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The Determinants of Immigration to Israel

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Abstract

This paper empirically investigates the determinants of immigration to Israel and compares them to those affecting immigration to Europe and to the U.S. The results support the hypothesis whereby immigration to Israel is unique.

In particular:

(i) There is a higher number of immigrants to Israel from countries with relatively high GDP per capita, inconsistent with traditional immigration theory, which assumes an increase in earnings as one of the major drivers of immigration.

(ii) More immigrants come to Israel from countries with a low share of young population, contrary to conventional expectations.

(iii) In contrast to usual predictions, more immigrants come to Israel from more distant countries; also more trade reduces immigration.

The findings for Europe and for the U.S. are broadly consistent with the conventional theory and with its predictions.

1. Introduction

Immigration to Israel is often perceived to be driven by unique factors (Shuval, 1998). This paper provides an empirical investigation of this notion. The determinants of immigration flows to Israel are compared to the determinants of immigration flows to 13 European countries and to the United States. The investigation relies on the analysis of a time-series cross-section dataset (TSCS), containing data on inflows from 88 origin countries to 15 destination countries, in the period 1990-2004[3]. The analysis is based on the predictions of a theoretical framework developed by Hatton and Williamson (2005) and Clark, Hatton and Williamson (2007)). This paper is the first one to combine data from the Organization for Economic Cooperation and Development (OECD) on international migration flows with data from the Israeli Central Bureau of Statistics (CBS), in order to compare the drivers of

We estimate OLS and Fixed Effects regression models to examine the effect of customary migration determinants on the flow of migrants. The findings of the paper show that there is a considerable degree of uniqueness in immigration to Israel: customary determinants of migration have opposite effects to those predicted by the conventional migration literature, with the exception of 'network effects'. The evidence for Western Europe, on the other hand, is consistent with the international migration model.

The paper is organized as follows. Section 2 examines the background to the analysis, including the literature. Section 3 describes the theoretical model and its empirical implementation. Section 4 presents the data. Section 5 outlines the empirical methodology and presents the results. Finally, Section 6 offers some concluding remarks.

[3] The TSCS data in this paper are cross sectional data from different countries, repeated annually.

2. Background

2.1 Migration flows to Israel, Western Europe and the United States

The Israeli "Law of Return" (dated 1950) allows Jews and those with Jewish parents or grandparents, and their spouses, to settle in Israel and gain citizenship, except for unusual circumstances. Thus, the majority of immigrants to Israel are either Jewish, or have a Jewish family background[4]. Often, immigrants to Israel are not perceived as leaving an old home to find a new one, but as leaving a country where they were 'strangers' in order to find their home in Israel (Benski, 1994; Markowitz, 1993). Thus, immigration to Israel is perceived as 'unique' both in Israel and outside Israel (Shuval, 1998).

The origin of the vast majority of immigrants to Israel throughout the 1990s was the FSU. Hence, special attention is devoted to here FSU immigration.

The composition of immigration into European countries has changed over the past two decades: until the 1980s, labor migrants dominated migration to Western Europe. Over the past two decades, refugee and family union migration from less developed countries were the main sources of immigration (Chiswick and Hatton, 2002). The average skill level of these migrants is often lower than the average skill level in the destination countries (Borjas, 1994; Chiswick, 2000).

Immigration to the U.S. has also undergone considerable changes. The overall number of legally admitted immigrants rose from a quarter of a million per year in the 1950s to nearly half a million in the 1970s, and close to a million in the early 1990s. The change in source countries composition has been dramatic. Europeans formed over half of the total number of immigrants

[4] CBS data regarding the *overall* number of immigrants to Israel are cited by the Jewish Agency as the number of *Jewish* immigrants to Israel (cf. CBS annual immigration data and The Jewish Agency, ALIYAH STATISTICS 1948- 2006).

in the 1950s, and the bulk of these were from Western Europe. By the 1990s, Western Europeans were a mere 5 percent of the total number of immigrants to the US (Clark et al (2007)).

2.2 Theories of migration

The older, "traditional" theories of migration have focused on differences in the expected wage as the main determinant of international migration, consistent with the human capital framework (e.g., Sjaastad, 1962). Some modifications within this neo-classical framework have been introduced, such as examining the probability of being unemployed (Harris and Todaro, 1970; Jackman and Savouri, 1991) and modeling the decision to migrate as a household decision (Mincer, 1978; Holmlund, 1984). The early literature has also considered the costs of traveling and establishing a new residence in the destination country. These costs may constitute barriers to migration for low-skilled people from poor countries ('the poverty restriction'). Therefore, countries with relatively high migration costs are likely to send relatively skilled immigrants. Urrutia (2001) finds that relative costs of migration are a key factor in explaining observed migration patterns.

More recent literature has emphasized two notions:

(i) Self-selection processes, as presented by Borjas (1987), following the Roy model (1951). Borjas (1987) examined the skill differentials between immigrants and natives and the relation with the variance of the wage distribution in the origin and destination countries. According to the Borjas model, the composition of migration flows by skill is determined by the individual's position in the origin country wage distribution, and the cross-country variance differential. Individuals with above-average skills would gain more than individuals with below-average skills by migrating to a

country with a higher skill premium. Immigration to the destination country will therefore be comprised of immigrants with relatively high skills ('positive selection'). On the other hand, immigrants with relatively low skills would have a stronger incentive to migrate to countries with a low skill premium ('negative selection').

(ii) Migration networks. Massey et al. (1993) define migration networks as "…sets of interpersonal ties that connect migrants, former migrants, and non-migrants in origin and destination areas through ties of kinship, friendship, and shared community origin." Models of migration networks have explained the positive effect of former immigrants on new immigrants in terms of positive externalities: the overall utility of immigrants (both of the newly-arrived and the previously-arrived) grows in response to an increase in the number of newcomers. At a certain point, externalities become negative due to congestion effects, but this does not immediately decrease the immigration rate, since these effects are external to the utility function of the individual immigrant.

Further prominent papers include the following:

Hatton (1995) considered both push and pull factors of the type mentioned above. Borjas (1999), focusing on the level of welfare programs as a pull factor for potential immigrants, introduced the 'welfare magnet' concept. According to Borjas (1999), potential emigrants must consider the probability of being unemployed in the new destination country. This risk may be lowered by the existence of welfare benefits in the destination country. The role of origin and destination countries' migration policies was found to be substantial by Joppke (1998) and Mayda (2009). Migration policies

have also been analyzed as an endogenous factor, including the case of Jewish migration from the FSU to Israel and Germany, as examined by Joppke and Roshenhek (2001).

In terms of empirical implementation, a large number of papers have used time-series analyses of immigration into a single destination country to test the notions presented above. Hatton and Williamson (2005) investigated migration flows to the U.S., finding significant effects of origin country per capita income, 'selection effects', distance, language and 'network effects', as measured by the stock of former immigrants. Mitchell and Pain (2003) investigated the determinants of international migration into the U.K., and found significant effects of population growth in the source locations, stock of former immigrants and per capita incomes in the U.K. relative to the origin countries.

A smaller number of papers have implemented time-series cross-sectional (TSCS) analyses similar to the current paper, i.e. multiple origin countries and multiple destination countries, in multiple years. Mayda (2009) has conducted four annual analyses on inflows to OECD countries, in the years 2003-2006. Using mainly OLS regressions and emphasizing destination countries' migration policies, she finds evidence of positive and significant pull effects and small or insignificant push effects. Work by Alvarez-Plata et al. (2003) has assessed potential migration from Central and Eastern Europe into the EU-15. They find that beyond macroeconomic factors such as per capita income levels and unemployment rates, the propensity to migrate is heavily affected by geographical location, cultural distance, language and the social and political environment. A TSCS analysis of determinants of immigration to OECD countries is further carried out by Pedersen et al. (2004), finding evidence of traditional factors' effects and network effects, but no clear evidence of the influence of selection effects. Zoubanov (2004) assessed the determinants of migration in the European Union, finding

significant effects of the impacts of per-capita income, lagged net migration rate and stock of foreign population. Peridy (2006) simultaneously tested the impact of the traditional and new variables on migration flows into the EU, and found, in accordance with Alvarez-Plata et al (2003), that the new variables are of particular significance compared to traditional ones.

3. The Model

3.1 Theoretical Considerations

The theoretical framework is based on the migration models presented by Hatton and Williamson. (2005) and by Clark et al. (2007). The basic assumption is that potential migrants choose the destination country which provides them with the highest level of income, net of migration costs and the costs of adaptation to the new country. The individual's earning prospects, in case of migration (m_{ihf}), are given by.

$$m_{ihf} = (W_{if} + T_{if}) - (W_{ih} + T_{ih}) - C_{ihf} \quad (1)$$

W_{if} and W_{ih} denote the wages of individual i in the foreign and home (source) country, respectively. T_{if} and T_{ih} denote the welfare benefits (transfers) granted by each country to individuals. C_{ihf} represents migration costs. The following assumptions are made: $Cov(W_{if}, W_{ih}) > 0$; $Cov(T_{if}, W_{if}) < 0$; $Cov(T_{ih}, W_{ih}) < 0$ and the other covariances are equal to zero. Following Borjas (1987), it is assumed that wages depend on some minimal value (α_f and α_h) and on the skill level (S_i) of each person:

$$\begin{aligned} W_{if} &= \alpha_f + \beta_f S_i \\ W_{ih} &= \alpha_h + \beta_h S_i \end{aligned} \quad (2)$$

With β_f and β_h reflecting the return to skill of individuals in each country. The wages (W) in equation (2) are the net present value of all future wages, for each individual. It follows that the source country age structure should also matter.

Migration costs C_{ihf} are given by:

$$C_{ihf} = C_{hf} (D_{hf}, B_{hf}, L_{hf}, CT_{hf}, H_{hf}, U_{hf}, BT_{hf}, P_{hf}) + z_{ihf} \quad (3)$$

A parsimonious expression of equation (3) to be used below is given by:

$$C_{ihf} = C_{hf} (X_{hf}) + z_{ihf} \quad (4)$$

where

$$X_{hf} = (D_{hf}, B_{hf}, L_{hf}, CT_{hf}, H_{hf}, U_{hf}, BT_{hf}, P_{hf})$$

C_{hf} (X_{hf}) are direct and indirect costs, which are the same for all individuals i in country h for a given destination f. Direct costs include the geographical distance between h and f (D_{hf}), the border effect (B_{hf}), i.e. the cost of crossing the international border, as well as differences in languages between the source and destination country (L_{hf}), past colonial ties (CT_{hf}) and differences in the cost of living between the source and destination countries (H_{hf}). Indirect costs involve the difference between unemployment rates abroad and at home (U_{hf}) or the absence of business ties, reflected by bilateral trade (BT_{hf}). Differences in political conditions between the countries (P_{hf}) comprise another part of indirect migration costs. In equation 1, the poverty restriction is evident when C_{ihf} is considerably high in comparison to W_{ih}.

The term z_{ihf} represents costs that are specific to the individual i. These individual costs include non-monetary benefits which are lost when migrating, such as the absence of family or other human networks. z_{ihf} can also be viewed as the individual's compensating differential in favor of country h (Clark et al. 2007). The individual's specific costs may play a role in

the effect of policy regulations. For instance, the formation of a family network abroad will not only increase because of better information and lower psychic costs for the individual, but also because the host country may encourage family reunification through a specific policy. Thus, one important influence on z_{ihf} is the stock of previous migrants from the source country living in the destination country (the 'network effect').

Substituting equations (2) and (3) into (1) yields:

$$m_{ihf} = (\alpha_f - \alpha_h) + (\beta_f - \beta_h)S_i + (T_{if} - T_{ih}) - C_{hf}(X_{hf}) - z_{ihf} \quad (5)$$

Each individual chooses to migrate if $m_{ihf} > 0$. This equation captures the presence of 'selection effects': migration will increase with skill level (positive selection) if the return to skills is greater in the destination country ($\beta_f > \beta_h$), and migration will decrease with skill level (negative selection) if the return to skills is greater in the source country ($\beta_f < \beta_h$).

It is assumed that wage means and variances equal to μ_{wf}, μ_{wh}, σ_{wf}, σ_{wh} respectively. Following Borjas (1987), if S_i and z_{ihf} are normally distributed, the aggregate migration can be expressed as:

$$M_{hf} = 1 - \Phi\left(\frac{-\mu_{wf}(S_i) + \mu_{wh}(S_i) - \mu_{tf} + \mu_{th} + C_{hf}(X_{hf}) + \mu_z}{\sigma_{M_{hf}}}\right) \quad (6)$$

Where μ_z is the mean of individual-specific costs (C_i), Φ is the standard normal distribution function and $\sigma_{M_{hf}}$ is the standard deviation of m_{ihf}, which (under the assumptions described in the beginning of this section, regarding covariances) is equal to:

$$\sigma_{M_{hf}} = \sqrt{\sigma_{wf}^2 + \sigma_{wh}^2 - 2\sigma_{wf}\sigma_{wh} + \sigma_{tf}^2 + \sigma_{th}^2 - 2\sigma_{wf}\sigma_{tf} - 2\sigma_{wh}\sigma_{th} + \sigma_z^2} \quad (7)$$

3.2 Empirical Implementation

The explanatory variables included in equation 5 cover a variety of push and pull factors. First, the 'traditional' economic factors: 'economic development' is measured by GDP per capita. Employment opportunities in the sending and receiving countries are measured by the unemployment rate. Both GDP per capita and the unemployment rates are measured as the ratio between the origin country and the destination country. The hypothesis regarding GDP per capita in destination countries is that higher levels of economic development in the destination countries will be associated with higher immigration rates to these countries, because potential immigrants expect to experience higher income. However, the effect of GDP per capita in the origin countries may be ambiguous. Earlier studies have found an inverted 'U' relationship between origin-country GDP and emigration (Hatton and Williamson, 2005). At very low levels of GDP, emigration is low because people are too poor to pay the migration costs ('the poverty restriction'). At higher income levels, migration increases, and when GDP levels increase further, migration may again decrease because the economic incentives to migrate to other countries decline.

The share of young population in the origin country is included in W_{if} and W_{ih}. The assumption is that the present value of gains from migration (increased wages) is likely to be higher for younger potential migrants, since they have a longer period of time in the destination country's labor force. We follow previous studies, such as Clark et al (2007) and Hatton and Williamson

(2005), in attempting to measure this effect by including the proportion of the population aged 15-29 in each origin country.

In order to account for selection effects, we follow previous studies, the most recent being Peridy (2006) and Mayda (2009), and proxy the ratio of returns to skills in origin and destination countries by including measures of inequality (Gini coefficients). Finally, in order to capture potential push and pull factors related to the 'welfare magnet' theory, we include three variables in the model: total social expenditure, public expenditure on health and public expenditure on education, measured as share of GDP in each country.

The following variables belong to C_{ihf}, reflecting costs of moving to a foreign country. The political atmosphere in the origin and destination country is likely to influence migration, assuming individuals prefer a high level of human rights. In order to capture this effect, We include two variables from the 'Freedom House Index': the first variable measures the degree of 'political rights' and the second measures 'Civil Liberties' in origin and destination countries. These two variables are categorical, ranging from 1 (a high degree of political rights and civil liberties) to 7 (a low degree of rights and liberties). On one hand, low degrees of political rights and civil liberties are expected to increase migration flows by increasing immigrants' motivation (decreasing P_{hf}). On the other hand, measures of rights and liberties may also capture migration restrictions in origin countries, and have a negative effect on migration flows. In addition, we include a variable measuring the military expenditure in origin and destination countries, also measured as percent of GDP. This variable is intended to capture the effects of geo-political tension and armed conflicts.

In order to measure direct migration costs, a variable measuring the distance in kilometers between the capital areas in the sending and receiving countries is included. Longer distances are expected to decrease migration. As

a proxy for cultural and business ties between two countries, the total trade values (imports and exports) are measured for all country pairs. Ties represented by the volume of trade are expected to have positive effects on total migration between countries. Another proxy for cultural affinity is a dummy variable describing neighboring countries, which assumes the value of 1 if the two countries have a common border, 0 otherwise. A second dummy variable assumes the value of 1 for countries ever in colonial relationship, 0 otherwise. The assumption is that past colonial ties might lower the 'cultural distance', thereby increasing migration.

Knowledge of the language in the destination country is represented by a third dummy variable, equal to 1 for common language in two countries, 0 otherwise. Knowledge of the local language in the destination country decreases psychological migration costs, and raises the skill level of the immigrant in the labor market, thus increasing immigration.

The last variable included in the C_{ihf} vector is the stock of immigrants from origin country i, divided by population in destination country j. This normalized measure is expected to capture 'network effects', described in Section 2. The existence of network effects implies that immigration flows are highly correlated over time.

4. The Data

The data sample consists of 18 variables, 88 origin countries and 15 destination countries, over 15 years (1990-2004). The group of destination countries consists of 13 European countries from the EU-15 (the 15 member states of the European Union, before the enlargement in 2004) and Israel. The two countries which were excluded from the EU-15 group, due to a low number of observations on migration inflows, are Greece and Luxembourg.

Data on migration (both inflows and stocks) comes from the OECD's Continuous Reporting System on Migration (SOPEMI), and the Israeli Central Bureau of Statistics. Population registers, residence and work permits are the main sources of the OECD data. Due to data limitations on outflows from OECD countries, the data refer to gross inflows instead of net inflows.

Three issues should be noted regarding the OECD data on migration inflows: first, the definition of an immigrant is not exactly the same for all destination countries[5]. Second, data from residence permits has certain deficiencies when used for statistical purposes[6]. The OECD harmonization methods provide a partial solution to these issues. Finally, the data only cover legal immigration[7].

Data on macroeconomic variables were collected from various sources: data on GDP per capita, PPP-adjusted (constant 1996 international dollars) comes from PENN world table, version 6.2[8], and the CBS. The unemployment rates were collected from the International Labor Organization. Data on Gini

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[5] The data vary according to the different requirements for receiving a residence or working permit in each country, or according to different sampling in population registers. For definitions of migrants in each destination country, see OECD 2006, "International Migration Outlook", p. 249.

[6] See OECD publication, by Georges Lemaitre, Thomas Liebig and Cécile Thoreau (2006): "Harmonised statistics on immigrant inflows – preliminary results, sources and methods".

[7] According to Hatton and Williamson (2005), illegal migration may amount to 10-15% of the OECD foreign population.

[8] Source: Alan Heston, Robert Summers and Bettina Aten, Penn World Table Version 6.2, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, September 2006.

coefficients, used to measure "selection effects", comes from the UN, World Institute for Development Economic Research. Three variables proxied for "welfare magnets": the share of total social expenditure in GDP, the share of public expenditure on health in GDP and the share of public expenditure on education in GDP. These three variables were obtained from the United Nations Statistics Division, the World Health Organization Statistical Information System (WHOSIS), the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics and the Israeli CBS. Both 'poverty restriction' variables - the ratio of population earning less than $1 a day and the ratio of malnourished population, come from the United Nations (Millennium Development Goals Indicators). Data on business ties (total trade) comes from the OECD and the Israeli CBS. Information on origin countries' share of young population (ages 15-29) comes from the U.S. Census Bureau, International Data Base. Both "political pressure" variables - the degree of 'political rights' and the degree of 'Civil Liberties' in each country (on a scale of 1 for the highest degree, 7 for the lowest), come from the "Freedom House Index". Geographic and cultural variables - great-circle distance, land border, common language and colonial ties were collected from Glick and Rose's (2002) dataset on gravity-model variables. Finally, measurements of countries' military expenses, as share of GDP, come from the Stockholm International Peace Research Institute (SIPRI).

5. Estimation and Results

We run OLS and Fixed Effects regressions for Israel, the U.S. and the EU-13 countries. The basis for pooling the data on European countries is their relative similarity in terms of macro-level characteristics: all countries are located in Western Europe, share high annual GDP per capita levels (above US$ 20,000 since 1990, PPP adjusted, constant 1996 prices) and similar political regimes.

There is reason to allow for heterogeneity in the model, in order to account for different conditions between origin-destination pairs, e.g., different immigration policies. The Fixed Effects model allows for a certain degree of heterogeneity of destination-origin country pairs, by allowing a different intercept for each country pair. The coefficients of the independent variables are still assumed to be the same for all countries. The disadvantage of the Fixed Effects model is that it removes any of the average country-to-country variation from the analysis, and simply asks whether changes in migration rates between each pair of countries are associated with changes in migration determinants in both countries. Thus, if a certain destination country attracts more immigrants than others because of its high rate of GDP per capita, this will not be captured in the Fixed Effects model. Hence, there is basis for conducting both OLS and Fixed Effects regressions.

Both OLS and fixed effects regressions used migration inflows (as share of the source country's population) as the dependent variable. The appendices present these data in figures and tables. The independent variables were the migration determinants described in Section 3 above. The OLS regressions compare between Israel, 13 European countries (EU-13) and the U.S. In the fixed effects regression for the U.S., none of the explanatory variables were found significant. Therefore, the results are reported only for

Israel and the EU-13 countries. Tables 1 and 2 present the parameter estimates from these regressions.

Table 1: Migration Determinants Comparison between Israel, Europe and the United States 1990-2004 OLS Regressions			
Dependent Variable: Immigration rate			
	Israel	**EU-13**	**USA**
GDP Ratio (Origin/Destination)	2.104 (3.31)**	-0.272 (-0.9)	1.073 (-1.52)
Unemployment Ratio (Origin/Destination)	-1.465 (3.78)**	0.234 (-1.24)	-0.899 (-1.27)
Young Population (Origin)	-10.476 (3.66)**	5.513 (2.65)**	-1.764 (-0.24)
Gini Ratio (Origin/Destination)	-3.518 (3.41)**	-1.126 (1.99)*	3.97 (2.24)*
Civil Liberties (Origin)	2.124 (3.57)**	-0.19 (-0.50)	2.259 (-1.87)
Military Expenses (Origin)	0.06 (-0.11)	-0.278 (-1.14)	-2.377 (5.16)**
Common border	dropped	dropped	9.432 (4.64)**
Distance	17.237 (6.66)**	-0.466 (-0.49)	5.436 (-0.9)
Total Trade	-1.594 (8.58)**	0.341 (2.82)**	-1.003 (2.09)*
year	-461.367 (-1.23)	92.141 (0.58)	-300.674 (-1.2)
year^2	0.116 (1.23)	-0.023 (-0.58)	0.075 (1.2)
Constant	460160.373 (1.23)	-91996.16 (-0.58)	299,845.86 (1.2)

Observations	62	344	58
R-squared	0.81	0.08	0.74
Value of t statistics in parentheses * significant at 5%; ** significant at 1%			
Source: Various international databases, and the CBS. See section 4 for the detailed description of sources.			

Table 2: Migration Determinants Comparison between Israel and Europe 1990-2004 Fixed Effects Regressions		
Dependent Variable: Immigration rate		
	Israel	**EU-13**
GDP Ratio (Origin/Destination)	0.057 (0.08)	1.097 (1.32)
Unemployment Ratio (Origin/Destination)	-0.044 (-0.24)	0.213 (2.17)*
Young Population (Origin)	2.335 (2.43)*	-2.384 (-1.7)
Gini Ratio (Origin/Destination)	0.081 (-0.36)	-0.172 (-0.84)
Civil Liberties (Origin)	0.326 (-1.93)	0.158 (0.83)
Military Expenses (Origin)	0.032 (0.13)	-0.696 (-2.37)*
Distance	–	-0.611 (-0.46)
Total Trade	-0.088 (-0.46)	–
year	157.821 (2.53)*	-0.155 (-0.89)
year^2	-0.04 (2.53)*	-32.779 (-1.18)
Constant	-157,411.86 (2.52)*	0.008 (1.18)

Observations	62	344
Number of Destination-Origin pairs	14	89
R-squared	0.63	0.10
Value of t statistics in parentheses * significant at 5%; ** significant at 1%		
Source: Various international databases, and the CBS. See section 4 for the detailed description of sources.		

These results support the hypotheses regarding the uniqueness of immigration to Israel.

The following are the main implications.

Macroeconomic conditions. The variable `GDP ratio' in Israel has a significant positive effect in the OLS regression and no significant effect in the Fixed Effects regression. Therefore, it is likely that this effect stems from cross-sectional differences, and not from the variation over time, within each origin-destination country pair. In other words, there is a higher number of immigrants to Israel from countries with higher GDP per capita. This finding is inconsistent with traditional immigration theory, which assumes an increase in earnings as one of the major drivers of immigration. GDP ratio has no significant effect in any of the regressions for Europe or the U.S. The negative coefficient of the OLS Unemployment Ratio in Israel is also inconsistent with the international migration model. In Europe, the Fixed Effects coefficient of the Unemployment Ratio is positive, as the theory predicts.

Population distribution. The negative sign of the share of young population in the Israeli OLS regression is significant, contrary to findings of previous studies. However, in the Israeli Fixed Effects regression the sign is significantly positive. Thus, in this case, the cross-section effect seems to be

dominant: although the effect of the changes in young population within each country over time matches migration theory, the overall effect is the opposite, i.e., more immigrants come to Israel from countries with a low share of young population. In comparison, the significantly positive estimate for young population in Europe matches conventional expectations.

Inequality. The Gini index is the only determinant which has the same effect in Europe and Israel: significantly negative, implying negative selection in both cases. In Israel, this finding is consistent with the negative effect of young population in the Israeli OLS regression: assuming the older population's skills are below the median (considering their lower skills for adapting to new environments), it is clear why more immigrants from countries with a higher share of older population would rather reach a country with lower variation in the returns to skills. The positive effect of the Gini index in the U.S., implying positive selection, is consistent with the findings of Hatton and Williamson (2002) and Clark, Hatton and Williamson (2007).

Political conditions. `Civil Liberties' were found to be a better (more significant) proxy of the degree of political freedom than `Political Rights'. The positive effect of `Civil Liberties' in the Israeli OLS regression indicates that less civil liberties are correlated with more immigration to Israel. This effect was not found neither in Europe nor in the U.S. (or in the Israeli Fixed Effects regression). The positive sign of `Civil Liberties' weakens the assumption that civil liberties serve as a proxy for immigration restrictions, and suggests that this variable has captured `push factors' that stem from individuals' preference for higher degrees of liberty. The effect of military expenses in the origin country (as a share of GDP) is significant in the European Fixed Effects regression, suggesting that a rising atmosphere of hostility in the origin country leads to higher emigration rates, as expected. However, in the U.S. OLS regression, military expenses were found to have a

negatively significant effect. One possible explanation is that European countries tend to receive more refugees than the U.S. In the U.S. case, military expenses might have partially captured the effect of policy restrictions, preventing the immigrants from reaching the U.S.

Geography and Trade. Geographical distance was found significant only in the Israeli OLS, with a negative sign, counter to theoretical predictions: more immigrants come from more distant countries. The estimates for total trade continue the overall tendency of the regression results for Israel; the negative sign in the Israeli OLS regression does not match theoretical predictions, while the positive sign in Europe is consistent with theory. The negative effect of total trade in the U.S. may be explained by assuming that an increase in the rate of trade with the U.S. increases the average wage in the source country, thus reducing incentives for immigration.

6. Conclusions

This paper undertakes a comparison between the determinants of migration flows into Israel, Western Europe and the U.S. The results lend support to the idea that immigration to Israel, at least in the period 1990-2004. is driven by unique factors. Thus in the OLS regression for Israel, the signs of most of the estimates are contrary to the usual ones, as found for EU-13, with the exception of 'network effects', which are found to be consistent with the theory.

A major question for future research is what other specific factors explain immigration to Israel, given that most of the traditional ones do not provide such explanation.

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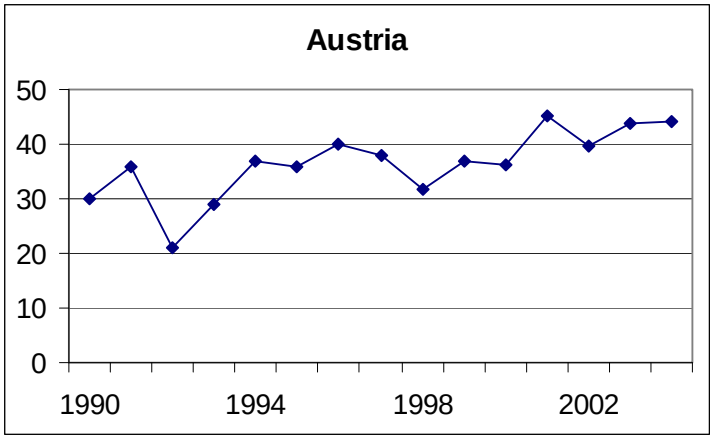
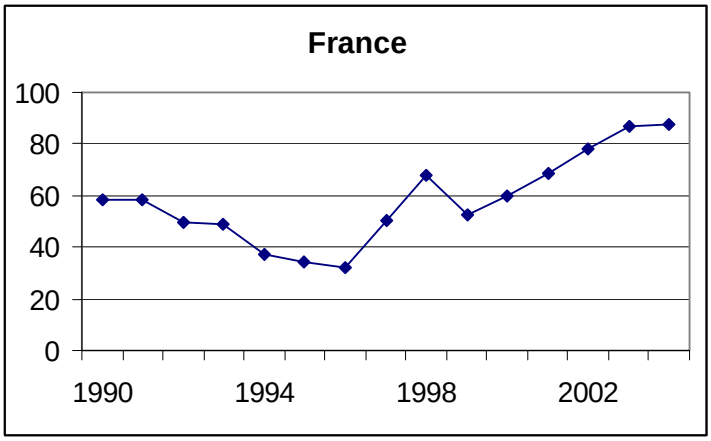
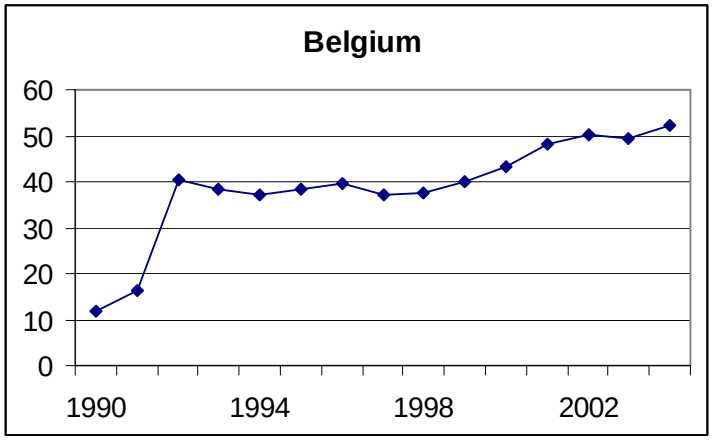
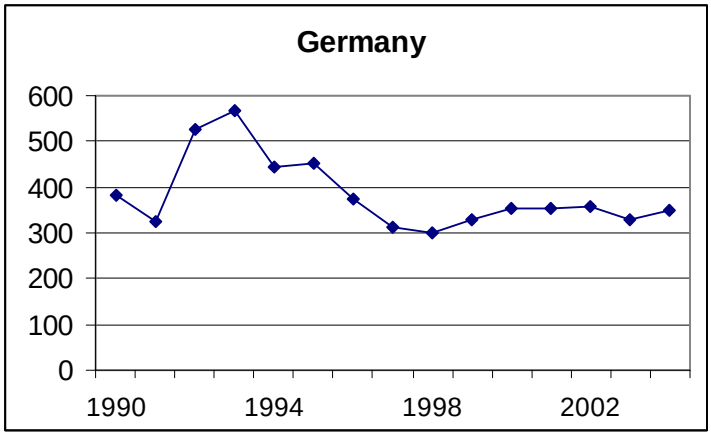
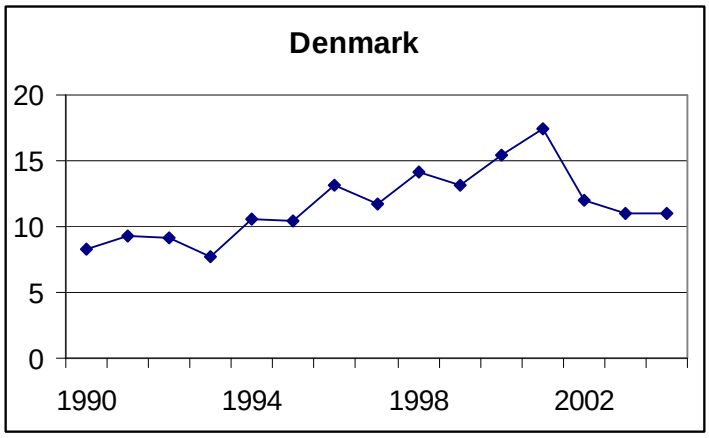
Appendix 1: Total immigrant inflow (thousands) by destination country

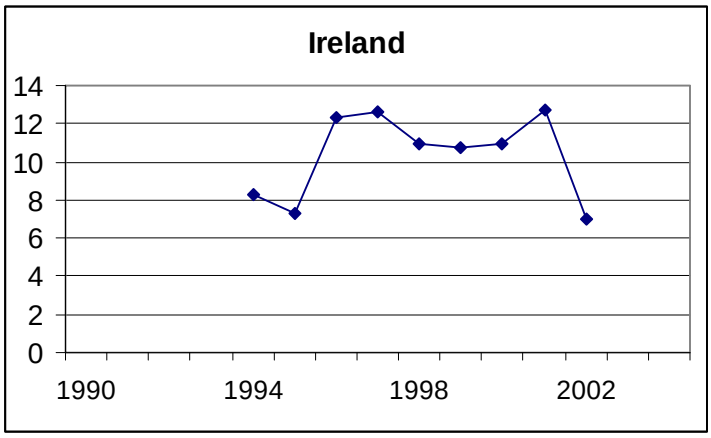




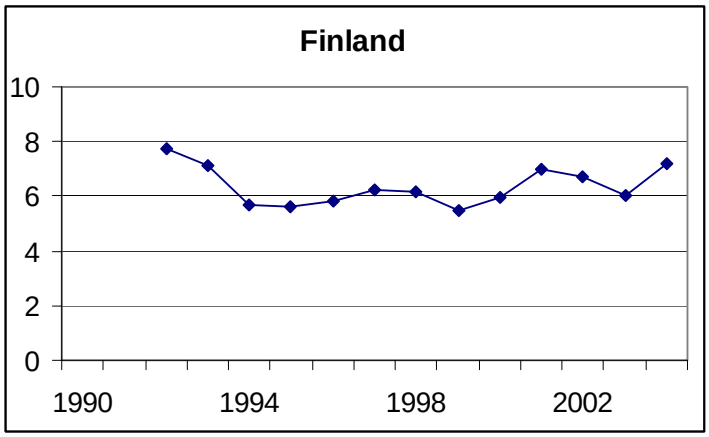


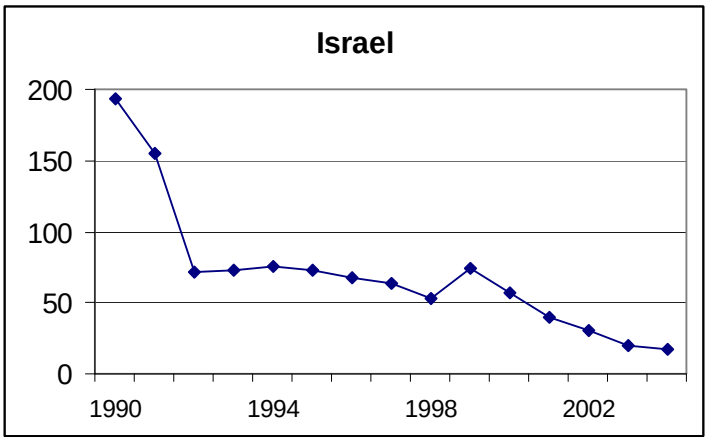


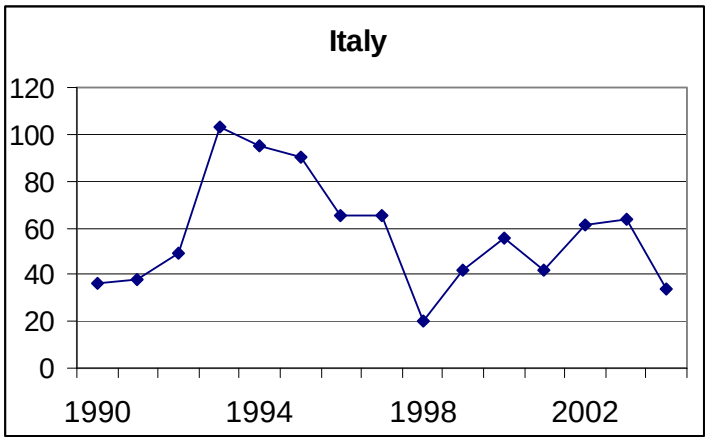


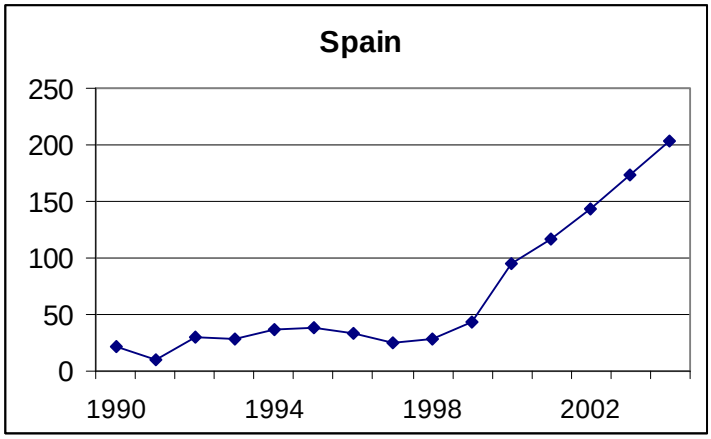


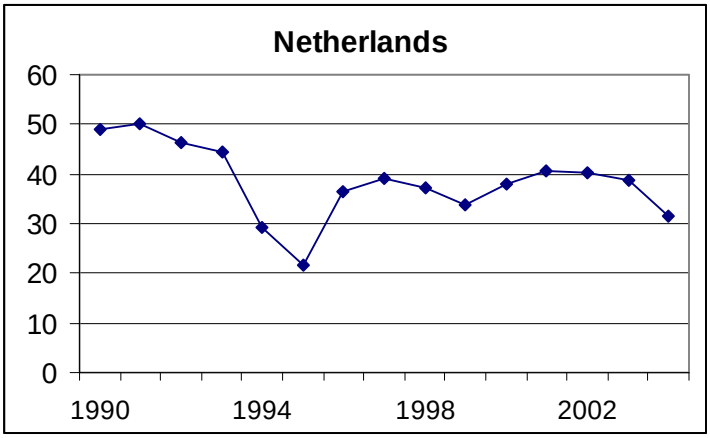
Appendix 1 (cont.): Total immigrant inflow (thousands) by destination country 1990-2004

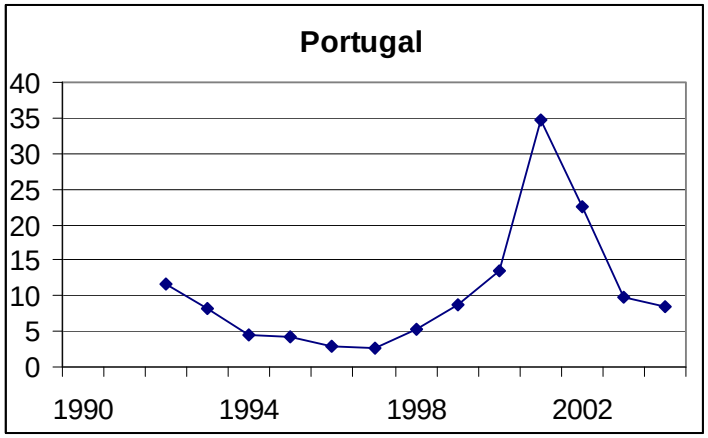




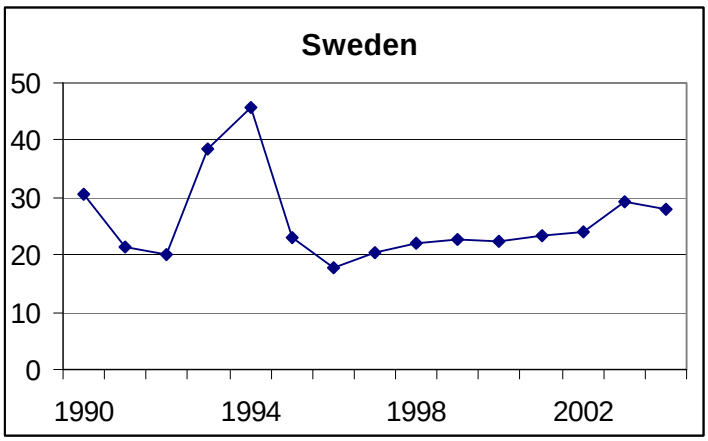


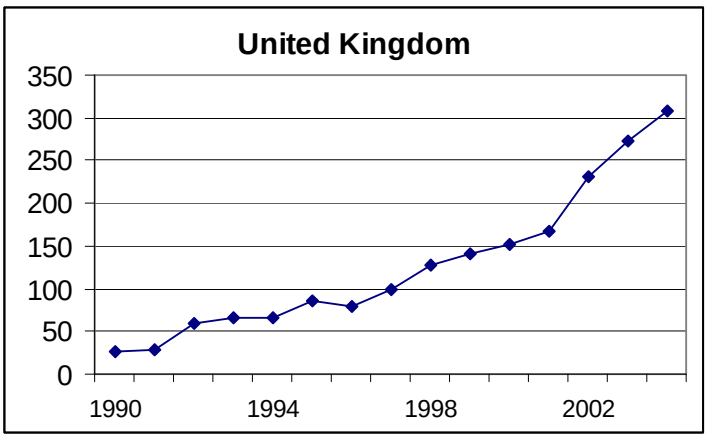


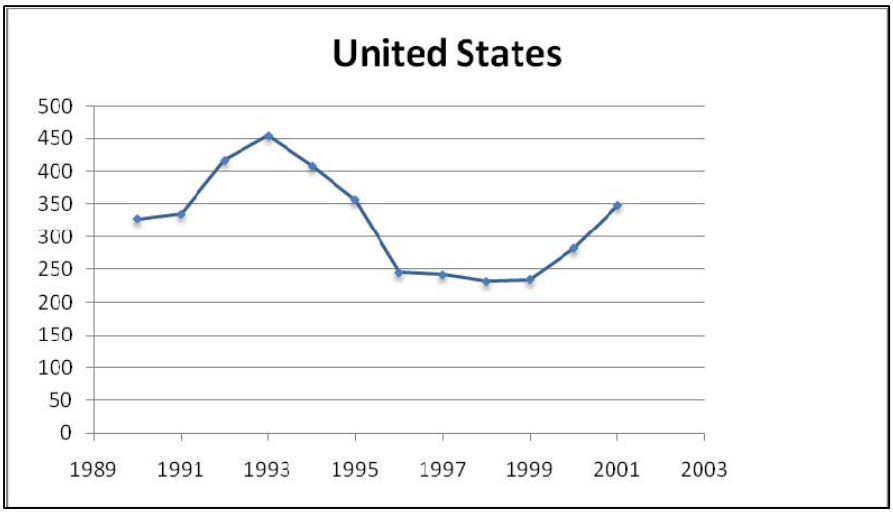




Appendix 1 (cont.): Total immigrant inflow (thousands) by destination country







Source: OECD (SOPEMI) and the Israeli Central Bureau of Statistics

Appendix 2: Immigration to Israel

Top 6 Origin countries

1990-2004

	Origin	No. of Immigrants	% of Total Immigration	Cumulative
1	Russian Federation	933,880	89.1%	89%
2	United States	22,654	2.1%	91%
3	Argentina	18,866	1.8%	93%
4	France	17,345	1.6%	95%
5	Romania	6,288	0.6%	95%
6	United Kingdom	6,282	0.6%	96%
	Other	44,708	4.2%	100.0%

Source: CBS