

# OECD MIGRATION, WELFARE AND SKILL SELECTIVITY

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Recent migration patterns show growing migration pressure and changing composition of immigrants in many Western countries. According to theory, the impact of immigration depends on the skill distribution of immigrants compared to the natives. During the latest decade, an increasing proportion of the immigrants have been from poor countries, where the educational level of the population is low. The comprehensive income support schemes, social safety net and a high tax pressure, may play a role in changing the composition of migration flows. This paper presents empirical evidence on immigration flows into 27 OECD countries over the period of 12 years, 1989–2000. Using a fixed effects panel data model, we analyze the determinants of the migration flows during the latest decade. We study whether there are significant selectivity effects in international migration flows, i.e. whether the countries with generous welfare schemes and high tax pressures tend to attract the low-skilled migrants. We look as well at the role of migration networks and non-economics factors such as cultural and linguistic distance or threat to own freedom and safety.

**Keywords:** Immigration, welfare, income distribution

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## 1. INTRODUCTION

In the near future many rich OECD countries expect to face the problem of declining and ageing populations. Demographic projections by the United Nations (UN) suggest that during the next five decades Europe and Japan might *et par.* lose 12 and 17 percent of their population respectively. The post-war “baby boom” generation coupled with a higher life expectancy account for an exponential growth in the number of elderly people increasing their numbers in OECD countries from a level of 152 million in 2000 to a predicted 300 million in 2050. This will impose an increasing pressure on the welfare systems in these countries as public pension payments will absorb a growing share of total national incomes. Immigration of young people to these ageing OECD countries is one of the possible solutions that has been discussed in relation to this problem<sup>1</sup>.

However, the opponents of immigration as a solution to the ageing problem fear negative impacts on the labor market, public finances and social conditions. Recent studies on immigrants’ economic performance show that they actually tend to be more welfare dependent than natives. Thus immigration may not be a solution to the problem of population ageing but might instead impose a higher fiscal burden for the receiving economies, see Riphahn (1998), Hammarstedt (1998, 2000), Pedersen (2000). As an example, Wadensjö and Orrje’s (2001) study of immigrants and their economic performance in Denmark shows that the net fiscal impact of immigrants from Non-Western countries is a net cost from a public finance perspective. The main reason for this result is that the employment rate for Non-Western immigrants has been much lower than for natives in many European countries, see for instance SOPEMI (2003). These results clearly reject the hypothesis that immigration will bring a fiscal relief to natives. This is one of the reasons why international migration has become a major issue of discussion and analysis in a number of developed countries.

Why has immigration in many European countries become an economic problem instead of an economic gain as it was usually considered a few decades ago? According to some authors – see for instance Borjas (1994) and Chiswick (1986, 2000), recent migration patterns show that the composition of immigrants is changing. Over the last decade, the waves of migrants have mostly been coming from poorer countries where educational levels are relatively low. One may ask

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<sup>1</sup> To illustrate this point, the 2000's UN report estimates that the European Union should have to accept 1.4 million immigrants a year to keep its labour force stable and to sustain economic growth.

why many developed countries seem to attract groups of immigrants with lower skills? The explanation may be the changing character of these countries towards higher welfare associated with growing generosity in the social services and benefit levels. Comprehensive income support schemes, social safety net and a high tax pressure are nowadays characteristics of many OECD countries. According to the theory, see Borjas (1987, 1999), the generous characteristics of the welfare state may also play an important role in migrants' decision of choosing country of destination, the so called "welfare magnet effect"<sup>2</sup>. On the other hand a number of non-economic factors are also highly important regarding the migration decision. Beside classic factors as "love and wars", these include luck, random events, environment, climate and probably the language knowledge and aspects of the "cultural distance". Regarding the last factor it is a standard result that the more "foreign" or distant the new culture is and the larger the language barrier, the less likely is an individual to migrate. Such disincentives are reduced if the concerned ethnic group is already present in the destination country, the so called network effect. Thus, an unanswered but interesting question is: how much do the economic factors explain migration behavior, and how much is explained by other factors like cultural and linguistic distance, migrant networks, threat to own freedom and safety, random events or love?

This paper adds to the empirical evidence regarding the migration pattern in the OECD economies by analyzing, which immigrant groups tend to go to which countries and by attempting to explain why this migration pattern is observed by relating the observed flows to the type of variables mentioned above. This is done by estimating a number of regression models on the flow of migrants from 129 countries to 27 OECD countries annually for the period 1989 - 2000.

The rest of the paper is organized as follows: The next section surveys the economic literature on international migration. The third section describes immigration development and trends into the OECD countries, and contains a description of our database. Section Four presents the basic model on international migration we are estimating. Results from the econometric analyses are given in the fifth section. Section Six finally offers some concluding remarks.

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<sup>2</sup> The theoretical contribution is found in Borjas (1987). Within the framework of the Roy model (1951) Borjas looked not only on the national wages means but also on the impact from the variance of the wage distribution. The composition of the migration flows by skill is determined by the individuals' position in the home country wage distribution and the cross-country variance differential. So the model predicts that a country with a low wage dispersion will have an overrepresentation among the below average performed immigrants.

## 2. THEORY AND LITERATURE REVIEW

### a. Traditional literature on migration

The issues concerning migration, its determinants and its consequences, have been much in focus in the economic literature during the latest decades. In neo-classical economics, based on rationality and utility maximization, differentials in economic well-being, particularly wages, are regarded as the primary determinant of migration. Such a view was clearly expressed by J. R. Hicks in his statement: "...differences in net economic advantages, chiefly differences in wages, are the main causes of migration" (Hicks, 1932, pg 76). This traditional view is further reflected in the empirical literature on migration of workers as the "human capital" framework (Sjaastad, 1962) predicts that a person acting rationally decides to move if the discounted future expected benefits exceed the costs of migration.

However, the incentives to migrate measured only by differentials in expected earnings have in reality failed to explain why so few people move given huge differences in wages across the world. Some modifications within the neo-classical framework have been introduced, e.g. the model by Harris and Todaro<sup>3</sup>(1970) showing that one must take into account the employment opportunities in the destination region as the labour markets are not perfectly functioning. The modified model predicts that migration is motivated by expected earnings differentials, i.e. earnings adjusted for the probability of being employed or being unemployed. Some studies have put forward the argument that migration flows are responsive to the number of job opportunities in different regions perhaps even more so than to wage or income differentials (i.e. Jackman and Savouri, 1991). Further, the decision to migrate has been seen as a family or household decision. A move takes place only if the net gain accruing to some members exceeds the others' net loss (Mincer 1978, Holmlund 1984).

A step further is made by the new economics of labour migration, which sees labor migration as a risk-sharing behavior in families. In contrast to individuals, households may diversify their resources such as labor, in order to minimize risks to the family income (Stark, 1991). This theory implies that the more unequal the distribution of income is in the source country, the stronger are the migration incentives, see Arango (2000) for more detailed discussion. Thus, the new economics of migration draws attention to the income distribution. However, the

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<sup>3</sup> Harris and Todaro (1970) analysed rural-urban migration.

theoretical investigations of new economics of labour migration concern only the causes of migration at the sending side.

The importance of past and present linkages between countries is emphasized by the “world system theory”, see Arango (2000) for an overview. Nevertheless, this theory has been criticized as migration flows between historically unconnected or weakly connected countries are increasingly frequent. Another theory is based on migration networks. Immigrants do not have full information on the alternatives of potential immigration targets and often they perform only limited search. One possible way to reach relatively good and safe decisions in the case of uncertainty and imperfect information is to decide on the basis of migration network’s information. 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” (Massey et al., 1993). Empirical evidence around the world has shown that migrant networks have significant impact on sequential migration (Bauer et al., 2002).

Until now, the models of migration networks have been based on the network externalities theory. Positive externalities exist if the immigrant utility (utility of newly coming immigrants and previous immigrants) grows in response to an increase in the number of newcomers. The network externalities theory distinguishes between so called community effects, which increases the utility of a community (i.e. inflow of people from the same nation helps creating subcultures), and family effects, which increases the utility of only friends and relatives (Carrington et al., 1996). However, there might as well be a negative effect stemming from continuously increasing immigration population. The growing number of immigrants increases competition among immigrants on the market and may reduce wages, so that accelerated migration could put strain on immigrant’s well-being.

Heitmueller (2003) is considering the case where the previous immigrants due to negative externalities withhold information and discontinue their assistance to potential immigrants and newcomers. He argues that sustained immigration beyond the optimal network size is due to co-ordination failure among previous immigrants. While it is collectively optimal to terminate support, individuals may still find it beneficial to accept an addition in their individual networks.

Possible explanation of persistent immigration is given by Epstein (2002) and Bauer et al. (2002). They show that both network externalities and “herd behaviour” have significant effects

on the migrant's decision on the choice of destination. They argue that the network externality effect has an inverse U shape. However, they see persistence of migration flows as a herd behaviour, which may play a role even when the externalities are negative. The network effect on immigrant's decision-making implies "I will go to where my people are, since it will help me" but the herd effect in the case of migration means: "I will go to where I have observed others go, because all these others who went before most probably have information that I do not have, even though I would have chosen independently to go elsewhere" (Bauer et al., 2002). They further try to combine these two theories and provide empirical evidence on location choice of Mexican immigrants in the U.S. They show that both network externalities and herd behaviour have significant effects on the migrant's decision on where to migrate.

However, all these theories also fail to explain why so few people move. Therefore, it is also necessary to look at the barriers to immigration: it is obvious to mention the importance of tight immigration policies and social and cultural factors. Clearly, politics and the state are usually missing in the theories of migration and clearly they are some of the main factors shaping migration flows.

#### b. Migration and Welfare

A number of studies have focused on welfare systems and their impact on immigration. The recent studies show mixed results as regards the fiscal impact of immigration in the destination countries.

The study by Fertig and Schmidt (2001) based on micro census data in Germany shows that welfare dependence of immigrants is much lower than for Germans for both first and second generation of immigrants. Similar results have been achieved by Bonin, Raffelhüschen and Walliser (1999). They show that the net contribution of prospective immigrants to the public sector is positive. Therefore, immigration seems attractive for natives because it lowers their future fiscal burden. The positive effect of immigration can be substantially strengthened by a selective immigration policy, which favours skilled immigrants and supports the labor market integration. However, the opposite migration pattern is found for Scandinavian countries during the latest decade.

Wadensjö and Orrje's (2001) study of immigrants and their economic performance in Denmark shows that the net fiscal impact of immigrants from Non-Western countries is much more costly than beneficial: for the period from 1991 to 1998, there was a net transfer from the public sector

to the immigrants. However, immigrants from more developed countries made a positive financial net contribution. The conclusion reached by these authors is that immigration represents a pressure on public expenditures in Denmark. It is estimated that within the next decade immigration could even worsen the situation if the Danish welfare system is to be maintained. Similar findings have been given by Pedersen (2000). The author has estimated a static impact of immigrant on public sector revenue and expenditures. The average amount per immigrant from non-OECD countries was – 82.000 DKK and the total net contribution of immigrants was estimated to be -11.3 m DKK corresponding to 1.2 per cent of GNP in 1995. These results reject the hypothesis that immigration will solve the problem of population ageing by bringing a fiscal relief to natives, as has been hoped for. Hammarstedt (2000) studied the reliance of Swedish immigrants on social safety net in 1985 and 1990. Riphahn (1998), Hammarstedt (2000) and Blume and Verner (2003) have studied the determinants of immigrants' versus natives' welfare dependence for Germany, Sweden and Denmark respectively. For Germany it is found that immigrants are more likely to be welfare dependent with longer time spent in Germany. However, the study by Blume and Verner shows the opposite result, the Danish immigrants tend to assimilate out of dependency and public income.

There is one clear pattern coming from these studies, namely, that immigration success is highly dependent on the skills of immigrants compared to natives. The literature on international migration suggests that immigrants arriving are not randomly selected from the countries of origin, see Borjas, 1999 for an overview. The theoretical contribution is found in Borjas (1987). Within the framework of the Roy model<sup>4</sup> (1951) Borjas looked at the skill differentials between immigrants and natives according to the variance in the wage distribution. The composition of the migration flows by skill is determined by the individuals' position in the home country wage distribution and the cross-country variance differential. Above average performers in the home labor market are potential emigrants to a country with big wage dispersion. On the other side, below average performers are expected to move to a country with low wage dispersion. So, the model predicts that a country with a low wage dispersion will have an overrepresentation among the below average performing immigrants. The more positively selected migrants are, the more

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<sup>4</sup> Self-selection model has originally been developed by Roy (1951). Roy was analysing the effect that individual characteristics (ability, productivity, quality or skill) have on the distribution of earnings. In particular, he showed that the activity (or location) which has more dispersed distribution of potential performances will attract the most skilled workers since it rewards them proportionately better.

successful will their adjustment be in the new country and the more beneficial their impact on the destination economy and society; see Storesletten, K. (2000).

The Borjas study gained lots of attention and critique as well, i.e. Jasso and Rosenzweig (1990), Chiswick (2000). For example, one of the important assumptions of the Borjas' model is the non-existence of fixed out-of-pocket money costs, which in reality are quite high (e.g. transportation costs, housing), and which are considered very important in human capital migration models (Chiswick, 2000). These migration costs constitute huge barriers to migration especially for low-skilled people from poor countries characterized by an unequal income distribution. Therefore, there could very well be a positive selection from countries with an unequal income distribution.

Such considerations seem to be reflected in results from empirical studies, which fail to give clear support to the Borjas theory. For example, Urrutia (2001) shows that immigrants from different countries of origin perform differently in the U.S. labour market. His results support the theory that immigrants are self-selected and performing differently as regards the differences in the earnings. However, he argues that the relative costs of migration present the main explanation of this pattern. Namely, so that countries with relatively low (high) fixed costs, e.g. due to geographical distance, are more likely to send immigrants from the bottom (top) of the distribution of abilities. Different possible immigration policies are analyzed in his study as well. One result is to show that replacing the existing quota system in the U.S. with an entry fee charged equally to all immigrants is a very efficient instrument to obtain an optimal immigration policy.

Chiquiar and Hanson (2002), using Mexico and U.S. census data, examine the skill selection of people migrating from Mexico to the United States and how the performance of these individuals compare to those remaining in Mexico. According to the Borjas - Roy model, the Mexican immigrants to U.S. should be below average performers on the Mexican labour market.

However, they found that Mexican immigrants while much less educated than U.S natives are on average more educated than the average residents of Mexico. This is especially true for Mexican females. Thus according to the authors there is intermediate or positive selection of immigrants from Mexico to the United States.

Some empirical research on this issue has been conducted for European countries as well. Hatton (2002) studies net immigration into Britain and examines the effects of relative incomes, income

inequality and immigration policy on the immigration flows. According to his study, migration to Britain can largely be explained by economic variables. The increase in inequality in Britain (40 % in time period being studied) is found to be the most important single cause of rising net immigration to Britain.

Borjas (1999) focuses on the level of welfare as a pull factor for potential immigrants<sup>5</sup>. The theoretical background comes from a neo-classical framework, given that potential emigrants must take into account 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. Such welfare income is basically a substitute for the wage income during the period of searching for a job. Borjas (1999) investigates whether immigrants' location choices after arrival to the United States are influenced by the dispersion in the welfare benefits. He defines a "magnetic" effect of welfare. In his paper, he argues that immigrant welfare recipients will be clustered in the state that offers the highest welfare benefits – while the native welfare recipients will be much more dispersed across the states. His empirical work indicates a negative selection of immigrants into California – a state with relatively generous system compared to other US states.

Contrary to Borjas findings, Zavodny (1997, 1999) argues that immigrants do not respond to interstate differentials in welfare generosity but rather to differences in the sizes of the foreign-born populations. Zavodny (1997) focuses in her study on destination of immigrants in United States from eighteen countries of origin who arrived in 1982 and 1992. By using aggregate data on immigration levels to the United States, she found little evidence that new immigrants will choose their destinations based on level of welfare generosity. New immigrants are attracted to areas with large immigrant populations indicating that network effects dominate. However, because earlier immigrants have been disproportionately located in high-welfare states, it may appear that high welfare benefits attract immigrants. Vedder et al. (2000) also found no evidence that US immigrant settlement was determined by high levels of welfare benefits. They argue that higher immigrant overrepresentation in the welfare system compared to previous years is due to (1) the increase in the relative numbers of immigrant in the population, (2) the marked tendency for immigrants to settle in high income states, which are usually the high welfare-benefit states

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<sup>5</sup> The "welfare magnet" effect has been first analyzed on the bases of inter-regional, inter-state moves of the natives in connection with changes in welfare benefits levels. The results of the research on this issue are mixed, ranging from large welfare magnet effects (Enchautegui, 1997) to fairly modest in size or no welfare magnet effects on locational choice of low-income natives (Kaestner, Neeraj and Ryzin; 2001 and Meyer; 1998). Borjas (1999) has used this framework for studying the behavior of immigrants.

as well and (3) high welfare participation of refugees. By estimation of a standard immigrant-settlement model they show that immigrants have not been sensitive to either availability of or relative attractiveness of welfare benefits in making location decisions.

Sierminska (2002) analyses location decision of immigrants in relation to native Americans using various techniques including difference-in-difference methods. Her study shows that welfare benefits do not play a big role in immigrant behavior. She finds that immigrants indeed cluster in high benefit regions, but their migration pattern is positively correlated with the change over time of economic variables other than welfare benefits such as the wage rate. Thus immigrants do cluster in California, but regardless of their welfare dependency status.

There is little research so far on the issue of welfare magnets and selectivity of migrants for the European countries, although there are heated debates on this issue as many of the European Union member countries possess generous welfare systems and face intensive immigration pressure. A new study by Boeri, Hanson and McCormick (2002) show that welfare benefits distort the composition of immigrants, both in terms of observable and unobservable characteristics. They show that although the effects are quantitatively moderate, some of the most generous countries seem to act as welfare magnets.

Further, there exist literature on emigration and/or return migration and skill selectivity, which indicate some support for welfare magnet and skill selectivity theory; Edin (2001); Longva, (2001); Jensen and Pedersen (2001).

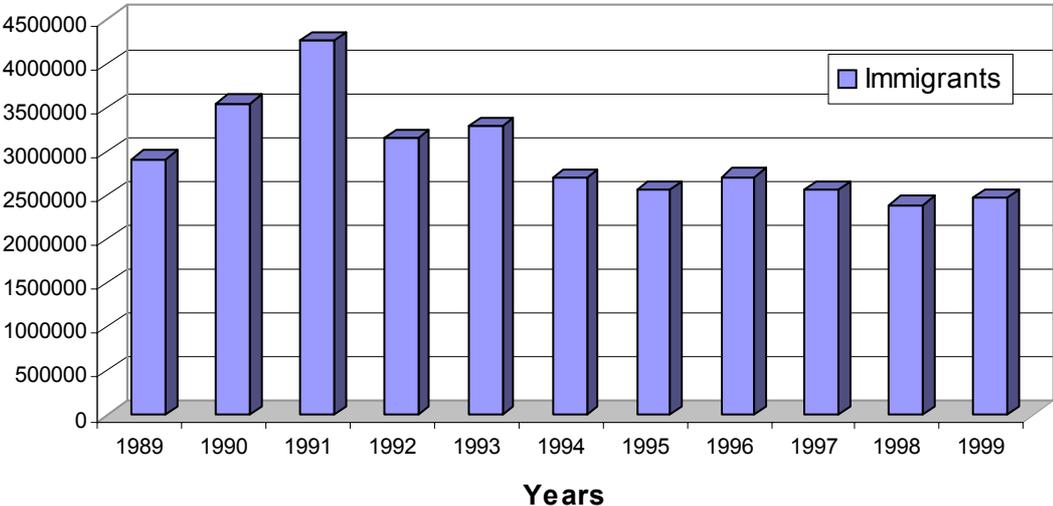
### 3. DESCRIPTION OF MIGRATION TRENDS AND DATA

During the 80s and beginning of 90s the immigration inflows increased almost in all OECD countries. According to Figure 1, which shows the development of total volume of gross immigration inflows into the OECD countries<sup>6</sup> during the period 1989 – 1999, the immigration flow was increased until the 1991 reaching the level of slightly more than 4 mil and since then the gross flow has stabilized at a annual level of about 2,5 mil.

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<sup>6</sup> To be able to compare over the time we have been counting immigration flows into following 19 OECD countries: Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Japan, Luxembourg, Netherlands, New Zealand, Norway, Poland, Spain, Sweden, Switzerland, United States.

Figure 1: Total volume of gross immigration inflows into OECD countries, 1989 - 1999



Source: own calculation

After 1991, the gross inflow of immigrants of legal immigrants has fallen mainly due to immigration restrictions (SOPEMI, 2001) and has been stabilized at a level of about 2,5 mil immigrants per year. For information on immigration flows into each particular OECD country in absolute numbers and immigration growth see Tables 1a and 1b.

TABLE 1a and 1b ABOUT HERE

The number and share of foreigners living in OECD countries are given in the Tables 2a and 2b.

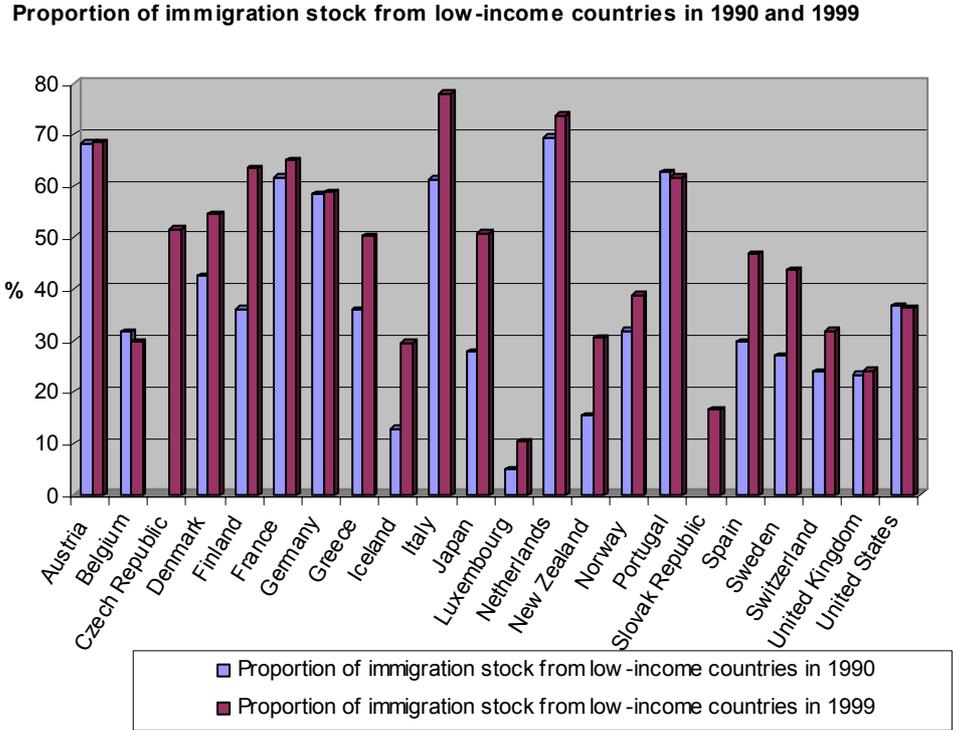
TABLE 2a and 2b ABOUT HERE

However, aggregate data tell us relatively little about the immigration and immigration practices of each country. Therefore, it is necessary to look more deeply into the immigration structure. Table 3 shows immigration flows for five the most important source countries for each particular OECD country and relevant number of stock of foreign population. Many developed OECD countries face immigrations that are not only rapidly growing but also changing in composition – see Table 3. There are many new source countries, what we can observe by looking at the comparison of the percentage of inflows on the total inflows volume with the percentage of stock of foreign population on total volume of foreign population from the previous year<sup>7</sup>.

<sup>7</sup> In the Table the flows are registered for the year 1999, the stock for the year 1998.

As we can see from following figure, the stock of immigrants coming from poor – low-income countries increased almost in all destination countries.

Figure 2: Proportion of immigration stock in 1990 and 1999 originating from low- and lower-middle income countries.



Definition of low- and lower-middle- income countries is given by World Bank (also by UN). For the exact definition and list of countries see Data Appendix.

**DATABASE**

In general, data availability for the analysis of international migration is very unsatisfying. In order to have more precise data on immigration, we have collected a dataset coming from national statistical offices supplemented by OECD Source statistics. The dataset contains detailed information on immigration flows and immigration stock in 27 OECD countries from 129 particular countries of origin. Besides, we have collected many other variables, which can help us explain the immigration behavior. We observe 12 years period: 1989 – 2000.

Variables have been collected from the sources of World Bank, International Labor Organization, OECD Source statistics and national statistical offices of particular OECD

countries. For a detailed description of definition, statistical sources and descriptive statistics of variables used in analyses, see Data Appendix.

#### 4. A MODEL OF INTERNATIONAL MIGRATION

Assume that potential migrants compare alternative potential destination countries and choose the country, which provides the best opportunities, all else equal. So, the individual follow utility-maximizing behavior. Immigrant's decision to choose a specific destination country depends on many factors, which relate to the characteristics of the individual, the individual's country of origin and all potential countries of destinations. Following Zavodny (1997) we consider individual  $k$ 's expected utility in country  $j$  at time  $t$  given that the individual lived in the country  $i$  at time  $t-1$ .

$$U_{ijkt} = U(S_{ijkt}, D_{ij}, X_{ijkt}) \quad (1)$$

where  $S_{ijkt}$  is a vector of characteristics that affect a individual's utility of living in country  $j$  at time  $t$  given that individual lived in country  $i$  at time  $t-1$ . For example, an individual may want to move to a country where his friend or family members are.  $D_{ij}$  reflects time-fixed costs, fixed-out-of pocket and psychological/social costs of moving from country  $i$  to country  $j$ .  $X_{ijkt}$  are characteristics of country  $i$  and country  $j$  at time  $t$ .  $X_{ijkt}$  is a matrix of the economic explanatory variables of the source and destination countries that varies across time and affect individual  $k$ 's choice, i.e. average income, unemployment rate, welfare benefits.  $j$  denotes particular countries of destination ( $j = 1, \dots, 27$ );  $i$  denotes particular countries of origin ( $i = 1, \dots, 129$ );  $t$  is time period ( $t = 1, \dots, 12$ ).

We assume the utility of an individual having a linear form:

$$U_{ijkt} = \alpha_1 S_{ijkt} + \alpha_2 D_{ij} + \alpha_3 X_{ijkt} + \varepsilon_{ijkt} \quad (2)$$

where  $\varepsilon_{ijkt}$  presents idiosyncratic error and  $\alpha_1, \alpha_2$  and  $\alpha_3$  are vectors of parameters of interest to be estimated.

A potential immigrant maximizing his utility chooses the country with the highest utility at time  $t$  conditional on living in country  $i$  at time  $t-1$ . Thus, we can write the conditional probability of individual  $k$  choosing country  $j$  from 27 possible choices as:

$$\Pr(j_{kt} / i_{kt-1}) = \Pr[U_{ijkt} = \max(U_{ki1t}, U_{ki2t}, \dots, U_{ki27t})] \quad (3)$$

Model (3) might be used for estimation of the determinants of the individuals' locational choice. However, as we use macro data we aggregate up to population level by summing  $k$  individuals. The number of individuals migrating to country  $j$ , i.e. whose utility is maximized in that country, is given by:

$$M_{ijt} = \sum_k \Pr[U_{ijkt} = \max(U_{ki1t}, U_{ki2t}, \dots, U_{ki27t})] \quad (4)$$

where  $M_{ijt}$  is the number of immigrants moving to country  $j$  from country  $i$  at time  $t$ .

We assume a linear form of the variables that influence locational choice of immigrant. The function is following:

$$M_{ijt} = \beta_1 S_{ijt} + \beta_2 D_{ij} + \beta_3 X_{ijt} + u_{ijt} \quad (5)$$

where  $u_{ijt}$  presents an error term assumed to be *iid* with zero mean and constant variance .

In the further specification of the model we include destination countries fixed effects<sup>8</sup> to capture for unobserved factors influencing immigration flows i.e. for changes in national immigration policy, business cycle etc. To express the immigration flows into the particular destination countries better, we use the immigration rate,  $m_{ijt}$ , instead of immigration flow in absolute numbers<sup>9</sup>. Further, we consider the stock of immigrants,  $S_{ijt-1}$ , and matrix of explanatory variables of the source and destination countries that vary across time,  $X_{ijt-1}$ , as lagged one period to count for information on which the potential immigrants base their decision to move.

$$m_{ijt} = \beta_1 S_{ijt-1} + \beta_2 D_{ij} + \beta_3 X_{ijt-1} + c_j + u_{ijt} \quad (6)$$

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<sup>8</sup> The OLS estimator is biased if  $u_{ijt}$  is correlated with regressors -  $X_{ijt}$  and  $D_{ij}$ . Therefore, we better consider a fixed effects (FE) estimator that allows for arbitrary correlation between unobserved effects and explanatory variables (Wooldridge, 2001). We could obtain the random effects (RE) estimator by applying GLS on (6) and thus we could allow estimating the time-invariant variables. However, the RE estimator is based on the assumption of exogeneity. If there is endogeneity among regressors, GLS will yield biased and inconsistent parameter estimates. A way to test the hypothesis that individual effects are uncorrelated with  $X_{ijt}$  is the Hausman test based on comparison of estimated parameters from FE and RE, see Wooldridge, 2001, Chapter 10.7.3.

<sup>9</sup> Immigration rate,  $m_{ijt}$ , is immigration flow to country  $j$  from all other particular countries of origin  $i$  expressed per population of the country  $j$ , in the period  $t$ .

We include the information on the stock of immigrants  $S_{ijt-1}$  as a major role in migration process is referred to the existence of “networks” - links between sending and receiving countries. Through the “networks” the potential migrants receive information about the immigration country - about the possibility of getting job, about economic and social system, immigration policy, people and culture. It facilitates easier immigration and further easier adaptation of newly coming immigrants into the new environment.

A matrix  $D_{ij}$  contains variables reflecting costs of moving to foreign country. First, we add a variable describing cultural similarity denoted *Neighboring Index*. It is in the form of a dummy variable having value 1 if the two countries are neighbors, 0 otherwise. Next, we look into the relationship between countries given by common historical past. This is of some interest as e.g. the past colonial ties could have some influence on the shortening cultural distance: provide better information and knowledge of potential destination country and thus lower migration costs, which could encourage migration flows between these countries. Thus, we create the colony index, *colony*, again in the form of dummy variable with value 1 for countries ever in colonial relationship, 0 otherwise. We try to incorporate an interesting question into our analyses: What role does the linguistic distance play in explaining migration behavior? We include variable capturing linguistic distance in the form of dummy with value 1 for common language in two countries, 0 otherwise.

The hypotheses behind is that there will be higher migration flows between the countries with common language spoken, common historical and cultural ties than between countries without such ties.

To control for the direct costs<sup>10</sup> (proxy for transportation costs) of migration we use the measure of the *distance in km* between sending and receiving country. The longer the distance between the countries the weaker should be the migration flows. We add as well variable on the volume of trade between two countries suggesting that the business ties could have importance in international migration.

The explanatory variables included in matrix  $X_{ijt-1}$  covers an influence of economic factors such as the difference in economic development measured by GDP per capital, employment opportunities in the sending and receiving countries, measured by unemployment rate, and

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<sup>10</sup> This variable is taken often as proxy for cultural and linguistic distance as well.

demographic factors such as the population. The hypothesis is that increase (decrease) in the economic development in the destination (source) country will lead to higher immigration rates. It is expected, following Harris and Todaro study, that lowering (rising) unemployment rate in the destination (source) country will cause higher immigration flow. The higher the population in the source countries the larger migration pressure is expected.

Another set of explanatory variables included in matrix  $X_{ijt-1}$  embodies the educational level of the source countries and political pressure expressing political motive to move. Regarding the first one, we use the adult illiteracy rate measure. The political pressure variable is expressed by the Freedom House Index representing the degree of freedom, political rights and civil liberties in the countries. The variable is in the form of dummy varying from one to seven, with one representing the highest degree of freedom and seven the lowest. Violated political rights and civil liberties are expected to increase migration flows.

We are interested whether the potential destination countries have some “magnetic” power in the migrants’ decision of choosing country of destination, as presented by Borjas (1987, 1999). To test this hypothesis, we add following variables into regressions: the public social expenditure and tax revenue, both expressed as a percentage of GDP in the potential destination countries and Gini coefficient<sup>11</sup> for these countries. According to the welfare magnet theory, we expect higher migration flows into countries with lower income inequality and tax level, and with higher level of public social expenditure in potential destination countries.

Further, we follow Borjas’ argumentation and try to test whether there is negative selection into the welfare states, and whether the immigrants from the poor countries with lower educational level are more likely to move to the countries with higher welfare and more equal income distribution.

In order to capture this effect we create an interaction term of welfare magnet variable in the destination country and economic development level in source country,  $I_{ij}$ . We use three different operationalizations of the interaction term. First, we create an interaction of tax revenue variable in  $j$  country and GDP per capita in  $i$  country, second an interaction of public social

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<sup>11</sup> Gini coefficient measures the extent to which the distribution of among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of zero represents perfect equality, while an index of 100 implies perfect inequality.

expenditure in  $j$  country and GDP per capita in  $i$  country and finally, an interaction of Gini coefficient in  $j$  country and GDP per capital in  $i$ . Our model is thus finally defined in the following form:

$$m_{ijt} = \beta_1 S_{ijt-1} + \beta_2 D_{ij} + \beta_3 X_{ijt-1} + \beta_4 I_{ij} + c_j + u_{ijt} \quad (7)$$

All variables we use in the estimations, except for the dummies, are in logs, so that the estimated coefficients represent impact elasticity. The results are discussed in the following section.

## 5. RESULTS

In this section we present the results from estimating the model in Section 4 on data on annual migration from 129 countries into 27 OECD countries for the period 1989 – 2000. The results from the regressions are shown in Tables 4 and 5. The regressions have been run both without and with fixed effects for each of the 27 destination countries. The explanatory variables are collected from a multitude of sources and fall into a number of groups, i.e. demographic, geographic, economic, linguistic and historic data.

TABLE 4 ABOUT HERE

TABLE 5 ABOUT HERE

### **Effects from network variable**

The first variable, Stock of Foreigners, is a measure of the lagged number of people of a given immigrant nationality relative to the stock of natives in each country of destination. The variable is intended to be an indicator of the size of the ethnic network in the destination country that may have an impact on the ease with which new immigrants are integrated into the host country. This again can have an impact on the flow of immigrants with the same nationality. We do find a consistently strong and highly significant effect from the lagged stock of immigrants of the same nationality, indicating the existence of a network effect. This could consist of a number of possible mechanisms, i.e. as a background for family reunification or as indicators of faster access to the labour market in the new country, the more people already there from your own ethnic group.

### **Effects from distance variables**

The variables representing different dimensions of distance are producing somewhat mixed results. The dummy variable for two countries being neighbours has a consistently significant

negative coefficient, i.e. being neighbours has a clear dampening impact on migration flows. The great majority of flows registered in the database, about 95 per cent, occur between non-neighbouring countries.

The variable Distance in kilometers between country capitals has a significant negative coefficient throughout implying smaller migration flows the more apart two countries are geographically.

The variable Linguistic Distance is a dummy variable set at 1 if two countries share the same language and set at 0 otherwise. The coefficient is as expected significant and positive in all regressions indicating that a common language reduces the general costs or barriers for international mobility.

The variable Colony is a measure of historical ties between two countries. It is defined as a dummy variable set at 1 if one of the i-countries has been a colony of one of the j-countries, 0 otherwise. As expected, the existence of these pairwise ties comes out as a significantly positive coefficient to this variable in the fixed effects regressions. In the regressions without country fixed effects the coefficient to Colony is, as expected, dominantly insignificant.

The final variable in the broad group of distance measures is the Trade Volume between the countries pairwise. In the fixed effects regressions we find the expected positive sign to trade, i.e. higher trade between two countries implies a higher flow of migrants. In the regressions without fixed effects, results are more mixed. When the variables for population size, GDP per capita, unemployment and illiteracy rate in the source countries are included, the coefficient to trade volume becomes negative. Before inclusion of these trade-dominating variables we find the same result as in the fixed effects regressions, i.e. a significant positive coefficient to Trade Volume.

### **Effects from economic variables**

GDP per capita in the destination countries has a significant positive effect in all regressions without country fixed effects. This confirms prior expectations that a high average national income is a strong attractor regarding immigration flows. However, when we look at regressions with destination country fixed effects the coefficient to GDP per capita in destination countries becomes significantly negative. But, at the same time we have a vector of country coefficients which mostly are significant and positive. So, in this specification the economic pull factor must be evaluated for each destination country separately. An obvious interpretation is that the country fixed effects capture country specific differences in immigration policies. GDP per

capita in source countries has a negative coefficient which is significant in most cases, i.e. a higher average income has a dampening effect on out-migration. Overall, we thus have the standard result from migration theory that income differentials are important factors.

Next, we include two labour market indicators, i.e. the unemployment rate in destination and source countries. Regarding unemployment in the destination countries, the coefficient is significant and negative in all regressions. This is in accordance with prior expectations that a more depressed labour market is less attractive for immigrants. Regarding the unemployment rate in the source countries results differ between the specifications. In regressions without fixed effects the coefficient is negative and significant in all cases, implying that higher unemployment reduces the outflow of migrants. In a regional context inside a country this would be a counterintuitive result as higher unemployment is expected to push people to other regions. Here, however, we deal with international mobility which is expected to be much more costly in both financial and other terms. Higher unemployment, in a low income country, could simply indicate a situation making it more difficult due to financial restrictions to finance migration to another, eventually distant, country. Looking at the regressions with country fixed effects, the coefficient to source country unemployment rates becomes insignificant. Summing up, we find the most clear effect from destination country unemployment. It should be mentioned also, that unemployment as a concept and a statistical entity is more precisely measured in the destination countries. Besides source country unemployment rates we also include source country population size which has the expected positive sign in all regressions.

### **Welfare state variables**

We include a number of variables in an attempt to capture the eventual existence of welfare magnets in international migration. We use indicators for public social expenditures and tax revenues relative to GDP in destination countries. Further, we include income distribution indicators using the Gini coefficients for destination countries as another variable.

Regarding the Public Social Expenditure variable we find significant positive coefficients indicating a welfare magnet tendency in the regressions without fixed effects. In the fixed effects regressions, coefficients are insignificant to the Public Social Expenditure variable and the explanation is carried by the country dummies.

Looking next at the Tax/GDP ratio we find a nearly complete domination of significantly negative coefficients, indicating that a high Tax/GDP ratio reduces migration into the high tax

country. Regarding the Gini coefficient in destination countries, the results are very clear. We find significant negative coefficients without fixed effects and insignificant coefficients in the fixed effects regressions, i.e. high inequality in destination countries is accompanied by a lower immigration into the country. The comprehensiveness of the welfare state is usually expected to correlate negatively with inequality indicators. The negative coefficients to destination country Gini coefficients thus confirm a welfare magnet tendency.

Overall, results regarding the welfare state indicator variables are somewhat mixed. The social expenditure indicator and the Gini coefficient tend to confirm a hypothesis of immigrants from countries with lower incomes moving to affluent welfare states with emphasis on income security and income equality. On the other hand, the tax variable seems to contain another story of immigrants avoiding countries with high taxes, which is the counterpart to social expenditures and low income inequality. The explanation of this seeming paradox might be a selection that is not fully modeled in the present context where the findings regarding social expenditures and inequality is dominated by flows of low skilled people and where the tax reaction is dominated by higher skilled immigrants.

### **Other variables**

We further include an index for the illiteracy rate in source countries. The coefficient to this variable is significant and negative throughout. It is obvious to interpret the variable as an indicator of the rate of deep poverty in the source countries which makes it more difficult to possess the financial means for migration for people with no or very low education. Finally, we have entered the Freedom House Index for each country among the variables in an attempt to capture push effects due to political oppression etc. We find however no significant impact from this variable. This could reflect that refugees might be imperfectly covered in the database due to different administrative procedures resulting in registration delays or omissions and thus shifting all the explanatory power to the economic variables.

### **Interaction terms**

Finally, we have experimented with entering three interaction terms between the welfare state indicators in destination countries and the average income level in source countries. Looking first at the interaction term between tax revenues in destination countries and GDP per capita in source countries we find significantly positive coefficients to the interaction term in the regressions both with and without country specific fixed effects. This is counter to a simple

welfare magnet hypothesis where an increase in taxes in destination countries or an increase in average incomes in source countries both are predicted to result in a higher flow of migrants.

Next, we look at the interaction term between public social expenditures in destination countries and GDP per capita in source countries. Here we get a significant positive coefficient to the interaction term, both with and without fixed effects. According to a simple welfare magnet hypothesis increasing social expenditures should increase the inflow of immigrants while higher per capita income in source countries should dampen migration. The net prediction is thus indeterminate while the interaction variable results in a finding of increases in both variables leading to higher immigration flows.

Finally, we have an interaction term between Gini coefficients in destination countries and GDP per capita in source countries. The interaction term is significant negative in regressions without fixed effects while it is insignificant in the fixed effects case. Once again referring to a simple welfare magnet hypothesis, higher inequality is expected to correlate with a less comprehensive welfare state, and thus a higher Gini is expected to correlate with a lower inflow of immigrants, just like a higher GDP per capita in source countries. So, in this case the interaction term supports the simple welfare magnet hypothesis for the case without country fixed effects.

## 6. CONCLUSIONS

Based on the database and the model structure we present the first results from empirical work on the migration flows into 27 OECD countries from 129 countries during the years 1989-2000. The estimations are made both using fixed effect panel data model and using regressions without capturing the country fixed effects. We have collected a very comprehensive database of potentially important background factors and a selection of these is being used in the present estimations. The background factors include variables measuring the “distance” between countries in different ways as well as linguistic and historical variables. Further, a number of economic variables are used, including indicators of the extent of national welfare state programs which could be among the attractors in international migration flows. This allows us to examine whether the economic or non-economic factors explain migration behavior and whether there is some effect of the welfare state on selectivity in immigration flows structure.

A key and very robust result of our econometric analysis is that the networks measured as the number of your own national background already resident in a country had a large positive effect

on immigration flows and thus networks play an important role in explaining current immigration flows. Further, linguistic closeness and former colonial ties are important factors, both with a significant impact on migration flows. Geographic distance, on the other hand, has a clear negative impact on migration flows.

The impact from economic factors is measured by entering GDP per capita and unemployment rates in both destination and source countries. The results typically point to effects in accordance with prior expectations, i.e. migration flows react positively to higher income gaps and react negatively to depressed labour markets in destination countries.

Next, we have experimented with a number of welfare state indicators, i.e. public social expenditures, tax revenues and Gini coefficients in destination countries. The results from the regressions without considering fixed effects tend to support a welfare magnet hypothesis, i.e. that comprehensive welfare state programs function as attractors regarding immigration flows. However, together with inclusion of fixed effects into regressions welfare magnet results become somewhat mixed. To some extent this may support the hypotheses that the fixed effects account for some of the selectivity in immigration flows. This seems to be supported by looking into results of regressions with the interaction terms, which in majority are contradictory to welfare magnet theory.

However, these mixed results serve an area for more deep analyses in the future work with the very rich database used in the present paper.

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**Table 1a: Foreign gross population flows in absolute numbers and as a percentage growth in OECD countries, 1989 – 1994**

	1988	1989	1990		1991		1992		1993		1994	
				%		%		%		%		%
Australia	143,500	145.300	121.200	-16.6	121.700	0.4	107.400	-11.8	76.300	-29.0	69.800	-8.5
Austria	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	38.200	43.500	50.500	16.1	54.100	7.1	55.100	1.8	53.000	-3.8	56.000	5.7
Canada	161.900	192.000	214.200	11.6	230.800	7.7	252.800	9.5	255.800	1.2	223.900	-12.5
Czech Rep.	-	-	-	-	-	-	-	-	12.900	-	10.207	-20.9
Denmark	30.000	30.372	32.037	5.5	35.315	10.2	35.045	-0.8	34.419	-1.8	35.375	2.8
Finland	4.000	4.200	6.492	54.6	13.238	103.9	10.350	-21.8	10.874	5.1	7.633	-29.8
France	44.000	53.200	102.400	92.5	109.900	7.3	116.600	6.1	99.200	-14.9	91.500	-7.8
Germany	648.600	770.800	838.943	8.8	1.198.978	42.9	925.345	-22.8	1.211.348	30.9	777.516	-35.8
Greece	-	-	32.116	-	29.004	-9.7	24.143	-16.8	20.331	-21.5	22.447	10.4
Hungary	23.500	33.700	37.200	10.4	23.000	-38.2	15.100	-34.3	16.400	8.6	12.800	-22.0
Iceland	-	-	-	-	-	-	1.270	-	1.250	-1.6	1.188	-5.0
Ireland	-	-	-	-	-	-	-	-	-	-	13.300	-
Italy	-	-	-	-	-	-	-	-	-	-	-	-
Japan	234.800	237.400	223.800	-5.7	258.400	15.5	267.000	3.3	234.500	-12.2	237.500	1.3
Luxembourg	8.200	8.400	10.281	22.4	10.000	-2.7	10.696	7.0	10.069	-5.9	10.145	0.8
Netherlands	58.300	65.400	81.300	24.3	84.300	3.7	83.000	-1.5	87.600	5.5	68.400	-21.9
N. Zealand	47.884	46.233	52.001	12.5	57.088	9.8	49.010	-14.2	49.562	1.1	57.257	15.5
Norway	23.200	18.500	20.300	9.7	21.300	4.9	30.100	41.3	25.700	-14.6	19.400	-24.5
Poland	1.700	1.950	2.626	34.7	5.040	91.9	6.512	29.2	5.924	-9.0	6.907	16.6
Portugal	-	-	-	-	-	-	13.700	-	9.900	-27.7	5.700	-42.4
Slovak Rep.	-	-	-	-	-	-	-	-	-	-	-	-
Spain	13.000	18.000	20.236	12.4	13.767	-32.0	20.663	50.1	17.665	-14.5	15.572	-11.8
Sweden	44.500	58.900	53.320	-9.5	43.926	-17.6	39.534	-10.0	54.834	38.7	74.734	36.3
Switzerland	76.00	80.400	122.779	52.7	133.100	8.4	131.891	-0.9	122.454	-7.2	107.650	-12.1
UK	-	-	-	-	-	-	203.900	-	190.300	-6.7	193.600	1.7
U.S.	643000	1090.000	1.536.483	41,0	1.827.167	18,9	973.977	-46,7	904.292	-7.2	804.416	-11.0

Source: SOPEMI, national statistical offices, own calculations

**Table 1b: Foreign population flows absolute numbers and as a percentage growth in OECD countries, 1995-2000**

	<i>1995</i>		<i>1996</i>		<i>1997</i>		<i>1998</i>		<i>1999</i>		<i>2000</i>	
		%		%		%		%		%		%
Australia	87.400	25.2	99.100	13.4	85.800	-13.4	77.300	-9.9	84.100	8.8	-	-
Austria	-	-	57.100	-	56.895	-0.4	59.229	4.1	72.379	22.2	65.954	-8.9
Belgium	53.100	-5.2	51.884	-2.3	49.240	-5.1	50.693	3.0	57.784	14.0	-	-
Canada	212.900	-4.9	226.100	6.2	216.000	-4.5	174.100	-19.4	189.800	9.0	-	-
Czech Rep.	10.540	3.3	10.857	3.0	12.880	18.6	10.729	-16.7	9.910	-7.6	7.807	-21.2
Denmark	53.713	51.8	44.737	-16.7	40.270	-10.0	41.177	2.3	39.276	-4.6	40.907	4.2
Finland	7.345	-3.8	7.539	2.6	8.147	8.1	8.340	2.4	7.937	-4.8	9.110	14.8
France	77.000	-15.8	75.500	-1.9	102.400	35.6	138.100	34.9	104.400	-24.4	-	-
Germany	792.701	2.0	707.954	-10.7	615.298	-13.1	605.500	-1.6	673.873	11.3	649.249	-3.7
Greece	21.191	-5.6	21.091	-0.5	22.214	5.3	22.078	-0.6	12.630	-42.8	-	-
Hungary	13.200	3.1	12.800	-3.0	12.200	-4.7	12.300	0.8	15.000	22.0	-	-
Iceland	1.225	3.1	1.459	19.1	1.406	-3.6	1.774	26.2	1.918	8.1	2.462	28.4
Ireland	13.600	2.3	21.500	58.1	23.500	9.3	20.800	-11.5	21.600	3.8	-	-
Italy	-	-	-	-	-	-	111.000	-	268.000	141.4	-	-
Japan	209.900	-11.6	225.400	7.4	274.800	21.9	265.500	-3.4	281.900	6.2	-	-
Luxembourg	10.325	1.8	10.027	-2.9	10.423	3.9	11.630	11.6	12.794	10.0	11.765	-8.0
Netherlands	74.531	9.0	86.183	15.6	87.145	1.1	96.425	10.6	94.176	-2.3	109.033	15.8
N. Zealand	67.591	18.0	80.288	18.8	76.896	-4.2	62.928	-18.2	56.580	-10.1	61.089	8.0
Norway	18.000	-7.2	26.407	46.7	31.957	21.0	36.704	14.9	41.841	14.0	36.542	-12.7
Poland	8.121	17.6	8.186	0.8	8.426	2.9	8.916	5.8	7.525	-15.6	7.331	-2.6
Portugal	5.000	-12.3	3.600	-28.0	3.300	-8.3	6.500	97.0	10.500	61.5	-	-
Slovak Rep.	-	-	-	-	2.303	-	2.051	-10.9	2.072	1.0	1.463	-29.4
Spain	16.553	6.3	13.209	-20.2	22.261	68.5	24.032	8.0	28.243	17.5	-	-
Sweden	36.079	-51.7	29.318	-18.7	33419	14.0	35.701	6.8	34.573	-3.2	42.629	23.3
Switzerland	90.957	-15.5	74.359	-18.2	69.604	-6.4	72.202	3.7	83.677	15.9	84.200	0.6
UK	206.300	6.6	216.400	4.9	236.900	9.5	258.000	8.9	276.900	7.3	-	-
U.S.	720.461	-10.4	915.900	27.1	798.378	-12.8	654.451	-18.0	646.568	-1.2.0	849.807	31.4

Source: SOPEMI, national statistical offices, own calculations

**Table 2a: Stock of foreign population in absolute numbers and as a %-age proportion of population in OECD countries, 1989 – 1994**

	1989		1990		1991		1992		1993		1994	
		%		%		%		%		%		%
Australia	-	-	3.885.500	22,8	3.965.300	22,9	4.028.400	22,9	4.053.900	22,9	4.093.800	22,9
Austria	-	-	453.100	5,9	532.700	6,8	623.000	7,9	689,6	8,6	713.500	8,9
Belgium	-	-	880.812	8,9	922.502	9,2	909.265	9,0	911.900	9,0	922.300	9,1
Canada	3.908.200 <sup>1</sup>	-	-	-	4.342.900	16,1	-	-	-	-	-	-
Czech Rep.	-	-	35.198	0,3	38.002	0,4	41.200	0,4	77.668	0,8	104.343	1,0
Denmark	166.372	3,2	173.595	3,4	181.447	3,5	190.710	3,7	199.530	3,9	206.883	4,0
Finland	-	-	26.255	0,5	37.600	0,8	46.300	0,9	55.600	1,1	62.000	1,2
France	3.596.000	6,3	-	-	-	-	-	-	-	-	-	-
Germany	4.845.882	7,8	5.342.532	9,4	5.882.267	7,3	6.495.792	8,0	6.878.117	8,5	6.990.510	8,6
Greece	69.850	0,7	142.367	1,4	146.162	1,4	149.482	1,5	148.770	1,4	150.593	1,4
Hungary	-	-	-	-	-	-	-	-	-	-	137.900	1,3
Iceland	4.774	1,9	4.812	1,9	5.395	2,1	4.826	1,9	4.825	1,9	4.715	1,8
Ireland	-	-	80.000	2,3	87.700	2,5	94.900	2,7	89.900	2,7	91.100	2,7
Italy	781.100	1,4	863.000	1,5	925.200	1,6	987.400	1,7	922.700	1,6	991.400	1,7
Japan	-	-	1.075.317	0,9	1.218.900	1,0	1.281.600	1,0	1.320.700	1,1	1.354.000	1,1
Luxembourg	-	-	113.100	29,4	117.800	30,2	122.700	31,0	127.600	31,8	132.500	32,6
Netherlands	-	-	692.400	4,6	732.900	4,8	757.400	5,0	779.800	5,1	757.100	5,0
N. Zealand	-	-	-	-	527.337	15,7	-	-	-	-	-	-
Norway	-	-	143.300	3,4	147.800	3,5	154.000	3,6	162.300	3,8	164.000	3,8
Poland	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	-	107.800	1,1	114.000	1,2	123.600	1,3	131.600	1,3	157.100	1,6
Slovak Rep.	-	-	-	-	-	-	-	-	11.000	0,2	16.900	0,3
Spain	-	-	278.700	0,7	360.700	0,9	393.100	1,0	430.400	1,1	461.400	1,2
Sweden	758.454	8,9	790.445	9,2	814.176	9,4	834.532	9,6	869.067	10,0	922.055	10,5
Switzerland	1.066.139	16,0	1.127.109	16,8	1.192.964	17,1	1.243.582	17,6	1.291.762	18,1	1.332.493	18,6
UK	-	-	1.723.000	3,2	1.750.000	3,1	1.985.000	3,5	2.001.000	3,5	2.032.000	3,6
U.S.	-	-	19.767.300	7,9	-	-	-	-	-	-	22.600.000	8,7

Source: SOPEMI, national statistical offices, own calculations, Notes: <sup>1</sup> data for the year 1986

**Table 2b: Stock of foreign population in absolute numbers and as a %-age proportion of population in OECD countries, 1995 – 2000**

	1995		1996		1997		1998		1999		2000	
		%		%		%		%		%		%
Australia	4.164.100	23,0	4.258.700	23,3	4.311.700	23,3	4.366.400	23,3	4.482.100	23,6	-	
Austria	723.500	9,0	728.200	9,0	732.700	9,1	737.300	9,1	748.200	9,2	710.926	
Belgium	909.800	9,0	911.900	9,0	903.200	8,9	892.000	8,7	897.110	8,8	861.685	8,5
Canada	-	-	4.971.1	17,4	-	-	-	-	-	-	-	-
Czech Rep.	159.207	1,5	199.152	1,9	210.311	2,0	220.187	2,1	228.862	2,2	200.951	2,0
Denmark	213.758	4,1	237.476	4,5	251.734	4,8	261.153	4,9	270.281	5,1	277.451	5,2
Finland	68.566	1,3	73.754	1,4	80.600	1,6	85.060	1,6	87.680	1,7	91.074	1,8
France	-	-	-	-	-	-	-	-	3.263.200	5,6	-	-
Germany	7.173.866	8,8	7.314.046	8,9	7.365.833	9,0	7.319.593	8,9	7.343.591	8,9	7.296.817	8,9
Greece	153.694	1,5	155.465	1,5	161.148	1,5	165.528	1,6	-	-	-	-
Hungary	139.900	1,4	142.200	1,4	143.800	1,4	-	-	127.000	1,3	-	-
Iceland	4.807	1,8	5.148	2,0	5.561	2,1	6.521	2,4	7.271	2,7	8.824	3,2
Ireland	96.100	2,7	118.000	3,2	114.400	3,1	111.000	3,0	117.800	3,1	-	-
Italy	991.400	1,7	1.095.600	2,0	1.240.700	2,1	1.250.200	2,1	1.252.000	2,2	1.464.589	2,5
Japan	1.362.371	1,1	1.415.100	1,1	1.482.700	1,2	1.512.100	1,2	1.556.100	1,2	1.686.444	1,3
Luxembourg	138.100	33,4	142.800	34,1	147.700	34,9	152.900	35,6	159.400	36,0	162.285	36,9
Netherlands	725.400	4,7	679.900	4,4	678.100	4,3	662.400	4,2	651.500	4,1	-	-
N. Zealand	-	-	605.061	16,6	-	-	-	-	-	-	698.628	18,2
Norway	160.800	3,7	157.500	3,6	158.000	3,6	165.000	3,7	178.700	4,0	184.337	4,1
Poland	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	168.300	1,7	172.900	1,7	175.300	1,8	177.800	1,8	191.143	1,9	208.198	2,1
Slovak Rep.	21.900	0,4	24.100	0,5	24.800	0,5	27.400	0,5	29.500	0,5	-	-
Spain	499.773	1,3	538.984	1,4	609.813	1,6	719.647	1,8	801.329	2,0	895.720	2,3
Sweden	936.022	10,6	943.804	10,7	954.231	10,8	968.707	10,9	981.633	11,1	1.003.798	11,3
Switzerland	1.363.590	19,0	1.369.494	19,0	1.375.158	19,3	1.383.645	19,4	1.406.630	19,6	1.424.370	19,8
UK	1.948.000	3,4	1.934.000	3,4	2.066.000	3,6	2.207.000	3,8	2.208.000	3,8	-	-
U.S.	23.000.000	8,8	24.600.000	8,7	25.800.000	9,3	26.300.000	9,8	28.180.000	10,3	27.625.000	10,1

Source: SOPEMI, national statistical offices, own calculations

**Table 3: Importance of the top 5 source countries in the total gross immigration flows and stocks, OECD countries 1999.**

Destination country + top 5 source countries	Inflows in 1999, absolute numbers	Inflows % of total inflow volume	Stock in 1998, % of total stock	Destination country + top 5 source countries	Inflows in 1999, absolute numbers	Inflows % of total inflow volume	Stock in 1998, % of total stock	Destination country + top 5 source countries	Inflows in 1999, absolute numbers	Inflows % of total inflow volume	Stock in 1998, % of total stock
<b>Australia</b>				<b>Germany</b>				<b>N. Zealand</b>			
New Zealand	21.900	23,7	7,5	Fed. Rep of				UK	12.082	21,3	31,3
UK	9.200	10,0	27,4	Yugoslavia	87.770	13,0	9,8	Australia	10.254	18,0	8,1
China	6.800	7,4	2,8	Poland	72.210	10,7	3,9	Japan	4.016	7,1	1,2
South Africa	5.700	6,2	1,4	Turkey	47.097	7,0	28,8	US	2.399	4,2	1,9
India	4.600	5,0	2,0	Italy	34.540	5,1	8,4	Canada	7.770	1,6	1,1
				Russian Fed.	27.777	4,1	1,1				
<b>Austria</b>				<b>Greece</b>				<b>Norway</b>			
Fed. Rep. of				Bulgaria	1.153	9,1	3,7	Yugoslavia	6.407	15,3	4,5
Yugoslavia	13.483	18,6	14,6	Egypt	1.105	8,7	0,4	Sweden	6.044	14,4	12,5
Germany	7.459	10,3	8,2	Ukraine	905	7,2	0,8	Denmark	2.734	6,5	11,2
Turkey	7.208	10,0	12,6	Albania	806	6,4	3,0	UK	2.014	4,8	6,5
Poland	5.120	7,1	2,9	Germany	758	6,0	5,7	Iraq	1.999	4,7	2,0
Bosnia & Herc.	3.887	5,4	15,7								
<b>Belgium</b>				<b>Hungary</b>				<b>Portugal</b>			
France	7.900	13,7	11,8	Romania	6.000	39,9	39,9	Brazil	1.200	11,2	11,2
Netherlands	6.200	10,7	9,4	Former				Spain	1.000	9,7	5,7
Morocco	4.900	8,5	14,0	Yugoslavia	1.700	11,3	11,1	Guinea-	1.000	9,2	7,3
				Ukraine	1.600	11,0	8,5	Bissau	1.000	9,1	22,6
Former Yugosl.	4.800	8,8	0,7	China	1.000	6,4	5,5	Cape Verde	900	8,9	9,3
Germany	3.100	5,3	3,8	Germany	700	4,5	5,9	Angola			
<b>Canada</b>				<b>Iceland</b>				<b>Spain</b>			
China	29.100	15,3	4,6	Poland	255	13,3	17,4	Switzerland	3.781	13,4	1,2
India	17.400	9,2	4,7	Denmark	182	9,5	34,7	France	3.276	11,6	5,5
Pakistan	9.300	4,9	-	Sweden	126	6,6	24,0	Venezuela	3.074	10,9	1,0
Philippines	9.200	4,8	3,7	Philippines	99	5,2	7,0	Germany	2.985	10,6	8,1
Korea	7.200	3,8	-	United States	99	5,2	20,8	Argentina	1.707	6,0	2,4
<b>Czech Rep.</b>				<b>Italy</b>				<b>Sweden</b>			
Slovak Rep.	3.235	32,6	87,7	Albania	37.200	13,9	7,3	Iraq	5.500	16,0	4,5
Ukraine	1676	16,9	10,0	Morocco	24.900	9,3	11,7	Finland	3.400	9,8	18,4
Vietnam	808	8,2	7,9	For.Yugoslavia	24.500	9,1	3,3	Norway	2.000	5,8	6,1
Russian Fed.	718	7,2	-	Romania	20.900	7,8	3,0	Denmark	1.300	3,7	5,6
Germany	560	5,7	17,8	China	11.000	4,1	3,0	Former	1.200	3,4	4,8
<b>Denmark</b>				<b>Japan</b>				Yugoslavia			
Iraq	1.980	6,9	4,0	China	55.700	19,8	18,0	<b>Switzerland</b>			
Norway	1.693	6,1	2,1	Philippines	47.600	16,9	7,0	Former			
Germany	1.521	5,5	8,7	United States	27.700	9,8	2,8	Yugoslavia	12.600	14,7	23,8
Sweden	1.437	5,2	4,8	Brazil	21.900	7,8	14,7	Germany	11.000	12,9	7,3
United States	1.329	4,8	4,7	Korea South	17.100	6,1	42,2	France	6.200	7,3	4,2
								Italy	6.000	7,0	24,9
<b>Finland</b>				<b>Luxembourg</b>				Portugal	5.000	5,8	10,1
Russian Fed.	2.129	26,8	19,8	France	2.185	18,5	13,1	<b>UK</b>			
Estonia	714	9,0	12,2	Portugal	2.061	17,5	38,4	US	44.800	16,2	5,4
Sweden	688	8,7	9,1	Belgium	1348	11,4	9,7	Australia	33.400	12,0	2,3
Fed. Rep. of				Germany	696	5,9	6,7	South Africa	24.100	8,7	1,8
Yugoslavia	373	4,7	3,5	Italy	553	4,3	12,4	India	19.600	7,1	6,3
Iraq	294	3,7	3,1					New Zealand	15.800	5,7	1,7
<b>France</b>				<b>Netherlands</b>				<b>United States</b>			
Morocco	14.100	16,4	15,4	UK	5.000	6,4	5,9	Mexico	147.573	22,8	26,7
Algeria	11.400	13,2	14,6	Germany	4.500	5,7	8,2	China	32.204	5,0	4,2
Turkey	5.700	5,4	6,4	Morocco	4.400	5,6	19,4	Philippines	31.026	4,8	4,3
Tunisia	4.000	4,7	4,7	Turkey	4.200	5,4	15,4	India	30.207	4,7	2,8
United States	2.700	3,1	0,7	United States	3.300	4,3	2,0	Vietnam	20.393	3,2	2,9

Source: SOPEMI, national statistical offices – own calculations

Table 4: Results for particular regressions without fixed effect.

<i>Dependent variable:</i>							
Flows per 1000 inhabitants	(1)	(2)	(4)	(5)	(6)	(7)	(8)
<i>Independent variables:</i>							
Stock of Foreigners	0.758*** (0.006)	0.717*** (0.010)	0.618*** (0.013)	0.621*** (0.013)	0.619*** (0.013)	0.619*** (0.013)	0.619*** (0.013)
Neighboring Index	-	-0.309*** (0.075)	-0.355*** (0.094)	-0.332*** (0.094)	-0.283*** (0.095)	-0.341*** (0.094)	-0.177** (0.084)
Linguistic Distance	-	0.162** (0.065)	0.248** (0.097)	0.251*** (0.097)	0.244** (0.097)	0.245** (0.097)	0.543*** (0.088)
Colony Index	-	-0.550*** (0.082)	0.092 (0.106)	0.085 (0.106)	0.100 (0.106)	0.083 (0.106)	0.442*** (0.105)
Distance in km	-	-0.215*** (0.019)	-0.357*** (0.028)	-0.348*** (0.028)	-0.346*** (0.028)	-0.352*** (0.028)	-0.190*** (0.028)
Trade Volume	-	0.035*** (0.007)	-0.036** (0.016)	-0.035** (0.016)	-0.038** (0.016)	-0.036** (0.016)	0.091*** (0.019)
GDP per cap in j	-	-	0.860*** (0.059)	0.854*** (0.059)	0.872*** (0.059)	0.857*** (0.059)	-1.410*** (0.421)
Unemployment Rate in j	-	-	-0.200*** (0.038)	-0.201*** (0.037)	-0.197*** (0.037)	-0.202*** (0.037)	-0.273*** (0.058)
Public Social Expenditure in j	-	-	0.636** (0.167)	0.644** (0.167)	-1.754*** (0.570)	-0.613*** (0.167)	-0.245*** (0.364)
Tax Revenue in j	-	-	-1.636*** (0.229)	-3.089*** (0.697)	-1.621*** (0.228)	-1.593*** (0.229)	-0.999* (0.512)
Gini in j	-	-	-0.725*** (0.225)	-0.729*** (0.224)	-0.675*** (0.224)	2.161** (0.921)	-0.019 (0.465)
Population in i	-	-	0.240*** (0.018)	0.237*** (0.018)	0.237*** (0.018)	0.239*** (0.018)	0.115*** (0.020)
GDP per cap in i	-	-	-0.071** (0.028)	-1.037*** (0.311)	-1.067*** (0.229)	-1.161*** (0.382)	-0.158*** (0.029)
Unemployment Rate in i	-	-	-0.123*** (0.028)	-0.123*** (0.027)	-0.123*** (0.027)	-0.123*** (0.027)	-0.036 (0.025)
Illiteracy Rate in i	-	-	-0.126*** (0.017)	-0.128*** (0.017)	-0.127*** (0.017)	-0.128*** (0.017)	-0.140*** (0.015)
Freedom House Index i	-	-	-0.050 (0.051)	-0.044 (0.050)	-0.047 (0.049)	-0.046 (0.049)	0.070 (0.043)
Tax Revenue in j *GDP in i	-	-	-	0.265*** (0.084)	-	-	-
PublicSocExpenditure in j * GDP in i	-	-	-	-	0.309*** (0.070)	-	-
Gini in j*GDP in i	-	-	-	-	-	-0.369*** (0.114)	-
Fixed Effects of Destination	No	No	No	No	No	No	Yes
No of obs	7 089	4 680	2 297	2 297	2 297	2 297	2 297
Adjusted R-squared	0.696	0.692	0.756	0.757	0.758	0.757	0.821

Notes: 10, 5 and 1 % levels of confidence are indicated by \*, \*\* and \*\*\*, respectively. Standard errors are in parentheses.

Table 5: Results for fixed effect panel data model

<i>Dependent variable:</i>							
Flows per 1000 inhabitants	(9)	(10)	(11)	(12)	(13)	(14)	(15)
<i>Independent variables:</i>							
Stock of Foreigners	0.756*** (0.006)	0.684*** (0.010)	0.619*** (0.013)	0.622*** (0.012)	0.621*** (0.012)	0.620*** (0.012)	0.618*** (0.013)
Neighboring Index	-	-0.165*** (0.059)	-0.177** (0.084)	-0.158* (0.086)	-0.127 (0.084)	-0.173** (0.084)	-0.355*** (0.094)
Linguistic Distance	-	0.378*** (0.053)	0.543*** (0.088)	0.549*** (0.088)	0.543*** (0.088)	0.543*** (0.088)	0.248** (0.097)
Colony Index	-	0.463*** (0.078)	0.442*** (0.105)	0.434*** (0.105)	0.442*** (0.104)	0.436*** (0.105)	0.092 (0.106)
Distance in km	-	-0.108*** (0.016)	-0.190*** (0.028)	-0.186*** (0.028)	-0.184*** (0.028)	-0.188*** (0.028)	-0.357*** (0.028)
Trade Volume	-	0.106*** (0.007)	0.091*** (0.019)	0.090*** (0.019)	0.086*** (0.019)	0.091*** (0.019)	-0.036** (0.016)
GDP per cap in j	-	-	-1.410*** (0.421)	-1.418*** (0.420)	-1.381*** (0.420)	-1.426*** (0.421)	0.860*** (0.059)
Unemployment Rate in j	-	-	-0.273*** (0.058)	-0.276*** (0.058)	-0.277*** (0.058)	-0.275*** (0.058)	-0.200*** (0.038)
Public Social Expenditure in j	-	-	-0.245 (0.364)	-0.218 (0.364)	-1.938*** (0.587)	-0.235 (0.364)	0.636** (0.167)
Tax Revenue in j	-	-	-0.999* (0.512)	-2.703*** (0.759)	-1.029** (0.511)	-0.979* (0.512)	-1.636*** (0.229)
Gini in j	-	-	-0.019 (0.465)	-0.023 (0.464)	-0.012 (0.463)	1.214 (0.927)	-0.725*** (0.225)
Population in i	-	-	0.115*** (0.020)	0.114*** (0.020)	0.116*** (0.020)	0.115*** (0.020)	0.240*** (0.018)
GDP per cap in i	-	-	-0.158*** (0.029)	-0.971*** (0.269)	-0.889*** (0.200)	-0.360 (0.338)	-0.071** (0.028)
Unemployment Rate in i	-	-	-0.036 (0.025)	-0.037 (0.025)	-0.037 (0.025)	-0.036 (0.025)	-0.123*** (0.028)
Illiteracy Rate in i	-	-	-0.140*** (0.015)	-0.141*** (0.015)	-0.141*** (0.015)	-0.140*** (0.015)	-0.126*** (0.017)
Freedom House Index i	-	-	0.070 (0.043)	0.071* (0.043)	0.070 (0.043)	0.067 (0.043)	-0.050 (0.051)
Tax Revenue in j *GDP in i	-	-	-	0.223*** (0.073)	-	-	-
PublicSocExpenditure in j * GDP in i	-	-	-	-	0.227*** (0.062)	-	-
Gini in j*GDP in i	-	-	-	-	-	-0.156 (0.101)	-
Fixed Effects of Destination	Yes	Yes	Yes	Yes	Yes	Yes	No
No of obs	7 089	4 680	2 297	2 297	2 297	2 297	2 297
Adjusted R-squared	0.799	0.821	0.821	0.822	0.822	0.822	0.756

Notes: 10, 5 and 1 % levels of confidence are indicated by \*, \*\* and \*\*\*, respectively. Standard errors are in parentheses.

## DATA APPENDIX:

### 1. TIME DIMENSION

We have time period of 12 years, namely 1989 – 2000 We decided to choose such a time dimension, as the data for the previous years are difficult to obtain for most of the countries under consideration

### 2. VARIABLES

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variable name	variable label
year	Denotes particular years 1989 - 2000
to	Denotes particular j destination countries
from	Denotes particular i countries of origin
flows_ij	Flows of immigrants from i to j
stock_i	Stock of immigrant in country j
POPj	Population in j country
GDPj	GDP per capital (constant 1995 US\$) of j country
Uj	Unemployment rate, total (% of the labour force) in country j
GINIj	Gini coefficient in country j
PSEPj	Public social expenditure as a %-age of GDP (SNA93) in j country
TAXRj	Tax revenue (% of GDP) in country j
POPi	Population in i country
GDPi	GDP per capital (const 1995 US\$) in i country
Ui	Unemployment rate, total (% of the labour force) in i country
FREEi	Freedom House Index in i country
dist_ij	Distance between countries in km
neighb	Neighbouring index
ILRi	Illiteracy rate, adult total (% of people ages 15 and above) in country i
ld2	Linguistic distance-index of common language, 0 no common, 1 common
colony	Colony index - Dummy for countries ever in colonial relationship
incl	Dummy for low-income countries
inclm	Dummy for lower-middle-income countries
incum	Dummy for upper-middle-income countries
inch	Dummy for high-income countries

### 3. DESCRIPTION, SOURCES, DEFINITIONS

#### 1. FLOWS<sub>ij</sub>

##### **Inflows of Foreign Population**

Source: “Trends in International Migration” SOPEMI 2000 OECD and statistics from national statistical offices.

#### 2. STOCK<sub>i</sub>

##### **Migration Stock**

Source: “Trends in International Migration” SOPEMI 2000 OECD and statistics from national statistical offices.

#### 3. POP<sub>i</sub>, POP<sub>j</sub>

**Total population** is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship--except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin.

Source: World Bank.

All years, all countries.

#### 4. GDP<sub>i</sub>, GDP<sub>j</sub>

**GDP per capita (constant 1995 US\$):** GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant U.S. dollars.

Source: World Bank national accounts data, and OECD National Accounts data files.

All years, all countries.

#### 5. U<sub>i</sub>, U<sub>j</sub>

**Unemployment, total (% of total labor force):** Unemployment refers to the share of the labor force that is without work but available for and seeking employment. Definitions of labor force and unemployment differ by country.

Source: International Labour Organisation, Key Indicators of the Labour Market database.

All years, all countries.

#### 6. ILLR<sub>i</sub>, ILLR<sub>j</sub>

**Illiteracy rate, adult total (% of people ages 15 and above):** Adult illiteracy rate is the percentage of people ages 15 and above who cannot, with understanding, read and write a short, simple statement on their everyday life.

Source: World Bank (United Nations Educational, Scientific, and Cultural Organization.)

All years, all countries.

#### 7. GINI<sub>i</sub>, GINI<sub>j</sub>

**GINI index:** Gini index measures the extent to which the distribution of among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of zero represents perfect equality, while an index of 100 implies perfect inequality.

Source: World Bank - based on primary household survey data obtained from government statistical agencies and World Bank country departments. For some countries we have obtained data from the National Statistical Offices and Luxembourg Income Study. Data for high-income economies are from the World Income Inequality Database and WIDER database: [http://www.undp.org/poverty/initiatives/wider/wiid\\_download.htm](http://www.undp.org/poverty/initiatives/wider/wiid_download.htm)

#### 8. PSEP\_i, PSEP\_j

**Public social expenditure as a percentage of GDP (SNA93):** Social expenditure is the provision by public institutions of benefits to, and financial contributions targeted at, households and individuals in order to provide support during circumstances which adversely affect their welfare, provided that the provision of the benefits and financial contributions constitutes neither a direct payment for a particular good or service nor an individual contract or transfer. Such benefits can be cash transfers, or can be the direct (“in-kind”) provision of goods and services.

Source: OECD Social Expenditure Database (SOCX).

All years, just OECD countries.

#### 9. TAXR\_i, TAXR\_j

**Tax revenue (% of GDP):** Tax revenue comprises compulsory transfers to the central government for public purposes. Compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue. Data are shown for central government only.

Source: International Monetary Fund, Government Finance Statistics Yearbook and data files, and World Bank and OECD GDP estimates.

All years, just OECD countries.

#### 10. Dist\_ij

**Distance between countries** – capitals in km.

Source: MapInfo, own calculations.

#### 11. FREE\_i, FREE\_j

**Freedom House Index** – represents scores of political rights, civil liberties, and freedom. These are measured on a one-to-seven scale, with one representing the highest degree of freedom and seven the lowest.

Source: Annual Freedom In The World Country Scores 1972-73 to 2001-2002.

All years, just OECD countries.

#### 12. Ld2

**The index of common language** in two countries. This index has value 1 for common language in two countries and 0 for no common language.

Source: Ethnologue: Languages of the World, 14<sup>th</sup> edition. <http://www.ethnologue.com/web.asp>

#### 13. Colony

**Colony index** – in the form of dummy for countries ever in colonial relationship – value 1, 0 otherwise.

#### 14. Neighb

**Neighbouring index** – in the form of dummy for neighbouring countries - value 1, 0 otherwise.

## 15. INCL, INCLM, INCUM, INCH

**Dummy for low-income countries, lower-middle-income countries, upper-middle-income countries and high-income countries.**

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### **1: High-income countries**

Andorra; Aruba; Australia; Austria; Bahamas; Bahrain; Belgium; Bermuda; Brunei; Canada; Cayman Islands; Channel Islands; Cyprus; Denmark; Faeroe Islands; Finland; France; French Polynesia; Germany; Greece; Greenland; Guam; HongKong, China; Iceland; Ireland; Israel; Italy; Japan; Korea, Rep.; Kuwait; Liechtenstein; Luxembourg; Macao, China; Monaco; Netherlands; Netherlands Antilles; New Caledonia; New Zealand; Northern Mariana Islands; Norway; Portugal; Qatar; San Marino; Singapore; Slovenia; Spain; Sweden; Switzerland; United Arab Emirates; United Kingdom; United States; Virgin Islands (U.S.)

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### **2: Upper-middle-income countries**

American Samoa; Antigua and Barbuda; Argentina; Barbados; Botswana; Brazil; Chile; Costa Rica; Croatia; Czech Republic; Dominica; Estonia; Gabon; Grenada; Hungary; Isle of Man; Latvia; Lebanon; Libya; Lithuania; Malaysia; Malta; Mauritius; Mayotte; Mexico; Oman; Palau; Panama; Poland; Puerto Rico; Saudi Arabia; Seychelles; Slovak Republic; St. Kitts and Nevis; St. Lucia; Trinidad and Tobago; Uruguay; Venezuela;RB

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### **3: Lower-middle-income countries and low-income countries**

Albania; Algeria; Armenia; Belarus; Belize; Bolivia; Bosnia and Herzegovina; Brazil; Bulgaria; Cape Verde; China; Colombia; Cuba; Dominican Republic; Djibouti; Ecuador; Egypt, Arab Rep.; El Salvador; Fiji; Guatemala; Guyana; Honduras; Iran, Islamic Rep.; Iraq; Jamaica; Jordan; Kazakhstan; Kiribati; Macedonia, FYR; Maldives; Marshall Islands; Micronesia, Fed. Sts.; Morocco; Namibia; Paraguay; Peru; Philippines; Romania; Russian Federation; Samoa; Serbia and Montenegro; South Africa; Sri Lanka; St. Vincent and the Grenadines; Suriname; Swaziland; Syrian Arab Republic; Thailand; Tonga; Tunisia; Turkey; Turkmenistan; Ukraine; Yugoslavia, Fed. Rep.; Vanuatu; West Bank and Gaza;

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### **4: Low-income countries**

Afghanistan; Angola; Azerbaijan; Bangladesh; Benin; Bhutan; Burkina Faso; Burundi; Cambodia; Cameroon; Central African Republic; Chad; Comoros; Congo, Dem. Rep.; Congo, Rep.; Côte d'Ivoire; Equatorial Guinea; Eritrea; Ethiopia; Gambia; Georgia; Ghana; Guinea; Guinea-Bissau; Haiti; India; Indonesia; Kenya; Korea, Dem. Rep.; Kyrgyz Republic; Lao PDR; Lesotho; Liberia; Madagascar; Malawi; Mali; Mauritania; Moldova; Mongolia; Mozambique; Myanmar; Nepal; Nicaragua; Niger; Nigeria; Pakistan; Papua New Guinea; Rwanda; São Tomé and Príncipe; Senegal; Sierra Leone; Solomon Islands; Somalia; Sudan; Tajikistan; Tanzania; Timor-Leste; Togo; Uganda; Uzbekistan; Vietnam; Yemen, Rep.; Zambia; Zimbabwe

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## 4. DESCRIPTIVE STATISTICS

Table A1: Information on variables for OECD destination countries

mean (st.d.) (years with information)	Australia	Austria	Belgium	Canada	Czech Republic	Denmark	Finland	France	Germany
<b>Flows of immigrants to the country *</b>	4 206 (4 380) (12)	1 472 (2 502) (6)	1 330 (1 749) (12)	8 414 (7 906) (12)	115 (465) (8)	276 (649) (12)	82 (296) (12)	823 (1608) (12)	17 040 (34 087) (12)
<b>Sum of immigration flows to the country **</b>	56 433 (17 776)	29 189 (30 723)	37 673 (12 912)	122 700 (16 295)	6 928 (5 055)	24 819 (6 231)	8 231 (2 123)	65 067 (16 995)	781 000 (243 550)
<b>Stock of immigrant in the country ***</b>	146 516 (235 667) (2)	6 787 (20 520) (12)	17 721 (40 660) (12)	204 306 (138 164) (2)	7 374 (12 531) (8)	2 662 (4 653) (12)	2 669 (3 342) (7)	202 039 (220 616) (2)	87 635 (262 494) (12)
<b>Sum of immigration stock in the country ****</b>	2 796 021 (24 523)	574 070 (1 887)	856 536 (18 351)	3 268 900 (0)	117 368 (88 985)	216 496 (35 154)	45 824 (21 510)	2 963 233 (42 019)	5 820 412 (712 042)
<b>Population (in thou.)</b>	18 000 (725)	7 959 (153)	10 100 (99)	29 100 (1 088)	10 300 (18 370)	5 227 (69)	5 088 (68)	57 700 (739)	78 400 (7 058)
<b>GDP per capital (constant 1995 US\$)</b>	20 766 (1 887)	29 366 (1 756)	27 365 (1 691)	19 898 (1 246)	5 015 (260)	34 324 (2 368)	26 824 (2 511)	27 086 (1 288)	30 047 (1 287)
<b>Unemployment rate (% of the labour force)</b>	8.15 (1.472)	5.013 (0.602)	8.431 (1.264)	9.142 (1.432)	4.823 (2.322)	7.146 (1.647)	11.007 (4.495)	10.794 (1.180)	7.592 (1.146)
<b>Gini coefficient</b>	35.2 (0)	26.6 (3.496)	26.175 (2.272)	30.425 (1.387)	24.500 (2.550)	24.625 (0.377)	24.250 (1.867)	32.042 (1.473)	28.417 (2.266)
<b>Family cash benefits as a %-age of GDP (SNA93)</b>	1.861 (0.391)	2.114 (0.157)	2.146 (0.058)	0.057 (0.004)	2.144 (0.428)	1.583 (0.148)	2.265 (0.377)	1.867 (0.314)	1.508 (0.325)
<b>Public social expenditure as a %-age of GDP (SNA93)</b>	16.748 (1.822)	27.715 (1.043)	26.752 (0.758)	1.903 (1.495)	18.794 (0.877)	31.33 (1.322)	29.699 (3.637)	28.143 (1.366)	26.746 (2.651)
<b>Tax revenue (% of GDP)</b>	29.073 (1.096)	42.533 (1.342)	44.575 (1.159)	37.167 (0.711)	40.025 (14.401)	48.892 (1.151)	45.642 (1.194)	44.158 (1.059)	36.800 (1.782)
<b>No. of years with complete information on all variables</b>	5	6	7	6	2	7	6	6	7

- \* mean and st.d. for each particular flow of immigrants from source country in the period 1989 - 2000  
 \*\* mean and st.d. for the sum of flows of immigrants from source country in the period 1989 - 2000  
 \*\*\* mean and st.d. for each particular stock of immigrants from source country in the period 1989 - 2000  
 \*\*\*\* mean and st.d. for the sum of stocks of immigrants from source country in the period 1989 - 2000

Table A2: Information on variables for OECD destination countries

mean (st.d.) years with information	Greece	Hungary	Iceland	Ireland	Italy	Japan	Luxembourg	Netherlands	New Zealand
<b>Flows of immigrants to the country *</b>	215 (479) (8)	874 (300) (11)	50 (130) (9)	2 550 (3 201) (6)	5 502 (7 859) (2)	15 719 (16 758) (11)	785 (816) (12)	1 107 (1 877) (12)	3 559 (4 835) (12)
<b>Sum of immigration flows to the country **</b>	14 952 (11 471)	15 220 (9 164)	1 325 (1 514)	5 100 (5 274)	19 259 (48 496)	179 453 (53 169)	6 867 (394)	62 460 (17 916)	34 996 (4 373)
<b>Stock of immigrant in the country ***</b>	1 321 (2 771) (10)	7 454 (14 118) (3)	166 (368) (12)	- - -	17 381 (24 628) (9)	32 139 (109 825) (6)	2 043 (6 932) (4)	32 197 (50 789) (7)	11 349 (35 549) (3)
<b>Sum of immigration stock in the country ****</b>	145 338 (8 612)	72 675 (61 443)	10 457 (3 145)	- -	669 183 (311 171)	1 317 719 (197 815)	132 313 (23 555)	987 386 (259 315)	460 566 (48 530)
<b>Population (in thou.)</b>	10 400 (166)	10 200 (103)	266 (8)	3 613 (89)	57 300 (342)	125 000 (1.155)	409 (18)	15 400 (327)	3 617 (165)
<b>GDP per capital (constant 1995 US\$)</b>	11 540 (709)	4 612 (3 816)	27 425 (1 850)	19 059 (4 263)	19 102 (916)	42 149 (1 881)	44 446 (6 060)	27 127 (2 069)	16 019 (930)
<b>Unemployment rate (% of the labour force)</b>	9.509 (1.506)	8.562 (2.703)	3.044 (1.336)	11.613 (3.723)	10.624 (1.186)	3.12 (0.928)	2.417 (0.787)	5.591 (1.503)	7.698 (1.499)
<b>Gini coefficient</b>	32.7 (0)	29.667 (3.254)	- -	33.725 (1.256)	29.917 (2.533)	24.9 (0)	24.392 (1.134)	27.125 (2.515)	35 (1.000)
<b>Family cash benefits as a %-age of GDP (SNA93)</b>	1.002 (0.303)	- -	1.394 (0.096)	1.646 (0.123)	0.562 (0.098)	0.189 (0.016)	2.066 (0.262)	1.052 (0.139)	2.318 (0.244)
<b>Public social expenditure as a %-age of GDP (SNA93)</b>	21.010 (1.200)	- -	19.543 (0.200)	18.862 (1.383)	25.858 (1.213)	12.764 (1.478)	22.473 (0.625)	26.988 (1.714)	21.006 (1.152)
<b>Tax revenue (% of GDP)</b>	32.142 (3.210)	42.090 (3.049)	32.633 (2.068)	33.275 (1.170)	41.633 (1.952)	28.158 (1.350)	41.100 (1.188)	42.892 (1.4226)	36.900 (1.012)
<b>No of years with complete information on all variables</b>	5	3	5	5	5	5	6	6	6

- \* mean and st d for each particular flow of immigrants from source country in the period 1989 - 2000  
\*\* mean and st d for the sum of flows of immigrants from source country in the period 1989 – 2000  
\*\*\* mean and st d for each particular stock of immigrants from source country in the period 1989 – 2000  
\*\*\*\* mean and st d for the sum of stocks of immigrants from source country in the period 1989 - 2000

Table A3: Information on variables for OECD destination countries

mean (st d ) years with information	Norway	Poland	Portugal	Slovak Republic	Spain	Sweden	Switzerland	United Kingdom	United States
<b>Flows of immigrants to the country *</b>	553 (959) (12)	403 (531) (12)	464 (550) (9)	32 (122) (4)	470 (824) (10)	409 (1 338) (12)	911 (3 084) (12)	7 035 (9 515) (9)	7 593 (35 638) (12)
<b>Sum of immigration flows to the country **</b>	27 061 (4 895)	4 864 (1 738)	5 183 (4 439)	704 (998)	14 400 (7 258)	44 980 (15 792)	105 344 (32 572)	102 600 (73 194)	908 668 (331 840)
<b>Stock of immigrant in the country ***</b>	2 832 (4 084) (7)	- -	6 137 (8 317) (12)	84 346 (175 070) (5)	11 651 (19 448) (10)	9 698 (24 657) (12)	11 009 (41 899) (12)	94 889 (114 921) (3)	380 008 (935 598) (3)
<b>Sum of immigration stock in the country ****</b>	141 856 (24 655)	- -	135 023 (34 030)	379 556 (379 683)	485 467 (146 026)	845 377 (96 162)	1 277 973 (138 505)	1 138 667 (73 859)	15 100 000 (6 597 726)
<b>Population (in thou )</b>	4 350 (83)	38 500 (227)	9 894 (59)	5 366 (20 629)	39 200 (217)	8 744 (125)	697 (168)	58 500 (703)	262 000 (8 789)
<b>GDP per capital (constant 1995 US\$)</b>	33 217 (3 409)	3 391 (494)	10 984 (990)	3 693 (385)	15 214 (1 262)	27 689 (1 602)	44 717 (969)	19 249 (1 351)	28 043 (2 047)
<b>Unemployment rate (% of the labour force)</b>	4.709 (0.965)	12.507 (2.415)	5.464 (1.180)	12.886 (3.037)	18.868 (3.171)	5.675 (2.418)	3.048 (1.638)	7.552 (1.709)	5.574 (1.054)
<b>Gini coefficient</b>	24.792 (1.300)	26.942 (3.547)	35.600 (0)	22.950 (2.850)	32.5 (0)	22.967 (1.157)	31.117 (0.493)	33.933 (1.774)	35.525 (1.489)
<b>Family cash benefits as a %-age of GDP (SNA93)</b>	2.406 (0.236)	1.532 (0.579)	0.673 (0.030)	2.169 (0.219)	0.242 (0.054)	2.133 (0.302)	1.117 (0.083)	1.780 (0.117)	0.270 (0.0416)
<b>Public social expenditure as a %-age of GDP (SNA93)</b>	28.110 (0.932)	23.852 (2.916)	16.603 (1.819)	13.972 (0.248)	20.350 (0.997)	33.430 (2.205)	24.504 (3.216)	24.604 (2.356)	15.112 (0.792)
<b>Tax revenue (% of GDP)</b>	41.492 (0.846)	38.767 (1.960)	32.058 (1.679)	36.067 (0.760)	33.692 (0.831)	50.925 (1.984)	32.717 (1.759)	35.492 (1.210)	26.942 (2.118)
<b>No of years with complete information on all variables</b>	6	3	6	3	5	7	7	5	6

- \* mean and st d for each particular flow of immigrants from source country in the period 1989 - 2000  
\*\* mean and st d for the sum of flows of immigrants from source country in the period 1989 – 2000  
\*\*\* mean and st d for each particular stock of immigrants from source country in the period 1989 – 2000  
\*\*\*\* mean and st d for the sum of stocks of immigrants from source country in the period 1989 - 2000

Table B1: Information on variables for source countries

mean (st.d.)	Population (in thous.)	GDP per capital (constant 1995 US\$)	Unemployment rate (% of the labour force)	Illiteracy rate, adult total (% of people ages 15 +)	Freedom House Index
Afghanistan	21,600 (3,170)	- -	- -	- -	7.517 (0.411)
<b>Albania</b>	3,300 (85)	761 (108)	12.333 (3.687)	19.441 (2.724)	4.625 (1.490)
<b>Algeria</b>	28,100 (1,834)	1,563 (62)	24.958 (4.075)	40.876 (4.955)	6.45 (1.030)
<b>Angola</b>	11,500 (1,232)	531 (87)	- -	52 (0)	6.95 (0.534)
<b>Argentina</b>	35,000 (1,563)	7,362 (841)	12.192 (4.525)	3.751 (0.389)	2.033 (0.618)
<b>Australia</b>	18,000 (725)	20,766 (1,887)	8.15 (1.472)	0 (0)	1.1 (0)
<b>Austria</b>	7,959 (153)	29,366 (1,756)	5.013 (0.602)	0 (0)	1.1 (0)
<b>Azerbaijan</b>	7,602 (312)	394 (86)	0.689 (0.396)	- -	6.278 (0.425)
<b>Bangladesh</b>	121,000 (7,317)	315 (32)	26.638 (14.519)	62.175 (2.209)	3.058 (0.977)
<b>Belarus</b>	10,200 (74)	1,306 (176)	1.878 (1.196)	0.443 (0.065)	5.6 (0.981)
<b>Belgium</b>	10,100 (99)	27,365 (1,691)	8.431 (1.264)	0 (0)	1.142 0.049
<b>Benin</b>	5,413 (536)	371 (22)	- -	68.833 (3.766)	3.508 (2.195)
<b>Bolivia</b>	7,343 (601)	898 (50)	5.738 (2.084)	18.500 (2.537)	2.058 (0.439)
<b>Bosnia Herzegovina</b>	3,902 (336)	1,202 (344)	39.275 (0.305)	1.500 (0)	5.925 (0.556)
<b>Brazil</b>	160,000 (7,695)	4,327 (209)	6.544 (2.062)	17.079 (1.520)	2.767 (0.523)
<b>Bulgaria</b>	8,385 (177)	1,517 (143)	14.264 (4.950)	2.234 (0.433)	2.817 (1.508)
<b>Burkina Faso</b>	9,910 (814)	221 (15)	- -	80.417 (2.568)	5.783 (0.803)
<b>Burundi</b>	6,077 (469)	173 (28)	- -	58.167 (3.854)	7.3 (0.482)
<b>Cambodia</b>	10,800 (990)	270 (18)	- -	35.847 (2.066)	6.517 (1.008)
<b>Cameroon</b>	13,100 (1,131)	667 (65)	- -	36.000 (4.680)	6.958 (0.478)
<b>Canada</b>	29,100 (1,089)	19,898 (1,246)	9.142 (1.432)	0 (0)	1.1 (0)
<b>Cape Verde</b>	73,152 (115,012)	1,265 (135)	- -	31.442 (3.527)	2.092 (1.788)
<b>Chad</b>	6,598 (672)	226 (13)	- -	65.833 (5.185)	6.708 (0.406)
<b>Chile</b>	14,300 (725,150)	4,372 (763)	5.782 (1.497)	5.122 (0.604)	2.458 (0.621)
<b>Chinese Taip</b>	- -	- -	- -	20 (0)	3.117 (1.153)
<b>China</b>	1,210,000 (43,300)	559 (162)	2.775 (0.292)	19.761 (2.510)	7.675 (0.043)

Table B2: Information on variables for source countries

mean (st.d.)	Population (in thou.)	GDP per capital (constant 1995 US\$)	Unemployment rate (% of the labour force)	Illiteracy rate, adult total (% of people ages 15 +)	Freedom House Index
<b>Colombia</b>	39,000 (2,548)	2,272 (121)	11.036 (3.546)	10.010 (1.115)	3.567 (0.801)
<b>Côte d'Ivoire</b>	13,700 (1,454)	752 (35)	- -	56.500 (3.457)	6.458 (0.064)
<b>Croatia</b>	4,586 (177)	4,454 (623)	15.058 (3.822)	2.472 (0.506)	4.308 (0.782)
<b>Cuba</b>	11,000 (180)	- -	- -	4.159 (0.533)	7.7 (0)
<b>Cyprus</b>	723 (28)	11,789 (1,267)	2.580 (0.597)	4.333 (1.029)	1.108 (0.028)
<b>Czech Republic</b>	10,300 (18)	5,015 (260)	4.823 (2.322)	0 (0)	1.9 (1.480)
<b>Denmark</b>	5,227 (69)	34,324 (2,368)	7.146 (1.647)	0 (0)	1.1 (0)
<b>Dominican Republic</b>	7,771 (458)	1,619 (218)	17.743 (1.952)	18.658 (1.477)	2.792 (0.873)
<b>Ecuador</b>	11,300 (825)	1,517 (55)	8.564 (1.917)	10.500 (1.387)	2.367 (0.287)
<b>Egypt</b>	58,800 (3,973)	1,051 (91)	9.322 (1.413)	49.235 (2.835)	6.317 (0.475)
<b>El Salvador</b>	5,736 (411)	1,585 (147)	8.210 (0.915)	24.554 (2.206)	2.992 (0.491)
<b>Estonia</b>	1,464 (73)	3,842 (575)	7.192 (4.462)	0.201 (0.001)	2.675 (1.692)
<b>Ethiopia</b>	58,000 (4,605)	103 (9)	- -	66.730 (3.555)	5.85 (1.165)
<b>Fed. Rep. of Yugoslavia</b>	10,600 (63)	1,271 (90.733)	23.418 (2.620)	1.5 (0)	6.108 (0.711)
<b>Fiji</b>	133 (209)	2,524 (158)	5.829 (0.338)	9.432 (1.533)	4.825 (1.224)
<b>Finland</b>	5,088 (68)	26,824 (2,511)	11.007 (4.495)	0 (0)	1.1 (0)
<b>Former USSR</b>	- -	- -	- -	0.4 (0)	5.95 (0.555)
<b>Former Yugoslavia</b>	- -	- -	32 (0)	2 (0)	- -
<b>France</b>	57,700 (739)	27,086 (1,288)	10.794 (1.180)	0 (0)	1.2 (0)
<b>Gaza Strip</b>	- -	- -	- -	- -	- -
<b>Georgia</b>	5,371 (67)	620 (362)	- -	- -	4.567 (1.035)
<b>Germany</b>	78,400 (7,058)	30,047 (1,287)	7.592 (1.146)	0 (0)	1.2 (0)
<b>Ghana</b>	17,100 (1,432)	375 (23)	- -	35.667 (4.650)	5.017 (1.349)
<b>Guatemala</b>	9,890 (897)	1,451 (71)	- -	35.500 (2.697)	3.758 (0.528)
<b>Greece</b>	10,400 (166)	11,540 (709)	9.509 (1.506)	3.968 (0.807)	1.267 (0.047)
<b>Guinea</b>	6,505 (574)	560 (31)	- -	- -	6.683 (0.411)

Table B3: Information on variables for source countries

mean (st.d.)	Population (in thou.)	GDP per capital (constant 1995 US\$)	Unemployment rate (% of the labour force)	Illiteracy rate, adult total (% of people ages 15 +)	Freedom House Index
Guinea-Bissau	936 (403)	228 (21)	- -	67.834 (3.831)	4.808 (1.477)
Haiti	7,265 (526)	388 (49)	- -	55.760 (3.489)	6.042 (1.267)
Honduras	5,557 (531)	705 (15)	3.767 (0.634)	28.750 (2.423)	2.717 (0.494)
Hong Kong	6,264 (416)	21,543 (1,790)	2.858 (1.568)	8.407 (1.261)	- -
Hungary	10,200 (103)	4,612 (3,816)	8.562 (2.703)	0.811 (0.096)	1.708 (0.890)
Iceland	266 (8)	27,425 (1,850)	3.044 (1.336)	0 (0)	1.1 (0)
India	939,000 (57,4000)	376 (51)	- -	47.121 (2.736)	3.025 (0.885)
Indonesia	196,000 (11,100)	943,517 (119,403)	17.857 (2.481)	16.991 (2.571)	6.417 (1.311)
Iran	59,500 (3,236)	1,475 (126)	- -	30.578 (4.495)	6.617 (0.080)
Iraq	21,000 (1,783)	- -	- -	49.944 (3.668)	7.692 (0.028)
Ireland	3,613 (89)	19,059 (4,263)	11.613 (3.723)	0 (0)	1.117 (0.037)
Israel	5,594 (511)	15,317 (1,222)	8.758 (1.345)	7.441 (1.333)	1.592 (0.432)
Italy	57,300 (342)	19,102 (916)	10.624 (1.186)	1.94 (0.270)	1.1833 (0.055)
Jamaica	2,527 (788)	2,144 (79)	15.927 (0.448)	15.666 (1.691)	2.242 (0.049)
Japan	125,000 (1,155)	42,149 (1,881)	3.12 (0.928)	0 (0)	1.35 (0.382)
Jordan	4,056 (569)	1,570 (63)	14.400 (0.986)	14.250 (2.895)	4.758 (0.901)
Kazakhstan	16,000 (472)	1521 (280)	11.640 (2.266)	0.912 (0.208)	6.256 (0.433)
Kenya	26,400 (2,332)	342 (8.783)	21.300 (0)	23.917 (3.995)	6.492 (0.781)
Korea, North (Dem. Rep. of)	21,100 (858)	- -	- -	3.167 (0.688)	7.7 (0)
Korea, South (Rep. of Korea)	44,900 (1,531)	10,267 (1,735)	3.233 (1.576)	3 (0)	2.233 (0.047)
Laos	4,753 (400)	370 (49)	- -	58.302 (4.286)	7.375 (0.390)
Latvia	2,534 (109)	2,535 (648)	11.044 (6.028)	0.208 (0.004)	2.233 (0.846)
Lebanon	4,028 (239)	2,522 (483)	18.760 (0.207)	17.044 (1.981)	6.4 (0.303)
Libya	4,732 (326)	- -	- -	26.333 (4.216)	7.608 (0.304)
Lithuania	3,629 (69)	2,154 (395)	11.520 (6.146)	0.570 (0.087)	1.467 (0.448)
Luxembourg	409 (18)	44,446 (6,060)	2.417 (0.787)	0 (0)	1.1 (0)

Table B4: Information on variables for source countries

mean (st.d.)	Population (in thou.)	GDP per capital (constant 1995 US\$)	Unemployment rate (% of the labour force)	Illiteracy rate, adult total (% of people ages 15 +)	Freedom House Index
<b>Madagascar</b>	13,200 (1,332)	248 (13)	- -	38.167 (2.915)	3.408 (1.241)
<b>Malawi</b>	9,231 (629)	155 (11)	- -	44.500 (2.818)	4.792 (2.369)
<b>Malaysia</b>	20,900 (1,768)	4,014 (643)	3.550 (1.164)	16.136 (2.359)	5.05 (0.467)
<b>Mali</b>	9,516 (815)	265 (15)	- -	78.250 (2.423)	3.958 (1.861)
<b>Morocco</b>	26,600 (1,606)	1,332 (50)	18.030 (2.435)	56.631 (3.537)	5.375 (0.522)
<b>Mexico</b>	89,300 (5,872)	3,364 (201)	3.517 (1.232)	10.460 (1.258)	3.858 (0.783)
<b>Mozambique</b>	16,000 (1,267)	157 (26)	- -	61.892 (3.594)	4.458 (1.483)
<b>Myanmar (Burma)</b>	43,900 (2,564)	- -	- -	17.417 (1.443)	- -
<b>Nepal</b>	20,300 (1,675)	213 (18)	1.100 (0)	64.500 (3.911)	3.392 (0.622)
<b>Netherlands</b>	15,400 (327)	27,127 (2,069)	5.591 (1.503)	0 (0)	1.1 (0)
<b>New Zealand</b>	3,617 (165)	16,019 (930)	7.698 (1.499)	0 (0)	1.1 (0)
<b>Niger</b>	9,031 (1,069)	215 (14)	- -	86.667 (1.548)	5.917 (1.582)
<b>Nigeria</b>	110,000 (10,600)	256 (5)	7.050 (5.743)	44.417 (5.338)	6.417 (1.129)
<b>Norway</b>	4,350 (83)	33,217 (3,409)	4.709 (0.965)	0 (0)	1.1 (0)
<b>Pakistan</b>	124,000 (10,500)	486 (24)	5.208 (1.054)	61.068 (2.706)	4.558 (1.206)
<b>Paraguay</b>	4,652 (378)	1,807 (43)	5.857 (1.163)	8.333 (1.029)	4.242 (0.830)
<b>Peru</b>	23,800 (1,417)	2,152 (202)	8.044 (1.173)	12.464 (1.541)	4.658 (1.187)
<b>Philippines</b>	69,000 (5,062)	1,098 (43)	8.700 (0.747)	6.232 (1.017)	2.742 (0.508)
<b>Poland</b>	38,500 (227)	3,391 (494)	12.507 (2.415)	0.344 (0.056)	1.875 (0.873)
<b>Portugal</b>	9,894 (59)	10,984 (990)	5.464 (1.180)	10.414 (1.743)	1.117 (0.037)
<b>Romania</b>	22,700 (257)	1,532 (121)	7.440 (2.139)	2.467 (0.375)	4.017 (1.795)
<b>Russian Fed. Rep.</b>	147,000 (1,232)	2,714 (586)	8.840 (3.957)	0.616 (0.106)	4.242 (1.102)
<b>Rwanda</b>	6,843 (792)	241 (42)	- -	40.500 (4.795)	7.092 (0.528)
<b>Sao Tome and Principe</b>	25 (38)	349 (11)	- -	37 (0)	2.183 (1.768)
<b>Saudi Arabia</b>	32,800 (49,600)	7,055 (303)	- -	29.500 (3.457)	7.592 (0.273)
<b>Senegal</b>	8,468 (787)	560 (24)	- -	67.617 (3.099)	4.308 (0.285)

Table B5: Information on variables for source countries

mean (st.d.)	Population (in thou.)	GDP per capital (constant 1995 US\$)	Unemployment rate (% of the labour force)	Illiteracy rate, adult total (% of people ages 15 +)	Freedom House Index
<b>Slovak Republic</b>	5,366 (20,629)	3,693 (385)	12.886 (3.037)	0 (0)	2.55 (1.337)
<b>Somalia</b>	7,930 (562)	-	-	60.000 (0)	7.617 (0.277)
<b>South Africa</b>	39,400 (2,611)	3,954 (118)	21.612 (4.215)	16.929 (1.401)	3.133 (2.144)
<b>Spain</b>	39,200 (217)	15,214 (1,262)	18.868 (3.171)	3.075 (0.488)	1.167 (0.047)
<b>Sri Lanka</b>	18,300 (811)	705 (94)	11.909 (2.402)	9.945 (1.019)	4.05 (0.534)
<b>Suriname</b>	134 (162)	931 (107)	12.613 (2.844)	30.000 (0)	3.475 (1.115)
<b>Sweden</b>	8,744 (125)	27,689 (1,602)	5.675 (2.418)	0 (0)	1.1 (0)
<b>Switzerland</b>	697 (168)	44,717 (969)	3.048 (1.638)	0 (0)	1.1 (0)
<b>Syria</b>	14,400 (1,410)	768 (83)	6.300 (0.505)	30.740 (3.346)	7.7 (0)
<b>Tajikistan</b>	5,763 (326)	620 (331)	1.633 (0.939)	1.329 (0.373)	6.722 (1.319)
<b>Tanzania</b>	29,200 (2,861)	183 (4)	3.300 (0.142)	31.583 (4.179)	6.008 (0.693)
<b>Thailand</b>	58,700 (1,652)	2,529 (375)	1.867 (0.804)	6.149 (1.095)	3.192 (1.104)
<b>Tunisia</b>	8,977 (478)	2,066 (220)	6.486 (0.689)	35.730 (4.109)	6.225 (0.479)
<b>Turkey</b>	61,000 (3,721)	2,821 (243)	7.470 (0.759)	18.689 (2.524)	4.033 (1.084)
<b>Uganda</b>	19,000 (2,032)	293 (37)	2.660 (2.439)	38.833 (3.854) <sup>1</sup>	5.633 (0.840)
<b>Ukraine</b>	51,000 (1,051)	1,014 (604)	7.163 (4.383)	0.491 (0.067)	3.975 (0.987)
<b>United Kingdom</b>	58,500 (703)	19,249 (1,351)	7.552 (1.709)	0 (0)	1.192 (0.028)
<b>United States</b>	262,000 (8,789)	28,043 (2,047)	5.574 (1.054)	0 (0)	1.1 (0)
<b>Uzbekistan</b>	22,900 (1,455)	504 (63)	0.400 (0.082)	1.101 (0.195)	7.175 (0.715)
<b>Venezuela</b>	22,100 (1,613)	3,478 (152)	10.227 (2.102)	9.359 (1.277)	2.658 (0.972)
<b>Vietnam</b>	73,300 (4,217)	272 (53)	-	8.140 (1.011)	7.692 (0.028)
<b>Yemen</b>	14,800 (1,843)	282 (24)	11.500 (0)	60.917 (4.741)	5.75 (0.571)
<b>Zaire (Dem. Rep. of the Congo)</b>	44,600 (4,881)	159 (45)	-	46.171 (4.821)	7.333 (0.463)
<b>Zambia</b>	8,844 (806)	425 (38)	13.700 (1.312)	27.500 (3.457)	4.658 (1.537)
<b>Zimbabwe</b>	11,300 (828)	642 (31)	5.967 (0.781)	15.750 (2.807)	5.8 (0.463)