 (.333)	0.019 (.087)
<i>Education</i>					
High school matriculation	0.937 (.528)	0.292 (0.440)	0.511*** (.154)	0.285 (.341)	0.569*** (.123)
Post-secondary Diploma	2.040*** (0.604)	0.591 (0.455)	0.808*** (.144)	0.916* (.366)	0.837*** (.118)
BA or equivalent	3.217* (1.523)	-0.257 (0.452)	1.374*** (.153)	1.056*** (.313)	1.245*** (.123)
M.A. degree or higher	22.117*** (.000)	1.031* (0.538)	1.869*** (.157)	0.884** (.319)	1.657*** (.126)
<i>Language background</i>					
Hebrew language studies (ulpan)	0.084* (.040)	0.213** (.076)	0.190*** (.023)	-0.057 (.051)	0.148*** (.018)

Linguistic distance	-	-	-	-	-0.060* (.029)
Nativity Concentration	-	-	-	-	0.000 (.003)
Origin					
Ethiopia	-	-	-	-	-2.579*** (.254)
Rest Asia/ Africa	-	-	-	-	0.049 (.187)
FSU	-	-	-	-	-1.203*** (.144)
Pseudo R ² (Nagelkerke)	64.3%	47.2%	64.4%	48.2%	61.0%
Total (N)	543	184	2,229	371	3,327

*P<0.05; **P<0.01; ***P<0.001

a) Numbers in parentheses are standard errors.

b) The reference categories are: age at immigration - 65+; main reason for immigration - other; gender – male; marital status – married; education – high school with no matriculation or less; origin - rest Europe/America.

Table 3.

OLS Regression (Unstandardized Coefficients [B]) of Earnings on Immigration Factors, Sociodemographic Characteristics, Employment Characteristics, and Hebrew-Language Proficiency among Immigrants in Israel, 2010

Independent Variables ^a	Ethiopia	Rest Asia/Africa	FSU	Rest Europe/Americas	Integrated Sample
<i>Immigration factors</i>					
Age at immigration					
6-14	-0.690 (.695)	-1.468! (.807)	0.995*** (.157)	0.176 (.474)	0.707*** (.137)
15-19	-0.313 (.678)	-0.161 (.677)	1.157*** (.138)	0.106 (.445)	0.949*** (.122)
20-24	-0.208 (.672)	-0.210 (.656)	0.953*** (.124)	-0.231 (.386)	0.808*** (.111)
25-34	-0.335 (.667)	0.032 (.631)	1.112*** (.110)	-0.065 (.355)	0.912*** (.101)
35-44	-0.454 (.667)	-.038 (.617)	0.989*** (.108)	-0.078 (.347)	0.810*** (.100)
45-54	-0.520 (.683)	-0.057 (.634)	0.599*** (.112)	-0.279 (.357)	0.488*** (.103)
Tenure	-0.015 (.036)	-0.141 (.085)	0.033 (.022)	0.056 (.063)	0.009 (.018)
Main reason for immigration					
Push factors	0.219 (.523)	0.637! (.368)	0.084 (.069)	0.013 (.357)	0.132* (.067)
Pull factors	-0.264 ¹ (.151)	0.200 (.248)	0.105* (.047)	0.347! (.188)	0.088* (.043)
<i>Sociodemographic characteristics</i>					
Gender					
Female	-0.423*** (.111)	-0.458* (.210)	-0.475*** (.045)	-0.798*** (.154)	-0.500*** (.040)
Marital status					
Single	-0.175 (.175)	0.255 (.377)	-0.185* (.085)	0.009 (.283)	-0.114 (.073)
Ex-married/ widowed	0.016 (.152)	0.116 (.530)	-0.273*** (.055)	0.000 (.244)	-0.225*** (.052)
Education					
High school matriculation	0.293 (.202)	-0.403 (.261)	-0.100 (.074)	0.594* (.251)	-0.030 (.063)
Post-secondary Diploma	0.329 (.254)	0.105 (0.303)	0.032 (.071)	0.267 (.260)	0.081 (.063)
BA or equivalent	-	-0.394 (.310)	0.045 (.077)	0.578* (.239)	0.109 (.068)
M.A. degree or higher	-	-0.579 (.423)	0.133 (.084)	0.776** (.274)	0.198** (.076)
<i>Class of worker</i>					
Employee	1.120** (.397)	0.077 (.215)	0.390*** (.087)	0.176 (.196)	0.311*** (.071)
Occupation	0.014 (.022)	0.138** (.046)	0.042*** (.009)	0.018 (0.037)	0.039*** (.008)

<i>Hebrew-language proficiency</i>					
Weak	0.208 (.240)	0.205 (.898)	-0.065 (.127)	0.950 (.720)	0.038 (.114)
Mediocre	0.328 (.233)	0.517 (.857)	0.071 (.122)	0.824 (.682)	0.140 (.109)
Fluent	0.398 (.252)	0.983 (.877)	0.146 (.128)	0.700 (.678)	0.219* (.114)
Very fluent	0.321 (.274)	1.030 (.894)	0.231! (.139)	1.127 (.692)	0.315** (.121)
<i>Nativity Concentration</i>	-	-	-	-	0.004* (.002)
<i>Origin</i>					
Ethiopia	-	-	-	-	-0.198* (.091)
Rest Asia/ Africa	-	-	-	-	-0.002 (.096)
FSU	-	-	-	-	-0.029 (.065)
Constant	10.188	10.213	9.433	9.462	9.620
Pseudo R ² (Nagelkerke)	19.4%	44.0%	31.9%	29.6%	25.7%
Total (N)	209	90	1,065	163	1,527

!P<.010; *P<0.05; **P<0.01; ***P<0.001

a) Numbers in parentheses are standard errors.

b) The reference categories are: age at immigration - 55+; main reason for immigration - other; gender – male; marital status – married; education – high school with no matriculation or less; class of worker – self-employed; Hebrew-language proficiency – not at all; origin - rest Europe/America.