Chapter 1

Introduction and Summary

1.1. INTRODUCTION AND MOTIVATION

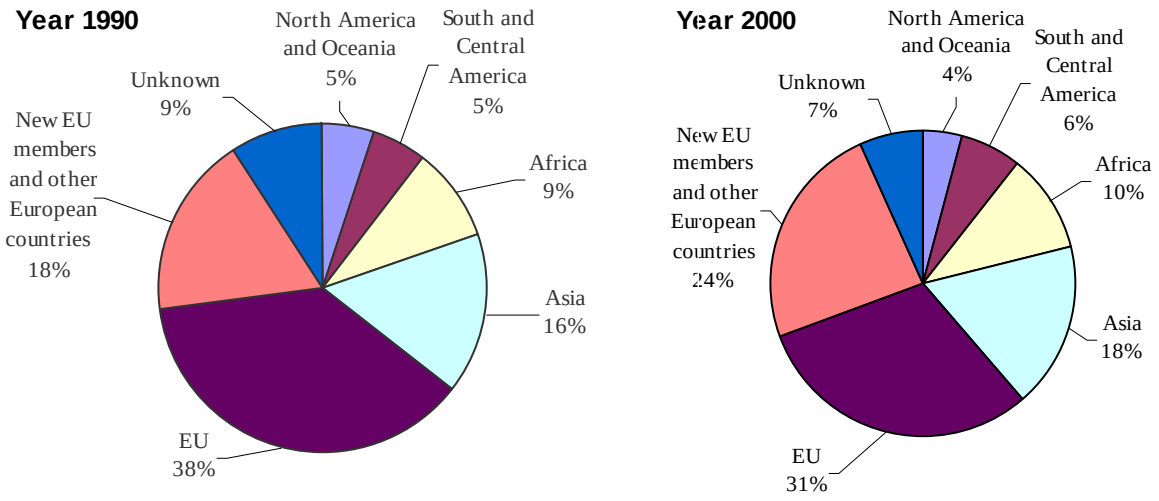
There are two specific phenomena that have had a large influence on the development in international migration during the last decades. First, while labor migration flows were dominating in the past, refugee immigrants and family reunion migrants from less developed non-Western countries have been growing sources of net immigration. But these new immigrants show lower social mobility, skills transferability and skills acquisition, which imply that the immigrants have difficulties entering the destinations' labor markets, see e.g. Chiswick (1986, 2000), Borjas (1999), Chiswick and Hatton (2003). Second, the 1990s have been strongly influenced by the collapse of the communism in Central and Eastern Europe. After forty years of communist regime, the "Iron Curtain" fell, which brought, among other things, the possibility of movement abroad. Consequently, the former communist countries have become a relatively new and large source of immigration.

These two trends are shown in Figure 1.1, which illustrates the decomposition of immigrants' stock by continents of origin in the years 1990 and 2000. Although the highest proportion of immigrants residing in OECD countries originates from Europe, the proportion has changed over time. The number of foreigners from "old" EU-15 countries dropped from 38% in 1990 to 31% in 2000. At the same time, the share of immigrants from the new EU member states and other non-EU European countries increased sharply by 6 percentage points, from 18% of the total stock in 1990 to 24% in 2000. Further, the share of immigrants from Asia, Africa and South and Central America increased by 2, 1 and 1 percentage points, respectively, see Figure 1.1.

There may be many factors explaining the migration trends and the changing composition of immigration. Besides differences in return migration behaviors, there might be different motives driving the migration flows. Hence the question is: What are the determinants behind the recent immigration? The classical explanation is that

relative real wages and employment opportunities are some of the main determinants of the international migration. In addition, there are many other economic and non-economic factors that play a role in the migration decision-making, like e.g. cultural and linguistic distance, political pressures and wars, networks of family and friends, educational pulls, social benefits, tax pressures, climate and random effects such as desire to experience adventures or pure luck. Last but not least, the growing restrictiveness of immigration policies in many OECD countries and their changing orientation towards some specific migration channels surely shape the migration flows and the composition of immigrants, see e.g. Chiswick and Hatton (2003) and Pedersen et al. (2004).

Figure 1.1. Proportion of total immigration stock in OECD countries by continents of origin, 1990 and 2000.



Note: Due to data availability, the figure shows information on: 1991 instead of 1990 for Austria, Iceland, Italy and Spain; 1991 and 2001 instead of 1990 and 2000, respectively, for Canada, Luxembourg and New Zealand; 1999 instead 2000 for France; 1997 instead of 2000 for Greece; 1994 instead of 1990 for the Czech Republic; 1995 instead of 1990 for the Slovak Republic and 1992 instead of 1990 for the United Kingdom. Hungary and Poland have been excluded due to non-detailed information on countries of origin and missing year 1990 in the case of Poland.

Source: Own calculations.

The research question on what drives migration has been much in focus over the last decades as the understanding of the migration behavior is crucial from the policy makers' point of view. Recently, the migration issues have gained a special attention among the politicians, academics and public in connection with the European Union (EU) enlargement towards the East. Given the geographical and the cultural proximity and huge economic disparities, there was a fear that, if the 10 new EU members that joined on May 1st 2004 obtained a right to free movement upon the accession[1], a mass East-West migration might occur. Accordingly, knowledge of the migration determinants and assessment of the migration potential from Central and Eastern Europe (CEE) have been especially relevant for the "old" EU-15 countries policy makers. But the majority of the previous studies have, due to data shortcomings, analyzed migration patterns from those countries on "out-of-sample" datasets. Often, they based their analysis on the migration flows data into one single destination country. Finally, despite the existing body of theoretical and empirical studies on the determinants of international migration the evidence from a multi-country perspective has been in general rather scarce, mostly due to the data limitations.

In fact, it is difficult to obtain a consistent database on international migration. For the purposes of the thesis, an international migration dataset has been compiled by contacting statistical offices in the 26 OECD countries and asking them for detailed information on immigration flows and stocks by countries of origin for the time period 1989-2000. This information is supplemented by published OECD statistics from "Trends in International Migration" publications, SOPEMI (various years). In total, the dataset contains information on immigration flows and immigration stocks in 26 OECD countries from 129 countries of origin. Besides flow and stock information, a number of other variables that may explain migration behavior have been collected. These variables are gathered from different sources like OECD, World Bank, UN, ILO and IMF publications. Although the dataset presents a substantial progress over that used in the past research, there are still some problems related to an unbalanced character of the dataset, i.e. missing observations for some countries and some years. But considering the lack of international migration

[1] The freedom of movement of workers between the EU states is one of the EU *acquis commanautaire.*

databases that previous studies had to deal with, this new dataset serves a great source for analyses of international migration behavior.

Given the recent developments in international migration and the availability of the rich migration dataset, this PhD thesis addresses selected issues related to the international migration. Concerning the phenomenon of changing composition of the international migration, one chapter of the thesis analyzes the determinants and selectivity in international migration during the latest decades. Other parts of the thesis are devoted to analyses of the Central and Eastern European migration behavior after the collapse of communism and to predictions of migration potential from those countries in connection with the EU enlargement.

Specifically, chapter 2 looks at the determinants of interregional migration in *a typical Central and Eastern European source country*, the Czech Republic. One advantage of the interregional analyses is that it provides a possibility to study the migration behavior of Central and Eastern Europeans in an environment with no migration obstacles such as restrictive immigration policies, i.e. an environment similar to the EU area with the free movement of labor. The Czech Republic represents a suitable country for this kind of analysis as this medium-sized Central European country has relatively large regional differences in economic conditions. Hence, identification of the migration determinants in the presence of the large interregional disparities may give some understanding of the migration behavior of Central and Eastern Europeans (CEE).

While Chapter 2 looks at determinants of internal migration without any migration obstacles, Chapter 3 focuses on *determinants of international migration flows*. This part is a joint work with Professor Nina Smith and Professor Peder J. Pedersen. We analyze determinants of emigration from 129 countries of origin to 22 OECD countries. The large number of destination countries included in the analysis allows us to analyze the migration patterns for groups of OECD countries which are alike with respect to welfare state regimes or migration policy, and in this way we are able to identify patterns which may be hard to document empirically in the one-country-specific studies. We go further in our analysis as we identify selectivity in international migration. As we are not able to observe individual characteristics, we look at "*country-based selection effects*". We test whether immigrants from low-income countries, where the educational level is relatively low, tend to go to

countries with higher welfare and lower income inequality and whether immigrants from high-income countries tend to go to countries with a lower welfare and higher income inequality level. We also study *network effects* and we look at whether the effects vary among different groups of the source countries.

Chapter 4 analyzes *determinants of migration from Central and Eastern Europe.* I study migration flows from a number of CEECs into a number of destination countries including the large immigration countries outside the EU-15 like the US, Australia and Canada. This allows me to study emigration from Central and Eastern Europe in more complex ways. Besides economic differences between sending and receiving countries, I include a number of other variables, e.g. language preferences, educational, social security pulls and other factors that help to explain migration behavior. The questions I address in this paper are the following: Where did the CEE immigrants go and why? What are the macroeconomic determinants of migration flows from these countries?

Chapter 5 concentrates on *predicting East-West migration potential*. In this chapter I first analyze determinants of emigration from the 7 new EU countries into EEA/EU-13 countries over the period 1990-2000. The obtained coefficients of the determinants are further used for prediction of migration potential from those countries in years after the 2004 EU enlargement, i.e. 2004–2015. I carry out the predictions in the framework of three assumed scenarios concerning the future development of the key explanatory variables.

The rest of this chapter contains brief summaries of the four main chapters and their results.

1.2. SUMMARIES

How mobile are Central and Eastern Europeans? Evidence from interregional migration in the Czech Republic (Chapter 2)

In this chapter, I analyze the determinants of interregional migration in the Czech Republic over the years 1993–2003. It is beneficial to understand migration patterns within one country, where there are no barriers to migration like those existing in the international migration such as restrictive immigration policies. Especially, it is of a

great interest to identify the migration behavior in the Central and Eastern European countries that have recently joined the EU. The reason is that it may give some understanding of the migration from the new EU countries in the case of the free movement of labor in the enlarged Europe.

The data used for the analysis have been collected from publications by the Czech Statistical Office. The dataset covers migration between 74 districts and a number of other variables and districts characteristics that may explain interregional migration during the period of eleven years, 1993 to 2003.

The results of my analyses show that migrants respond strongly to the interregional differences in wages. Thus, wages are the key driving force in the interregional migration. On the other hand, the districts' unemployment rates do not seem to play an important role. Further, on average Czechs prefer to move to regions near by and the migration propensity decreases with the distance between two districts. Overall, the scale of interregional migration in the Czech Republic is very low given the large interregional disparities, indicating relatively low migration propensity of Czechs. But the behavior is driven strongly by wages.

Selection and network effects – migration flows into OECD countries 1990-2000 (Chapter 3)

(Joint with Peder J. Pedersen and Nina Smith)

This chapter presents empirical evidence on immigration flows from 129 countries to 22 OECD countries annually for the period 1990-2000. The dataset used for the analyses is based on information obtained from the particular OECD country statistical office and other sources, as described above.

Our results indicate that economic factors such as income push/pulls and destination country unemployment rate play an important role in international migration. Further, traditional factors such as cultural and linguistic distance and migration costs as measured by physical distance between the countries are important. But the effects differ for different groups of countries. Interestingly, we have tested the simple welfare magnet hypotheses by allowing the effect of tax revenue in destination country on migration flows to vary across different source countries. We do not find any significant variation in the effect of the tax pressure on migration

flows across source countries. Contrary to the welfare magnet hypotheses, we find for some groups of destination countries that the coefficient of the tax pressure in destination countries becomes more negative for the immigrants coming from poor countries. This might be explained by the fact that relatively big public sectors correlate with restrictive immigration policies.

However, we found that the Scandinavian countries, to a much larger extent than the other welfare states, have an overweight of immigrants from the poorest source countries, when controlling for other determinants of migration flows. This pattern is not observed for the liberal welfare states like for instance the US, where newly arrived immigrants do not have the same access as natives to services and income transfers provided by the state as it is the case in Scandinavian countries. The liberal welfare states tend to have an overweight of immigrants from the highest income countries, when controlling for other factors.

A very robust key result of our econometric analysis is that the network effects measured as the coefficient of the stock of immigrants of own national background already resident in a country have a large positive effect on immigration flows, and thus networks play an important role in explaining current immigration flows. One interesting fact borne out from our econometric analysis is that the networks effect is stronger for immigrants coming from low-income groups of countries compared to immigrants from high-income group of countries. Moreover, the migration stock effects vary between different groups of welfare destination countries. The network effect variation across income levels of source countries varies a lot in the case of an Anglo-Saxon/liberal type of destination countries with a large network effect for low-income countries and a much smaller network effect for high-income source countries. Contrary to that, the network effect does not vary much across source-country income groups for Western European destination countries. Thus, this suggests that there is some migration selectivity that operates through the immigrants networks. It gives also some immigration policy implication, namely that a shift in immigration policy from largely family reunion admissions of migrants towards more skill-based admissions of labor migrants would influence the composition of immigrants.

Where did Central and Eastern Emigrants go and why? (Chapter 4)

This chapter focuses on the migration flows from Central and Eastern European countries (CEECs) after the fall of the "Iron Curtain". I analyze the importance of particular push and pull factors for the observed flows during the period 1990-2000. This is of great interest as the decade following the fall of Iron Curtain brought a period full of changes in post-communistic countries, which also was reflected in the development of migratory pressures. Contrary to most of the previous literature, I analyze migration determinants on actual migration flows from the CEE countries into a number of destination countries. Besides economic differences between sending and receiving countries, I include a number of other variables, e.g. language preferences, tertiary education, social security pulls and other factors that help to explain migration behavior.

The analysis is based on information on migration flows and stocks in 18 OECD destination countries from 9 Central and Eastern European source countries for the years 1989–2000. The data are taken from the international migration dataset that is shortly described above.

The descriptive results show that the principal destination of Central and Eastern Europeans is, not surprisingly, Germany or neighboring and nearby countries such as Austria for emigrants from the Czech and Slovak Republics and Hungary; Spain, Italy and Greece for emigrants from Bulgaria and Romania; and Scandinavia for emigrants from the Baltic countries. But besides Germany and neighboring countries as destinations, a significant part of the CEE migration flows goes to the US and Canada. The US is in fact a second main destination for Central and Eastern Europeans with an average flow of 27,000 persons annually.

My analyses reveal that the economic push/pulls factors play an important role in international migration from those countries. The disaggregated results show that there are large differences between the Central and Eastern European countries with respect to emigration patterns. The lagged stock of immigrants, which may reflect a network effect, has a strong and positive effect for immigrants from Central European countries, Romania and Bulgaria, while immigrants from the Baltic countries seem to rely much less on networks. Income gaps have a positive effect on migration flows, particularly from Southeastern countries, while employment opportunities in destination countries are main determinants of the migration flows

from the Baltic and Central European countries. The results concerning potential welfare magnet effects from those countries are mixed.

An interesting result of my econometric analyses is that language is important. When controlling for other factors, Baltic emigrants tend to go to English-speaking countries and to a smaller extent to German-speaking countries. Emigrants from Central Europe prefer the German- and French-speaking countries, while Romanian and Bulgarian emigrants favor French-speaking countries.

EU enlargement: Migration from new EU countries (Chapter 5)

The main purpose of this chapter is to predict the migration potential from new EU member states. Here, I make use of data on the actual migration from the 7 new EU member countries to the EEA/EU-13 countries over the period 1990-2000. Being able to observe migration behavior from these countries helps to avoid the problems related to (double) out-of sample forecasts and to the assumption of invariance of migration behavior across a space that previous studies had to hold.

I base my econometric analysis on the modified Hatton (1995) model, which incorporates features that help to explain migration dynamics such as formation of expectations about future utility streams based on past information. In the econometric analysis, I present and evaluate the model in its static and dynamic form estimated by different panel data econometric techniques. The results of the analyses reveal the importance of controlling for pairs of countries unobserved heterogeneity.

Some preliminary results regarding the predictions of future migration potential reveal that the average annual net increases in stocks from the 7 new EU member states are predicted to be between 20,000 and 46,000 depending on an assumed growth scenario. This leads to a total number of between 1.1 and 1.4 million migrants from those countries residing in the 13 EEA/EU countries in 2015. This is equivalent to an immigration stock of 1.5–2% of the source countries' populations in 2015. As regards the gross migration flows, the results show the total predicted accumulated gross flow over the period 2004-2015 being around 5.4-5.8% of the source population, again depending on the assumed economic convergence scenario. The results are relatively close to the findings of previous studies, although the

predictions of gross migration potential belong to the larger ones, while the net migration potential belongs to the lower ones.

The preliminary results regarding predictions of the future gross and net migration flows suggest that the fears concerned with large-scale migration are hard to justify. Furthermore, the current and predicted migration development indicates that migration from the new EU member countries towards the “old” EEA/EU countries is rather a temporary phenomenon in the sense that besides the inflows there will be substantial return flows as well. Last but not least, these migration flows may in fact play a rather positive role in the “old” EU destination countries as they can help them to alleviate the problem of declining and ageing populations that the EU countries are facing.

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