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The Common Nordic Labour Market at 50

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Nordic co-operation

Nordic cooperation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and three autonomous areas: the Faroe Islands, Greenland, and Åland.

Nordic cooperation has firm traditions in politics, the economy, and culture. It plays an important rol in European and international collaboration, and aims at creating a strong Nordic community in a strong Europe.

Nordic cooperation seeks to safeguard Nordic and regional interests and principles in the global community. Common Nordic values help the region solidify its position as one of the world's most innovative and competitive.

Contents

Summary

Free mobility of labour across national boarders was formalized by an agreement between Denmark, Finland, Island, Norway and Sweden in 1954. During the post war period this common labour market of the Nordic region has been unique within regard to the length of time it has been working and with regard to the level of freedom with which citizens have been able to move among the member countries. From a researcher's point of view it has also been unique with regard to the availability of data regarding the flows of people and variables indicating the states of supply and demand in the labour markets of sending and receiving areas.

In general the creation of free cross-country mobility serves two main gains. First, it creates a potential welfare gain for individuals who become free to search for jobs in a much broader labour market reducing both the incidence and duration of spells of unemployment, and increasing earnings in a long run perspective. Secondly, free mobility may contribute to dampening cyclical swings by attracting labour from neighbouring countries during an upswing and by reducing the increase in unemployment through emigration to neighbouring countries during a downturn. However, to build down national boarders between labour markets also have unfavourable consequences for groups in the sending and receiving countries. The shifts in labour supply caused by immigration intensify the competition in certain segments of the labour market which may result in higher unemployment or lower wages. From the point of view of sending countries main problems have been related to brain drain and its effects.

The Nordic countries have for a long time constituted a region where the process of migration can be studied when all significant institutional barriers to labour mobility across national boarders have been removed. The purpose of the present study is to collect evidence regarding the experience coming from this Nordic experiment in a historical setting of its own, and at the same time consider the Nordic case in a broader, mostly European, perspective

The majority of empirical studies on migration among the Nordic countries have addressed the question about driving forces, i.e., about which push and pull factors that have triggered and maintained flows of labour across national boarders within the Nordic region.

In Chapter 2 these studies which cover the period from the early sixties to nineteen ninety are reviewed. Taken together the studies indicate that economic push- and pull factors have played a part in the determination of the inter-Nordic migratory patterns. However, pull factors in the main receiving economy; the Swedish one, is pointed out as the most important triggering devices.

The increasing disequilibrium in Finland during the sixties and seventies coincided with a reverse disequilibrium situation in Sweden, i.e., a period of labour shortage due to the fast growing manufacturing industry. Thus, the high labour migration from Finland to Sweden seemed to be the answer to a problem in both countries. The much more sever unemployment problems in Finland during later periods did not increase the out migration from the country. All the major peaks in the intra Nordic migration flow in the pre nineteen ninety period appear simultaneously with peaks in the vacancy rate in Sweden. However, the demand pull from the receiving economy is not sufficient. The Norwegians did not move to Sweden during the sixties and early seventies even though the average welfare gap between Norway and Sweden was just as big as between Finland and Sweden. The general pattern seems to be that problems in the labour market of the home country; unemployment, insufficient demand, structural changes, build up a migration pressure which is released if a pull effect is exercised strongly from the labour market of the receiving countries.

In Chapter three the migration flows between and from Norway, Sweden, Denmark, Finland and Island, before and during the years of common Nordic labour market are described.

During the first forty five years after the Agreement had been signed, i.e., 1954–1990, the migration between the Nordic countries was dominated by the migration flow from Finland to Sweden, while there were large migration flows also between Denmark and Sweden and between Norway and Sweden. However, an extensive labour migration from the other Nordic countries to Sweden took place in the first decade after world war two, before the establishment of the common labour market. To a high extent the Nordic labour existed in practice before it was formally founded. Migration flows between the Nordic countries are overall much smaller in the post 1990 years. Further, the period divides into the 1990s and the years from 2000 with different characteristics regarding the intra-Nordic flows.

The development in the early 1990s reflected the deep depression in the Swedish economy. Gross migration to Sweden falls strongly in the other Nordic countries. For Finland, this implies a more permanent reduction in the share of emigrants going to other Nordic countries from about 70 percent to about 40 percent. The years in the 1990s and the years – so far – from 2000 differ very much regarding the direction and magnitude of the *net* intra-Nordic flows. In the 1990s Denmark receives a net flow from Iceland, Norway and Sweden, and both Finland and Norway receives a net flow from Sweden. From 2000 this picture shifts. Sweden once again becomes the net receiver of people from Denmark and Norway, while Denmark receives a net flow of people coming from Iceland. The significant shift in the Danish-Swedish flows seems to reflect the

opening of the Øresund Bridge between Copenhagen and Malmö more than cyclical changes in the national economies.

In Chapter 4 the cyclical sensitivity of Nordic migration in the post-1990 period is studied. That is, the sensitivity of the net inter country migration flows is analyzed with respect to the level of unemployment in countries of origin and destination. The results are compared to results from some of the studies summarized in Chapter 2, using similar date from earlier periods. Overall, the picture for the recent 15 years is very much different from that of the 20-year period up to 1990. The coefficients have the expected signs for the net flow from Denmark to Norway, i.e. higher unemployment in Denmark leads to an increase of the net outflow and higher unemployment in Norway leads to a decline of the net outflow. The coefficients are not significant, however, not even at a 10 per cent level, in contrast to the results for the 1970–1990 period where both coefficients were highly significant with expected signs. Looking at the net flow from Denmark to Sweden the coefficient for unemployment in Denmark is significant but with the wrong sign. In the preceding 1976–1990 period both coefficients were significant and had the expected sign.

In the analysis of the of the net migration flow from Denmark to Sweden an "Øresund Bridge dummy" is including set at 1 from 2000 and 0 before. Not surprisingly, this is found to be highly significant, but when the Bridge dummy is introduced both unemployment coefficients become insignificant. For the earlier dominant intra-Nordic flow between Finland and Sweden we find no impact at all from unemployment rates in the post 1990 period, in contrast to the finding of highly significant coefficients for the 1971–1990 period.

The exceptions to the results so far are found for Iceland and Norway. The net flow from Iceland to Denmark is related to the unemployment rates with significant coefficients having expected signs.

In Chapter 5 we focus on the skill composition of Nordic migrants, i.e., their distribution on educational and other characteristics which may affect their labour market performance.

The description of such patterns has two main parts. First, individuals who have moved between the Nordic countries are compared to the home country population, and to migrants moving to other regions in regard to their educational and professional background.

Both earlier studies and the descriptive statistics presented in this Chapter indicate that the emigration flows from the Scandinavian countries have been positively selected with regard to level of education. However, the positive correlation between education and emigration seems to be considerably less pronounced for the migration flows between the Nordic countries compared to those headed for destinations outside the region.

We argued that four factors in particular could increase the level of education in Nordic emigration flows:

- Pull effects from receiving countries experiencing a shortage of highly educated labour
- The relative low returns to education in the Nordic labour markets.
- A negative correlation between migration costs and level of education.
- The formal screening process by immigration authorities, favouring high productivity workers in excess demand.

At least the last three of these four factors are probably less operative within the Nordic labour market. Thus, the relatively low educational attainment of the intra-Nordic migrants compared to those moving to more distant destinations is in accordance with these arguments.

In our second approach to reveal the skill composition of Nordic migrants we utilize a Norwegian micro data set containing information about characteristics of individual movers and stayers. By using this source we manage to describe Norwegian emigrants more closely with regard to earlier labour market performance, skills and demographic features .

Analyzing the relationship between such individual characteristics and migratory behaviour we reveal a positive relationship between unemployment experience and intra-Nordic migration. This indicates that Norwegians to a greater extent look for work in other Nordic countries when they have personally experienced it hard to find a job at home. However, the opposite result turns up in relation to other OECD countries, showing that the same mechanism does not apply in relation to destinations outside the Nordic region.

The analysis also reveals a negative relationship between earlier income and the probability to move to another Nordic country, while the opposite seems to be the case with regard to OECD destination countries outside the Nordic region. These relationships indicate that the Norwegians who move to other Nordic countries are negatively selected with regard to labour market qualities, while the opposite is true with regard to the migrants moving to rich countries outside this region.

In Chapter 6 future migration prospects are discussed. One factor speaking for more migration within the Nordic region is improvement in the transportation system. Another factor leading to larger migration may be the Danish regulation of marriage migration. With larger cohorts of second-generation immigrants in Denmark, the regulation of marriage migration may have an increasing impact. A third factor which is that the young people more often have higher educations than earlier generations and people with higher education have a higher propensity for mobility.

The common labour market in Europe has expanded by ten new member states since May 2004. This has led to higher migration from especially Poland and the Baltic states. The new migration may have an effect especially on the parts of the labour market where the new immigrants get jobs. Some employers may recruit workers from those countries instead of from the other Nordic countries

1. Introduction

By Peder J. Pedersen and Eskil Wadensjö

Three years before the original six member countries of what has since become the European Union signed the Treaty of Rome including an agreement for free mobility of labour to be introduced not later than in December 31, 1969[1], free mobility had been formalized by the Nordic countries in 1954. In that sense the Nordic initiative can be seen as a front-runner for other regional agreements opening national labour markets to a setting of partial cross-national freedom of mobility.[2]

The purpose of the present study is to collect evidence regarding the experience coming from this Nordic experiment in a historical setting of its own, and at the same time consider the Nordic case in a broader, mostly European, perspective. The creation of free cross-country mobility serves two main objectives. First, it creates a potential welfare gain for individuals who become free to search for jobs in a much broader labour market reducing both the incidence and duration of spells of unemployment, and increasing earnings in a long run perspective. Secondly, from an economic policy point of view in the participating countries, free mobility may contribute to dampening cyclical swings by attracting labour from neighbouring countries during an upswing and by reducing the increase in unemployment through emigration to neighbouring countries during a downturn.[3] The equilibrating flows of labour between the participating countries in a regional free mobility construction can be permanent or transitory. The Nordic experience has shown both traits, i.e. return migration has been an important part of the migration experience. Further, the net advantage from an economic policy point of view depends on the extent of synchronization of cyclical movements. It is obvious that perfectly synchronized cyclical profiles in the participating coun-

[1] EEC agreement came into force from January 1, 1958, and the free movement of workers within the EEC was introduced later in three steps, September 1, 1961, May 1, 1964 and November 9, 1968. See SOU 1971:35.

[2] In practice the Swedish labour market became open for Nordic citizens already much earlier. From 1 October 1943 citizens from Denmark, Finland, Iceland and Norway did not need a work permit to be able to work in Sweden. The visa requirement was abolished for Norwegian citizens from 11 August 1945, for Danish and Icelandic citizens from 19 August 1945 and for Finnish citizens from 15 December 1949. See Wadensjö (1973).

[3] It is not self-evident that this is the case. Immigration may lead to increased infrastructure investment (for example housing) in the receiving country and decreased infrastructure in the sending country which may strengthen the business cycle variations. Mishan and Needleman (1966) is the seminal contribution to this discussion. The effects of migration on business cycle variation are an empirical question. The results depend on the size and time lag of the reaction of investment on migration. Increased commuting over the border has most likely less effect on infrastructure investment, for example less effect on residential investment.

tries reduce the net advantage from free mobility. On the other hand, even with a high degree of cyclical correlation, sectoral differences can result in skill imbalances in any of the national labour markets that might differ from the situation in one or more of the other countries. There may prevail a situation of low unemployment in the aggregate in all the member countries at a specific time, but unemployment and vacancy rates might differ for specific skill or educational groups between the countries, leaving room for a welfare gain from the existence of free mobility.

International migration in the Nordic countries is of course not just intra-Nordic. Three of the Nordic countries have entered the European Union at different dates; Denmark in 1973, and Finland and Sweden in 1995. Iceland and Norway as well as Finland and Sweden signed the European Economic Area agreement in 1992 together with the other members of EFTA. The most recent version of the agreement is from 2004 and states in Article 28 "Freedom of movement for workers shall be secured among EC Member States and EFTA States. Such freedom of movement shall entail the abolition of any discrimination based on nationality between workers of EC Members States and EFTA States as regards employment, remuneration and other conditions of work and employment. It shall entail the right, subject to limitations on grounds of public policy, public security or public health: (a) to accept offers of employment actually made; (b) to move freely within the territory of EC Member States and EFTA States for this purpose; to stay in the territory of an EC Member State or an EFTA State for the purpose of employment in accordance with the provisions governing the employment of nationals of that State laid down by law, regulation or administrative action; (d) to remain in the territory of an EC Member State or an EFTA State after having been employed there." The 2004 agreement was signed by the European Community, the 25 EU Member States and Iceland, Liechtenstein and Norway. Switzerland intended to sign the 1992 agreement but a referendum turned out against it. A bilateral agreement between EU and Switzerland on free movement of persons was concluded in 1999 and entered into force on 1 June 2002.

This means that for the most recent part of the 50 years of free intra-Nordic mobility, citizens in the Nordic countries have also enjoyed free mobility in a much greater European labour market. An interesting aspect in the present context is thus to what extent this expansion of potential mobility has influenced actual mobility flows. Further, the ongoing expansion of the European Union, from 1 May 2004 with 10 new member states, eight in Central and Eastern Europe and also Cyprus and Malta, is of clear relevance regarding international mobility in the Nordic countries. Special, more restrictive rules regarding migration are permitted under the first seven years after the 2004 enlargement of the EU. At the start, only Sweden of the three Nordic EU member countries gave entry to the labour market for citizens from the new member states on the same

conditions as for citizens from the "old" EU member states. Denmark and Finland together with most other European countries applied more restrictive rules. Sweden, Ireland and the United Kingdom were the only countries that did not introduce such rules.[4] The seven year transition period is divided in three sub-periods of two, three and two years. The first two-year period ended on 30 April 2006. For the next three-year period up to 30 April 2009 four countries have joined the group with open access. Those four countries are Finland (which works on the development of a registration/monitoring system), Greece, Portugal and Spain. Denmark will continue with restrictions but most likely modify them. From 1 January 2007, EU has two new member states, Bulgaria and Romania. Also this time there is a possible seven-year transition period divided into three sub-periods. Finland and Sweden have decided to abstain from any transitory rules. Denmark also this time has chosen to have restrictions for mobility from the new member states.

The cross-country Nordic mobility is mainly work or study related. In recent decades immigration from less developed countries has dominated the intra-Nordic flows of Nordic citizens in quantitative terms. The flows from less developed countries have mainly consisted of refugees and family reunifications including marriage migration. They show variation in the absolute numbers and arrival pattern as well as the composition by national origin between the Nordic countries. In all the countries they represent a big challenge regarding integration into the labour market and other areas that have recently tended to dominate policy and public debates on international mobility in the Nordic countries. The very large changes in Sweden in the composition of the stock of immigrants by region of origin are shown in Figure 1.1 by giving information at three points in time; 1970 when labour immigration completely dominated, 1990 just before the big turning point in the Swedish cyclical situation, and finally 2003. The strongest decrease is seen to be in the share coming from the other Nordic countries coming down from 60 per cent to about 25 per cent of all immigrants in Sweden. In 2003 a bigger share of the stock of immigrants are from Asian countries than from the neighbouring Nordic countries. In relative terms we also see a strong increase in the share coming from Africa. Sweden enters the EU between the two latest observation points in Figure 1.1 which may explain the slowdown of the decrease in the share from EU/EEA countries other than the Nordic countries. The same trend as shown in Figure 1.1 exists in the other Nordic countries

[4] See Doyle, Hughes and Wadensjö (2006) for details regarding the transitional rules. United Kingdom has a special registration system and Ireland has introduced specific rules regarding social assistance. See also Tamas and Münz (2006).

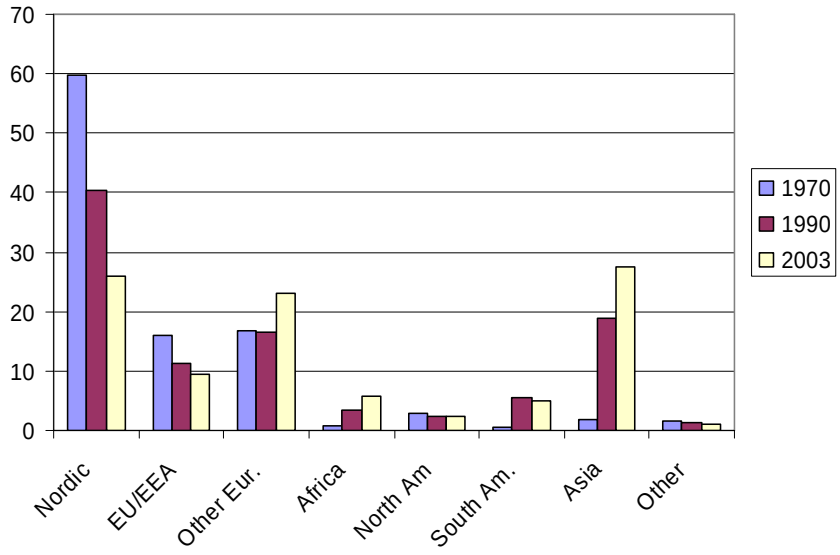

Figure 1.1. Relative distribution of foreign born in Sweden, 1970, 1990 and 2003

Source: Statistical Yearbook of Sweden, 2004.

Turning to the number of Nordic citizens living in another Nordic country in 1990 we get the profiles shown in Figure 1.2. Nearly 130,000 Finnish citizens lived in another Nordic country in 1990, most of them in Sweden, but much less than the historical maximum in earlier decades. Note that these figures are on citizens and not on immigrants. This is important as many immigrants from Finland to Sweden have become Swedish citizens. About the same number of citizens of Denmark and Norway lived in another Nordic country. Relatively few Swedish citizens lived in another Nordic country. Compared to the size of Iceland's population many Icelandic citizens lived in other Nordic countries.

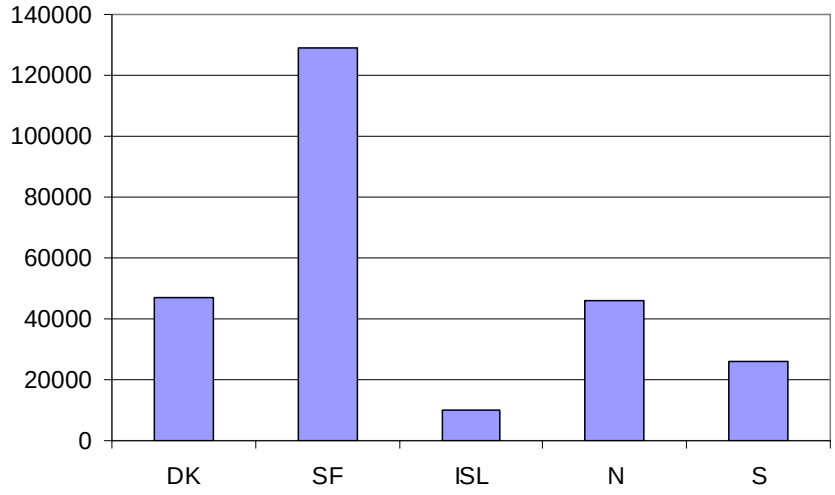

Figure 1.2. The number of Nordic citizens living in another Nordic country in 1990

The pattern in 1990 has in relative terms shifted very much between 1990 and 2005 as shown in Figure 1.3. The most spectacular change is the 80 per cent increase in the number of Swedish citizens living in another Nordic country. Note that this increase is from a low level in 1990 compared to those of the other Nordic countries in the same year. The increase of Swedish citizens living in other Nordic countries of 80 per cent is followed by a 60 per cent increase in the number of Icelandic citizens. We see a continuation of a historical trend of declining migration from Finland to other Nordic countries resulting in a nearly 25 per cent fall in the number of Finnish citizens living in other Nordic countries. A large part of this decline is explained by that many immigrants from Finland in Sweden have become Swedish citizens.

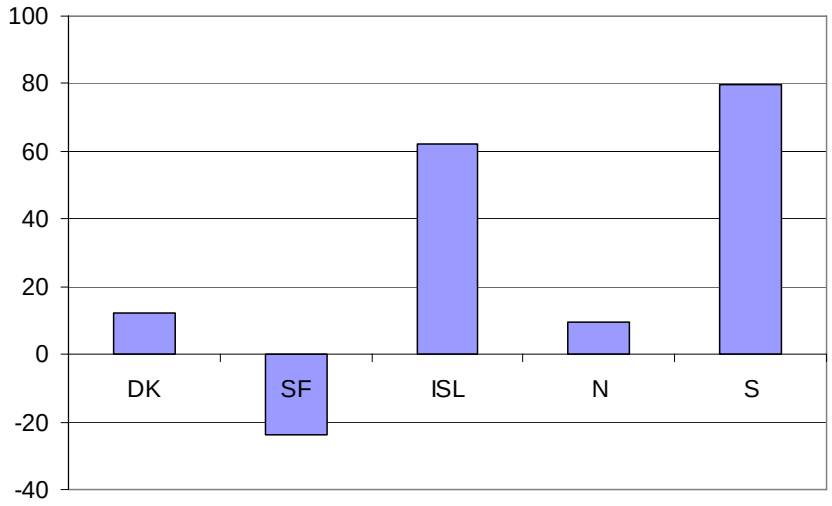

Figure 1.3. Percentage change in the number of Nordic citizens living in another Nordic country from 1990 to 2005

The purpose in the following is primarily to describe and analyze the more specific development of the cross-country mobility in the common Nordic labour market. But, at the same time, the trends in the specific intra-Nordic mobility must be seen in the broader context of how international mobility has changed, especially in the latter half of the 50 years on which we focus. In the following, Chapter 2 presents a survey of a number of the earlier studies of the common Nordic labour market. In Chapter 3 we focus on a description of the actual flows between the Nordic countries. The description is based on aggregate flows, i.e. existing data does not enable us to distinguish between labour mobility and other forms of intra-Nordic mobility. We thus, implicitly, assume that the aggregate flows are representative approximations to the narrower job related flows we ideally would like to use.

The 50 years we describe fall naturally into three phases. First we have a period up to the early 1970s when Sweden was a large receiver of

labour migrants. The majority of the labour migrants came from the other Nordic countries with Finland as the main source, but many also came from Denmark, Iceland and Norway. In the next period, from the early 1970s up to the years up to the big cyclical downturn around 1990 in Finland and Sweden the labour migration to Sweden from the other Nordic countries declined considerably. The wage differences between the Nordic countries became smaller and the economic growth and business cycle development much less favourable than earlier in Sweden. After this "transitional" economic period, the years since 1990 followed with fairly low net intra-Nordic mobility. The shift in emphasis to immigration from less developed countries was further strengthened. The choice of the early 1970s and 1990 as the dividing years in the description is supported also by the profile shown in Figure 1.4.

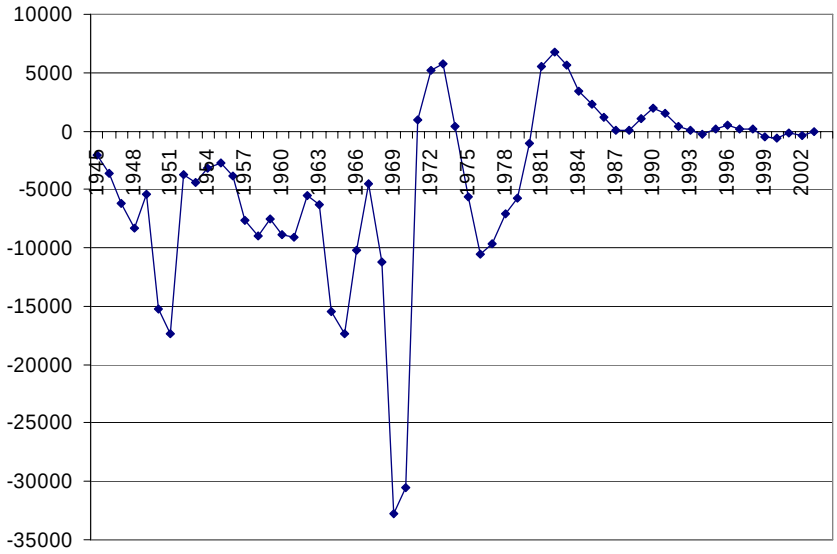

Figure 1.4. Net immigration from Sweden to Finland, 1945 – 2004.

Source: Institute of Migration (www.migrationinstitute.fi)

Here we look at the net flow between Finland and Sweden from the end of the Second World War until 2004.[5] Before 1970 the net flow every year is in the direction of Sweden and highly volatile. Between 1970 and 1990 the net flow is still highly volatile reflecting big differences between the cyclical patterns in Finland and Sweden, but goes some years in the direction of Finland (more people are returning to Finland than moving to Sweden from Finland). These big net flows are at the same time dominating the overall picture of intra-Nordic mobility in quantitative terms in these years. From 1990 both countries move into a deep depression fol-

[5] There is a problem with the consistency of the statistics due to that a common Nordic registration system (internordiskt flyttningsintyg) was introduced in 1970 leading to increased registration in 1970 and 1971 of migration which had taken place not only in those years but also earlier. The migration peak to Sweden in 1970 and the remigration peak to Finland in 1971 are both most likely considerably overestimated.

lowed by a fairly synchronized cyclical upswing later on. Net flows become approximately zero indicating a shift in the function of the Common Nordic labour market in the post-1990 period. Another characteristic difference between the years before and after 1990, is the changing fate of the Swedish labour market from being an "island of full employment" or even excess demand in a European "sea of high unemployment" until 1990, to becoming more "European" in the post-1990 years.

In Chapter 4 we focus on the interaction between intra-Nordic mobility flows and differences in the national cyclical situations measured by rates of economic growth, employment growth and unemployment rates. Further, we include in Chapter 4 a brief survey of recent evidence on cross-border commuting as an alternative to residential mobility. This aspect is relevant, for instance, in the Øresund region after the opening of the bridge between Malmö and Copenhagen.

In Chapter 5 we look at the evidence from a case study of skill mobility at three different dates in the most recent 20–25 years. We look at migration flows between the Nordic countries and migration out of the Nordic area by level of education and type of a number of specific skills. The purpose in this chapter is to evaluate whether the general increase in educational levels and the trend towards a more internationally oriented environment has resulted in a shift in mobility patterns in the Nordic countries in the direction of less importance of intra-Nordic flows.

Finally, Chapter 6 summarizes the results and includes a focus on remaining barriers for intra-Nordic labour mobility along with conjectures regarding future prospects based on five decades of experience in combination with recent trends.

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2. A survey of earlier studies of intra Nordic migration flows

By Peder J. Pedersen and Marianne Røed

2.1 The factors behind the movements according to earlier research

During the post war period the common labour market of the Nordic region has been unique within the western world in at least two respects: The length of time it has been working and the level of freedom with which Nordic citizens have been able to move among the member countries. From a researcher's point of view it has also been unique with regard to the availability of data regarding the flows of people and variables indicating the states of supply and demand in the labour markets of sending and receiving areas. For a long time the Nordic countries have constituted a region without any significant institutional barriers to labour mobility across national borders. Considering this background it is not surprising that a number of empirical studies have been carried out regarding the Nordic labour market.

The purpose of this chapter is to summarize the knowledge that can be drawn from these studies of intra-Nordic migration flows. That is, we want to gain insight concerning causes and consequences of migration flows in general, as well as specific knowledge about the flows among Nordic countries. Our focus is on labour migration and the labour market. We limit the discussion to studies based on an economic approach, i.e., studies that use economic theory as a point of departure and employ quantitative, statistical procedures in their empirical analysis. By labour migration we refer to movements and resettlements between geographical locations that are primarily motivated by labour market considerations. The economic research literature on geographical mobility is generally preoccupied with three broad topics related to labour migration: the driving forces of migration, the implications of migration on the economies of the source and host countries, and the performance of immigrants on the labour market of the host country.

What are the driving forces – the push and pull mechanisms – that generate variations in the migration flows between countries?

Within this part of the literature the main purpose is to identify the economic variables that trigger and maintain migratory movements and thus explain the size and the variation in migration flows between countries.

The candidates in this regard have been indicators of the location specific welfare levels and the state of supply and demand in the labour markets at home and in potential destination countries. Thus different measures of average wage levels, employment growth, unemployment and job vacancies, have typically been the explanatory variables in such studies. These kinds of analyses enhance our understanding of the interplay of economic conditions that may generate huge flows of people across national borders. Such knowledge can make us better able to foresee the consequences of removing institutional barriers against international labour mobility. This seems particularly useful in periods when common international labour markets are established and enlarged.

What are the implications of migration on the economies of the source and host countries?

Typical questions asked within this strand of research literature are: Does immigration harm or improve the economic prospects of natives, and what are the implications for those left behind in the home country? From the point of view of receiving countries some typical questions are: Do the shifts in labour supply caused by immigration affect the wages or unemployment in the labour market or certain segments of it? These questions have been important topics in studies of major immigration countries as for example the US, Canada and Germany. From the point of view of sending countries one main topic has been the brain drain and its effects. Other sending country topics have been the economic consequences of reductions in a structural excess supply of labour, and the effects of the inflow of remittances to the source countries from the immigrants.

How do the immigrants perform in the labour market of the host country?

One main focus of interest is the time path of assimilation. Does the time spent in the host country have an effect on the relative labour market performance of immigrants compared to natives? labour market performance is typically measured by the employment probability, the unemployment risk and the individual wage. To explain different assimilation patterns researchers have focused on the individual characteristics of immigrants. One issue has been to try to explain if differences in the outcomes between immigrants and natives are due to the selection of movers in the home countries.

2.2 Research on the three topics

The majority of empirical studies on migration among the Nordic countries have addressed the first question, i.e., what are the main driving forces behind migration flows? Some relatively new empirical studies

also include results regarding the economic performance of Nordic citizens living in other Nordic countries than their own (Barth et al. 2002). However, the main concern of these studies is not the labour market performance of Nordic citizens, but the slow labour market integration of non-Western (outside-OECD) immigrants who have moved to a Nordic country during the last thirty years. In these studies the immigrants coming from Nordic countries have the role of a comparison group of successful labour immigrants.

To our knowledge, there are no studies that directly analyze the impacts of Nordic migration flows on the labour markets of their home countries or host countries. The closest we get in this regard are a few studies of the correlation between the densities of western immigrants and wage growth in segments of the Danish and the Norwegian labour markets (Røed 2005; Wadensjö and Gerdes 2004). From official statistics it is well-known that Nordic citizens constitute the majority of western immigrants in the Nordic countries.

The three main topics in the economics of labour migration are closely related. Therefore, the effects of migration in home and host country labour markets may be deduced to some extent from results regarding the driving forces and the economic performance of the immigrant groups.

In this chapter we direct our attention to the economic studies of driving forces governing the fluctuations in migration flows between Nordic home and host countries. The studies we review cover the period from the mid-1950s to 1990. To our knowledge there are no systematic analyses regarding the determinants of Nordic migration flows after that period. A contribution regarding the post 1990 period is presented in Chapter 4. Since none of the earlier studies include Iceland we refer to Denmark, Finland, Norway and Sweden as the Nordic countries in this chapter.

In the rest of this chapter we first introduce the economic approach to migratory behaviour, i.e., how the problem of driving forces is generally formulated in the studies discussed. Secondly, we describe common features of the data sets which have been used in the empirical parts of the analyses. Thirdly, the main characteristics of the economic development in the Nordic countries during the period covered by the studies are sketched. Fourthly, we present different studies of the determinants of migration between the Nordic countries, and we conclude in the last section.

2.2.1 Factors affecting labour migration – the economic approach

In the empirical studies we review in this chapter, aggregated migration flows between countries are the dependent variables. It is an underlying assumption that the basic explanatory variables are factors affecting the incentives to move and the constraints on moving of the individuals living in these countries.

Migrants are perceived as people making an investment decision, that is, they decide to move or wish to move and then make up a migratory potential if immediate and expected future benefits exceed the costs of migration. Labour migrants are primarily motivated by the prospects of getting a better job in the destination country.

Labour market conditions are perceived as the result of two basic elements: First, the possibility to get a job, and second the remuneration received as an employee if having a job. With regard to the first element, the employment probabilities in the alternative locations are the main point. The relationship between supply and demand (unemployment, vacancies, and employment growth) is most important. With regard to the second element, the wage and employment conditions in attainable jobs at home and destination countries are the focus of interest.

Accordingly, the push and pull factors affecting migration movements are the result of these basic elements characterizing the labour markets at home and in the receiving countries. Improved conditions in the labour market of one country, higher wages or more vacant jobs, exercise a demand pull on potential immigrants from other countries. Deterioration of the labour market conditions, on the other hand, exercises a supply push on potential emigrants in a country. Of course, other factors such as the degree of cultural proximity, travel and establishment costs, and information flows also affect the directions and levels of migration. However, these factors are to a great extent uncorrelated with labour market conditions.

Researchers do not observe the decision making of individual migrants. However, their subjective opinions concerning the benefits from moving are presumed to be correlated with the development in average values of labour market variables which are observable to the researchers. Thus, when formal constraints are removed, variations in aggregate labour flows across national borders may be explained by variations in the values of average labour market indicators in the sending and receiving countries. Unemployment and vacancy rates in different locations are proxies for individual employment probabilities. Average wage and income measures indicate the relative remuneration levels in jobs attainable by individuals working in different countries.

The purpose of the empirical analyses in the studies we review in this chapter has first of all been to establish the sensitivity of migration flows to changes in the wage and employment opportunities at home and in receiving countries. In other words, to establish to what extent cross-country variations in the different labour market variables explain the variation in migration flows between the Nordic countries.

As has already been pointed out, such knowledge may improve our ability to anticipate migration flows. However, knowledge about the causes of migration may also add to the understanding of its economic implications in sending and receiving countries. Connections between causes and effects may be loosely exemplified: If the labour flows pri-

marily are triggered by employment probabilities – increased unemployment at home and/or excess demand (job vacancies) abroad – migration may contribute to the reduction of disequilibrium problems caused by frictions in the labour markets. Vacant jobs in one country are matched with unemployed workers in another. The growth process in the receiving area may speed up when bottlenecks are solved and when wage growth for the skill groups exposed to excess demand (eventually) slows down. However, the inflow of workers in one sector may cause bottlenecks in other sectors due to induced investment activities. In the sending country, the downward wage pressure caused by higher levels of unemployment may be moderated by the outflow of workers from the labour force.

If labour flows across national borders are primarily triggered by the prospects of higher (equilibrium) wages, the migration may influence the wage formation (level and structure) more directly. Workers in the receiving country, who are close substitutes to the movers experience higher competition and lower wage growth than in the absence of immigration. On the other hand, native workers who possess skills that are complementary to the skills held by the immigrants may experience higher wage growth. In the sending country these processes are reversed, i.e., remaining workers with the same skills as the emigrants experience a more favourable wage development and those who possess complementary skills experience the opposite.

Lundborg (2006) points out that to understand the driving forces of migration flows, as well as their effects in the sending and receiving countries, it is useful to distinguish between unregulated "US-type" of labour markets and regulated labour markets of the type one more often finds in the Western European and particularly in the Nordic countries. If labour markets are not regulated by collective agreements, job security laws etc. immigrants may find it easier to get a job in the receiving country since they can underbid the natives with regard to both wage and working conditions. Immigrants then exert a downward pressure on wages. However within the regulated "Nordic type" type of labour markets this mechanism is to some degree restrained by collective agreements, job security laws and relatively high minimum wages. Lundborg (2006:25) argues that such labour market institutions act as regulators of immigration: "In particular, since wages are downwardly rigid, immigrant workers' lower wage demand can not be used to enter the country, and large scale immigration will occur only during business peaks. Only when the labour market is characterized by over-employment, an abundance of vacancies and tendencies of wage drift, will there be chances for a large number of immigrant workers to enter."

2.2.2 The data used in studies of Nordic migration

In this section the dependent and independent variables, which are included in some form in many of the studies, are described with regard to

general characteristics and sources. In relation to the particular studies we will look more closely at how these variables are specified and at other variables included.

Migration flows.

In the national population registers of all of the Nordic countries, individual movements in and out of the countries, as well as destinations, are recorded. According to the national laws it is compulsory to report to these registers if leaving the country for more then a specific period. The length of this period varies between the countries but is nowhere longer than one year. Differences in the length of this period may lead to that the inflow from one country to another and the corresponding outflow may differ in size. Another complication is that not all people who migrate report that they are leaving the country. This means that out-migration is underreported. The extent of underreporting varies over time and between countries. The migration between the Nordic countries has been recorded in a more consistent way since the introduction of a special reporting system in 1970 (*nordiskt flyttningsbetyg*).

Based on data from these registers the aggregate migration flows between the Nordic countries might in principle be described during the entire period of the common Nordic labour market. However, it is not only labour migrants who have the right to move freely across borders within this region. Such rights also apply to students, pensioners and other groups outside the labour force. In the national population registers nothing is recorded regarding the reasons for moving. We know how many individuals who have reported to the registers that they have moved from one Nordic country to another, but we do not know how many of them that became employed in the host countries. And we do not know how many who move without reporting to the authorities. Most likely those not registered are only staying in the country for a short period as an unregistered stay may lead to practical problems for the migrant.

During the last twenty years administrative registers in the Nordic countries have gradually become more available for research. This is partly due to the fact that more and more information is systematically recorded. In addition the technical development has made it easier to link the registers containing different types of demographic, educational and labour market information about individuals in the population. This development has gradually enhanced the richness of the information that can be extracted for research purposes about the individual migrants and the skill composition of the migration flows.

All of the studies that are described and discussed below use the national population registers as a source with regard to the level of yearly migration flows between the Nordic countries. Only one of the most recent studies (Røed, 1996) makes use of the possibility to link the national

population registers to other administrative registers and thus become able to analyze the skill composition of these flows.

Labour market indicators

To measure variations in the basic push and pull explanatory variables, the studies we review have employed different measures of labour market conditions.

The purchasing power adjusted gross domestic product (GDP) per capita is used in some studies as an indicator of attainable remuneration if getting a job, or more generally the welfare level. Alternative measures have been different wage measures. Wage statistics for more or less specific occupational groups have been available from different sources: trade unions, employer organizations and national statistical offices. In all of the Nordic countries measures of average hourly earnings of industrial workers in different occupations in the private sector have been available from the national bureaus of statistics.

Average national unemployment and vacancy rates are the main indicators used to measure the tightness of labour markets, which in turn is a proxy for the individual employment probabilities. National unemployment rates are available for all of the Nordic countries for the whole period covered by the studies we review. Due to the active labour market policy in Sweden the rate of open unemployment has been questioned as a suitable measure of fluctuations in the tightness of the labour market (Nyberg 1980). On the other hand Sweden has had a more or less consistent series of yearly vacancy rates from the beginning of the 20th century. Due to changing registration routines, vacancy data is difficult to compare over time in Norway and Denmark, while Finland has consistent series from 1970 (Pedersen 1996). As a substitute for good data on vacancies the rate of employment growth has been used in some studies. Unemployment rates for different educational groups have been available from the national bureaus of statistics and public employment offices in later parts of the period.[6]

2.2.3 Development in migration flows and macro-economic shocks

The studies we review cover the period from the mid-1950s to 1990. In this section we shortly describe the main pattern of migration during this period and the development in some main labour market indicators.

In Chapter 3 the aggregated migration flows among the Nordic countries are illustrated for the period from 1950. Until 1990 Sweden is clearly the main receiving country within the Nordic region and Finland the main sending country. This gross flow from Finland to Sweden shows an increasing trend from around ten thousand in the 1950s to more than

[6] In Røed (1996, Appendix 1) the sources of wage, unemployment and employment data in the three Scandinavian countries from 1980 to 1990 are described in more detail.

forty thousand in the peak years of 1969 and 1970. A part of the explanation of the peak however is the introduction of a new system for registering migration. The flow falls sharply to around ten thousand again two years later. After that the trend is clearly decreasing and the gross flow of migrants from Finland to Sweden ends up around two thousand in 1990. Very few Finns went to Denmark and Norway in the period of large-scale emigration from Finland. The second largest flow of people between Nordic countries during this period went in the opposite direction of the first and consisted almost exclusively of Finns returning to Sweden from Finland.

During the first decade after the Second World War the gross flow among the Scandinavian countries, Denmark, Norway and Sweden, fluctuated between two and six thousand registered movers. After that the flows between these countries are moderate and quite balanced, i.e., the net migration fluctuates around zero, and gross flows move between two and three thousand people each year. There are two major exceptions from this pattern. The first one is the flow from Denmark to Sweden in the mid-1970s. This flow increased from around two thousand in 1974 to nearly twelve thousand only a year later. The second exception is the flow from Norway to Sweden which increased sharply during a few years in the late 1980s.

Data on return migration indicates that a large share of the emigration of nationals from both Denmark, Norway (Pedersen 1996) and Finland (Fisher and Straubhaar 1996) to Sweden is temporary. With regard to the Scandinavian return migration patterns, Pedersen (1996:49) concludes that "Return migration seems to follow an extremely stable pattern regardless of the cyclical conditions in the years after emigration".

Table 2.1 Structural adjustment in the Nordic Countries 1960–2004. Employment by economic sector, in percent.

	Denmark	Finland	Iceland	Norway	Sweden
Primary					
1960	18.2	36.2	20.1*	21.6	15.7
1975	9.8	14.9	15.2	9.4	6.4
1990	5.5	8.4	11.1	6.4	3.3
2004	2.9	4.7	6.4	3.7	2.1
Secondary					
1960	36.9	31.1	36.4*	35.6	40.3
1975	31.5	36.1	35.1	34.6	36.5
1990	27.2	30.9	28.9	24.2	29.2
2004	22.3	25.7	22.4	20.8	22.7
Tertiary					
1960	44.8	32.6	43.5*	42.9	44.0
1975	58.8	49.0	49.7	56.1	57.1
1990	67.3	60.7	60.0	69.3	67.5
2004	74.8	69.6	71.2	75.5	75.2

Source: Yearbook of Nordic Statistics, Fischer and Straubhaar (1996), table 2, page 112, Statistics Iceland.
Primary: Agriculture, forestry, hunting and fishing. Secondary: Mining, manufacturing, electricity and water, construction. Tertiary: Wholesale and retail trade, restaurants and hotels, transport and communication, finance, insurance, real estate and business service, public service
* 1963.

Table 2.1 shows the distribution of employment on the main economic sectors, primary, secondary and tertiary, in Denmark, Finland, Iceland, Norway and Sweden from 1960 to 2004. It illustrates the diverging development pace in the Nordic countries during the first fifteen years after the Second World War. In 1960 Sweden had the highest share of the work force employed within the secondary and tertiary sectors combined. This employment pattern expresses that the Swedes were in the lead with regard to the structural transformation towards a modern industrialized economy. However, measured by the distribution of employment on main economic sectors, Danes and Norwegians were not lagging very much behind. In Finland on the other hand, more than one third of the employed still worked in the primary sector in the beginning of the 1960s.

During the next fifteen years the structural adjustment in Finland was rapid and in 1975 the industrial sector employed the same share of the labour force as in Sweden. In 1990 all of the four Nordic countries were well on their way into the post industrial economy with the service sector employing more than sixty percent of the workers in all four countries. Fisher and Straubhaar (1996) present as "a common hypothesis" that this rapid structural transformation of the Finnish economy was an important precondition for the high migration from Finland to Sweden in the late 1960s and early 1970s. The argument is that the secondary and tertiary sectors could not absorb the labour released from the primary sector fast enough. Thus, during the 1960s the Finnish economy experienced a growing structural labour surplus which was reinforced by the labour market entry of the post war baby boom generation. As is illustrated in Figure 1, Finnish unemployment was high during this period relative to the other Nordic countries. According to Wadensjö (2005) this was particularly the case in the northern part of the country. The increasing disequilibrium in Finland coincided with a reverse disequilibrium situation in Sweden, i.e., a period of labour shortage due to the fast growing manufacturing industry. Many Swedish firms were actively recruiting workers from Finland during these years (Wadensjö, 2005). Thus, the high labour migration from Finland to Sweden seemed to be the answer to a problem in both countries.

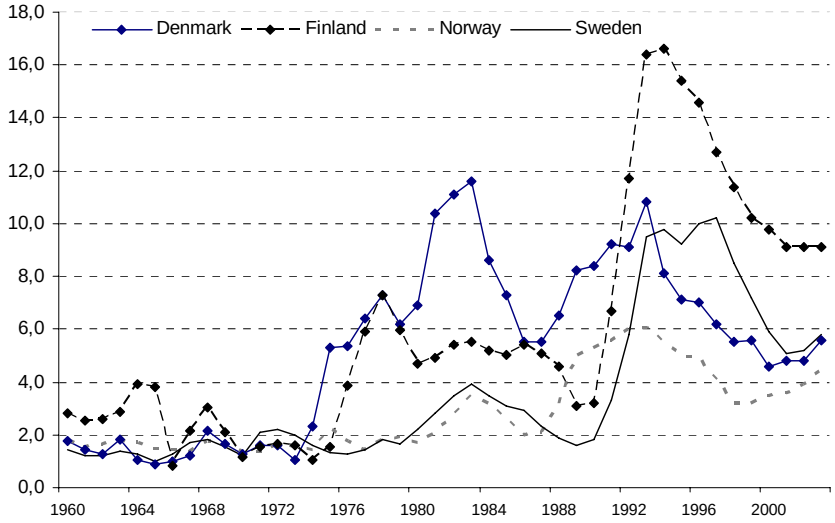

Figure 2.1 The unemployment rate in the Nordic countries 1960–2003

Source: Statistics Denmark.

Figure 2.1 shows the national unemployment rates in the Nordic countries from 1960 to 2004. As is clearly illustrated, the oil crisis in the mid-1970s initiated a turning point of the development of unemployment in the Nordic region. Until then the unemployment rates were quite stable and the levels were very low in all four countries. In Denmark an upward trend follows after a sudden jump in the mid-1970s. In Finland, the unemployment rate jumped during the same years as in Denmark. It then fell slowly until the late 1990s when the down-fall of the Soviet Union sent shock waves into the Finnish economy and the unemployment rate rose to an extremely high level.

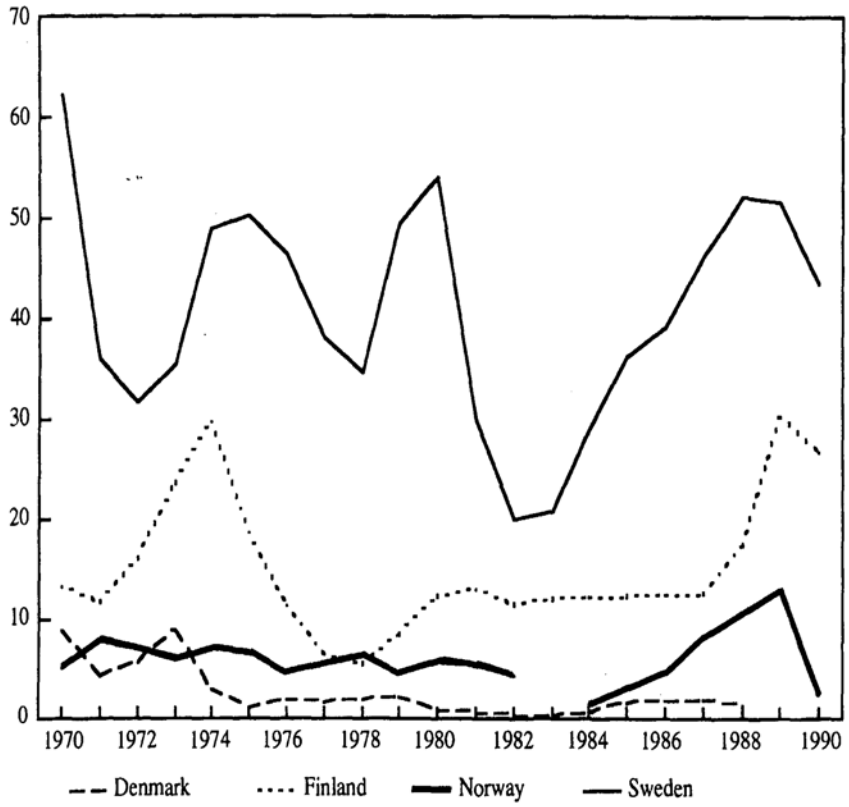

Figure 2.2 Average number of unfilled vacancies in the Nordic countries, 1970–1990, 1,000s.

Source: Pedersen (1996).

The aggregate number of vacant jobs is a measure of the pull impulses from the labour market in a country. Figure 2.2 displays the rate of vacant jobs in the Nordic countries from 1970 to 1990. For Sweden – the overwhelmingly dominating receiving country – the figure clearly illustrates four instances of peak demand in the labour market during this period. Corresponding to these peaks we have the big Finnish emigration to Sweden around 1970 and the Danish emigration to Sweden in the mid 1970s. The vacancy peak in the early 1980s is more or less concurrent with a slowdown in the Finnish return migration from Sweden and the peak in the late 1980s coincides with the biggest emigration flow from Norway to Sweden during the entire post war period.

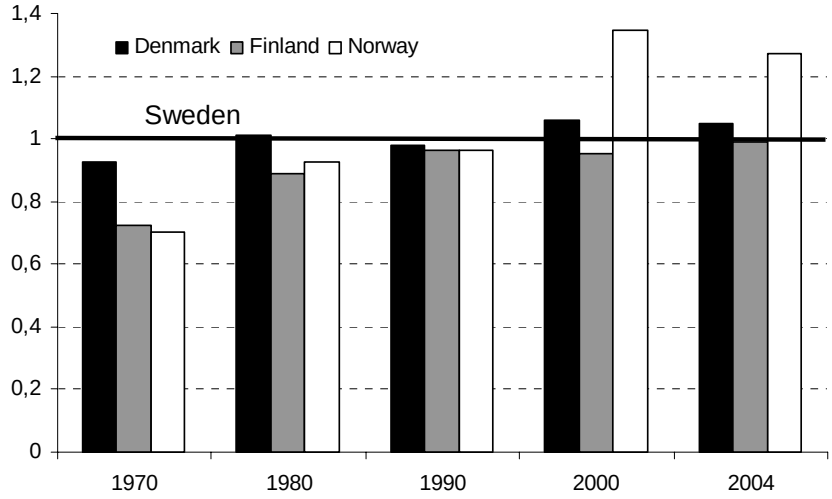

Figure 2.3 Nordic GDP per capita in percent of Swedish GDP per capita

Source: Fisher and Straubhaar (1996), Figure 2, page 113, Nordic Statistics 2005, Norden (CD-rom).

A rough measure of average welfare in the countries is the GDP per capita. Figure 2.3 shows the relative development of GDP from 1970 and onwards in the four Nordic countries. In the beginning of the 1970s the difference between Denmark and Sweden on the one hand and Norway and Finland on the other was around 30 percent. During the next twenty years of converging economic development within the Nordic region this difference vanished. This emphasizes further the importance of the years around 1990 as a time for a new setting for the common Nordic labour market.

2.3 The empirical studies

These studies examine different aggregated migration flows between a Nordic home and host country as their dependent variable. None of the studies are completely overlapping with regard to the directions of the flows and the period analyzed. The definitions of labour market indicators as explanatory variables, as well as the specifications of models to be estimated, vary. The choices in this regard are to some extent affected by the availability of data at the time the studies were carried out. Thus, these studies complement each other more than they compete in the search for the intra Nordic migration function.

All except three of the studies have total aggregated flows, gross or net, between Nordic host and home countries as their dependent variable. The exceptions are Ohlsson (1975), who studies immigration to Malmoe, Lundborg (1991), who studies flows from Norway, Denmark and Finland

to 24 Swedish counties and Røed (1996), who divides the flows among the three Scandinavian countries into educational groups.

Wadensjö (1973) analyzes the aggregated migration flows from Denmark, Finland and Norway to Sweden, from 1956 (1946 for Denmark) to 1967 with respect to average unemployment rates in the home countries and in Sweden. The respective flows are analyzed separately.

With regard to the Danish flow the unemployment rate at home has a positive (i.e. statistically significant) influence on the level of migration from Denmark to Sweden, while unemployment in the destination country has no effect. With regard to the flows from both Norway and Finland it is the other way around. To add the level of immigration from the home country to Sweden in the previous year, in all three cases, increased the explanatory power of the models considerably. This indicates that there is a trend element in the migration flows. The positive impact on the migration flow of a reduction in the Swedish unemployment is much stronger in the Finnish case than in the Norwegian. During this period there was a structural unemployment in Finland and a substantial income gap between Finland and Sweden. Wadensjö proposes the hypothesis that as long as structural unemployment exists in the home country variations in the migration flow are governed by the employment situation in the destination country. A higher unemployment level at home builds up a higher migration pressure which is released when the employment situation in the destination country improves. He points out that the Finnish results support this hypothesis. His results may further indicate that, even though Norway had no unemployment of any significance, the relatively high income level in Sweden may have formed a basis of a migration potential from Norway which was released by demand pull impulses from the Swedish labour market.

Ohlsson (1975), studies the flow of immigrants to Malmoe in the period 1947–1967. Malmoe was growing much these years and many labour migrants arrived from both Nordic and other countries. The explanatory variables tried are job vacancies (the same year and lagged one year), unemployment (the same year and lagged one year) and the immigration the year before. The main result is that vacancies are more important as a determinant of immigration than unemployment and that the effect is lagged. A change affects the migration not only in the same year but also in following year(s). A part of the lag in the effect on migration could however also be a result of a registration lag.

Wadensjö (1976) carries on his earlier analysis adding more years and also dummy variables for policy changes. The period covered is from 1951 to 1973. The migration flows are those from Denmark, Finland and Norway to Sweden and also those from Germany and Italy to Sweden (we will not report the results regarding these two countries here). The dependent variable is immigration (in some specifications log of migration). The explanatory variables are immigrations lagged one year, unem-

ployment in Sweden and in the country of origin, and dummy variables representing changes in the migration policy. One dummy variable represents the founding of the Common Nordic labour market (0 in 1951–1953, 1 in 1954–1973), a second one the stricter regulation of work permits from 1967 on (0 in 1951–1966, 1 in 1967–1973), and a third one the introduction of the law on 240 hours education in Swedish paid by the employer (0 in 1951–1970, 1 in 1971–1973). The founding of the common Nordic labour market is expected to have a positive effect on the migration from the Nordic countries. The stricter rules for work permits are expected to have a positive effect for immigration from the Nordic countries as it may have led employers to recruit from Nordic countries instead of from other countries. The law on 240 hours of employer-paid education in Swedish is expected to have a negative sign on immigration from Finland as it made it more expensive to recruit from Finland, but not for immigration from Denmark and Norway as Danish and Norwegian speaking people were not covered by the law.

The coefficient for lagged migration to Sweden is highly significant and positive for all three Nordic countries and the coefficient for unemployment in Sweden is significant with a negative sign for all three migration flows. Unemployment in the home country has a positive sign and is significant for Denmark, but not when including the dummy variables for Finland and not significant in any of the specifications for Norway. The common Nordic labour market dummy has a positive sign for all three countries but is only significant for Denmark, the stricter work permit dummy has a positive sign for all three countries and is significant for Denmark and Norway but not for Finland. The dummy for the employer-paid education in Swedish has the expected negative sign and is significant for the migration flow from Finland. The results of this study give support to the hypothesis that the labour market conditions in especially the country of destination matter and also to the hypothesis that migration policy influences the size of the migration flows.

Hietala (1978) analyzes the aggregate migration flows between all of the four Nordic countries, 1963 to 1975, both separately and pooled together. Thus, the peak years of both Finnish and Danish migration flows are included. With regard to the employment situation in the home country he experiments with different lagged functions of average unemployment. One conclusion is that unemployment at home has a strong effect on the migrations flows. However, when vacant jobs are lacking in the receiving country the effect is distributed (lagged) over some years.

The clearly biggest intra-Nordic migration flow during this period, the one from Finland to Sweden, follows this lagged pattern with respect to unemployment in the home country. The fluctuations in this flow were more or less totally explained by a four-year lagged unemployment function, number of vacant jobs in Sweden in the same year, number of persons between 15 and 24 years of age in Finland and a time trend. Vacant

jobs in Sweden have a stronger absolute influence than unemployment at home. According to the estimated coefficients of this model the following pattern prevailed: When the number of unemployed in Finland increases by 100, the migration flow to Sweden increases by 45 individuals over a four year period. An increase of 100 vacant jobs in Sweden leads to an increase in the number of Finnish immigrants to Sweden by 72 in the same year. Similar lagged patterns with regard to the effect of home country unemployment are found in relation to the migration flows from Finland to Norway and from Finland to Denmark. The same is also true for the flows from Norway to Denmark and Sweden.

These results fit in with the hypothesis proposed in Wadensjö (1973), i.e., that an emigration pressure is built up by higher unemployment at home and released by a pull impulse from the receiving economy.

Still, the second largest migration flow within the Nordic region during this particular period, i.e., the one from Denmark to Sweden, was released immediately as the unemployment in Denmark increased.[7] The author explains this by the non-coinciding economic cycles in Denmark and Sweden during this period. The generated migration pressure was therefore released immediately, cf. however with the results and interpretations in Lundborg (1991) discussed below.

Hietala (1978) finds that the emigration from Finland to Sweden reacts five times more sensitively to unemployment at home than the corresponding flows from Norway and Denmark. This may indicate that due to structural changes, or for some institutional or taste based reasons, the migratory behaviour varied among Nordic countries. A structural change kind of explanation could be that workers in Finland were on the move between industries and geographical areas anyway. An institutional type of explanation could be related to the unemployment insurance systems in the different countries, cf. also Lundborg (1991).

As a measure of inter-country real wage differences Hietala employed relative real wage levels in the manufacturing industry. While the employment situation may vary considerably from one year to another, the real wage differences between the countries change slowly. To obtain enough variation in this variable he made use of a pooled model specification. The results from this exercise indicate that the effect on migration of the wage differences between host and home country was positive but rather weak.

Nyberg (1980) analyzes gross and net migration flows between Finland and Sweden between 1962 and 1977. The relative real wage for male industrial workers is used to indicate differences in expected attainable wages between the countries. Average unemployment and vacancy rates indicate the changing employment situation in the labour markets. A lot of different combinations of these variables and different specifica-

[7] The second biggest is actually the flow from Finland to Sweden. However, a clear majority is return migrants.

tions of lagged migration terms are tested to identify the most important elements of the migration function. One general conclusion reached is that the employment variables are more important than the indicators of wage level differences. In one of the preferred models, fluctuations in net migration flows are close to be fully explained by the relative wage measure, unemployment in Finland lagged one year and vacancy rates in both countries. The Finnish employment variables account for 35 percent of the explained variance, the Swedish vacancy rate for around 50 percent and the indicator of wage difference for the remaining 15 percent.

The general picture sketched by this study is that gross out migration from Finland was strongly affected by the immediate employment situation in Sweden, i.e., the vacancy and unemployment rates of the same year. The immediate employment situation in the home country had no effect, while lagged values of the same variables had some effects. When it comes to the gross return migration from Sweden to Finland it is more or less the other way around. However, the coefficients are considerably smaller. The main explanatory variable with regard to this flow is the number of Finnish immigrants to Sweden in the two preceding years.

During this period 276,000 individuals moved from Finland to Sweden and 140,000 moved in the opposite direction. The net emigration from Finland constituted 4.1 percent of the Finnish population. Nyberg (1980) points out that this is a surprisingly high emigration rate in view of the relatively high level of welfare in Finland compared with other main European emigration countries at the time. He maintains that in addition to the welfare gap and the employment situation, explanations must take into account the absence of institutional barriers and the geographical and cultural closeness between the two countries. If the relative welfare gaps between the Nordic countries are adequately indicated by the GDP per capita, Figure 3 suggests that the gap between Sweden and Norway was just as big as between Sweden and Finland, in the 1960s and 1970s. At the same time, the geographical and cultural connections were just as close. However, the net migration between Norway and Sweden fluctuated around zero in the entire period. Thus, the divergent pattern of migration between Norway and Finland relative to Sweden emphasizes the influence of the home country employment situation on the level of outmigration.

Eriksson (1989) analyzes net and gross migration flows between the thirteen Finnish counties and Sweden from 1971 to 1983. Indicators of relative unemployment and wage at the county level relative to the national Finnish level were included as explanatory variables. Regional unemployment rates were collected from the Finnish labour Force Surveys. The relative wage for each county was calculated from the Regional Accounts. The national unemployment rate in Sweden compared to that in Finland and the Finnish-Swedish average manufacturing wage differential are included to explain the variations in the net and gross migration

flows. Eriksson (1989) points out that cultural and institutional differences between Sweden and Finland are small and that the movement of Finns to and from Sweden is an old phenomenon. Due to this, the author argues, the migration from Finland to Sweden and back again is more like a form of domestic interregional migration process. That is, to Finns contemplating migration Sweden is an alternative destination to another Finnish region. The migration flows between Finland and Sweden are accordingly affected by interregional labour market conditions within Finland.

The analysis shows that the regional migration flows to and from Sweden are influenced both by domestic regional and national labour market conditions and by changes in the Swedish labour market situation. The variation in the Swedish unemployment rate relative to its national Finnish counterpart clearly explains most of the variation in these flows. Analyzing the domestic interregional flows Eriksson (1989) finds that the Swedish labour market indicators have a significant influence. He concludes: "In other words, it appears not only that international flows play an important role in interregional labour market adjustments in Finland but that there is also a competitive relation between the two sets of flows. Thus if, for example unemployment falls in Sweden relative to the Finnish regions, the apparent effect is not only to boost rates of net emigration to Sweden, but also to curtail interregional migration within Finland."

Lundborg (1991) analyzes the flows of immigrants to 24 Swedish counties from the three other Nordic countries. The period studied is 1968 to 1985 and the flows are separated by gender. Just as in Hietala (1978), this analysis covers the peak periods of migration from Finland and Denmark to Sweden. In addition this study includes the period after the sharp increase in both Danish unemployment and emigration in the mid-1970s, when the outflow of Danes dropped to its "normal" low level, while unemployment continued to increase.

As in the other studies reviewed in this section the general purpose of this study is to identify the causes of variations in the flows. However, Lundborg particularly focuses on two questions: First, to what extent is the strong dominance of Finnish immigration to Sweden the result of country specific migratory behaviour? In other words is the sensitivity of Finnish immigration with regard to the indicators of labour conditions higher than the sensitivity of immigration from the two other sending countries?

The second question concerns the role of the unemployment benefit systems in the determination of the Nordic migration. As a motivation for this focus he points to the Danish experience with low levels of emigration to Sweden co-existing with high and increasing unemployment rates in Denmark compared to Sweden. However, during the same period the Danes, according to Lundborg (1991), experienced a substantial increase

in unemployment benefits relative to wages. Thus, he wanted to examine if the growth in the compensation level inhibited migration. To approach this question he included an indicator of income if unemployed as an explanatory variable together with income if employed.

Disposable real wages were specified for each of the 24 Swedish counties and for the sending countries. Doing this he employed the countries' consumer price index and the average income tax rates. Income as unemployed was calculated from the rules of the benefit system prevailing in the different countries and measured as the maximum amount of benefit per day. Income as well as unemployment benefits in the destination county are (geographically) distance corrected.

The results suggest that there are differences in the migratory behaviour among the populations in the Nordic region. The Finnish flows seem to be considerably more sensitive with regard to the wage levels in the destination region and in the home country compared to the Norwegian and Danish flows. With regard to the unemployment variables a similar pattern is not discovered. Unemployment at destination stands out as a more or less equally important determinant for all groups of migrants. Unemployment in the home country has no significant effect on the migration level in the Finnish case. However, since this variable enters without any lags this is not surprising given the results from the earlier studies.

Unemployment in the origin country had a clearly significant and positive effect on the migration flow from Denmark to Sweden when controlling for the benefit levels. At the same time the unemployment benefit level in the home country had a strong negative effect on Danish migration to Sweden, which was absent for the other sending countries. Lundborg (1991:372) interpreted this finding as follows: "The drastic increase in Danish benefits stands out as an important determinant of the apparently low migration to Sweden during the high unemployment years."

Fisher and Straubhaar (1996) analyze gross migration flows from Finland to Sweden from 1965 to 1990. They emphasize that this flow is particularly suited to econometric investigations because it is the only Nordic migration movement of considerable size and it fluctuates over time. It is also suitable because the number of Swedes returning from Finland is negligibly small.

Variations in this flow are analyzed with respect to five categories of driving forces: *Inter country income differences* are measured by the ratio of per capita gross domestic product in Sweden and Finland. *The job vacancy rate* in Sweden is employed as a measure of the demand pull from the target economy. *The unemployment rate* in Finland is utilized as a measure of the general supply push from the home country labour market. The percent *yearly fall in the agricultural share of total employment* in Finland is used as a measure of the rate of structural change towards

production in the secondary and tertiary sectors of the economy. Last, the population pressure on the labour surplus (unemployment) of the sending country is measured by the *yearly increase in the total labour force*.

The results of this study indicate that income differences play a significant part in explaining migration flows. The estimated coefficient of their model implies that a one percent reduction in the average GDP per capita difference between Sweden and Finland reduced the migration flow by around two percent. The authors comment that this relationship reflects the strong decrease in migration as the economies of the sending and receiving countries converge over the period studied. The study confirms that the fluctuations in this flow were mainly demand driven, i.e., triggered by an increase in Swedish job openings. The coefficients on Finnish unemployment is not significantly different from zero, while an increase in the Swedish vacancy rate has a relatively strong positive influence on the number of Finns moving to Sweden. Unlike the studies of Hietala (1978) and Nyberg (1980), unemployment in the home country is assumed to have an immediate impact on emigration. Thus, the lagged effect on migration of an increase in the unemployment level is not captured by the analysis.

The indicator of structural change in the economy, away from employment in the primary sector towards the secondary and tertiary sectors, had a positive but weak influence on the number of movements. The same is true with regard to the variable which was supposed to measure the "baby-boom" generations' addition to the labour surplus.

Pedersen (1996) explains fluctuations in those flows between the Nordic countries in the period 1970 to 1990 which were of any sizable importance. With one exception these are the flows from the other Nordic countries to Sweden. The exception is the migration from Denmark to Norway. Thus, as the author points out, the Danes were the only population group who seemed to consider two alternative destinations within the Nordic region during this period.

The net flows between countries are analyzed separately with regard to indicators of the employment situations in the national labour markets of the home and host countries. With regard to each flow Pedersen experiments with different specifications to find the model that had the highest explanatory power. A general conclusion is that net mobility across Nordic borders was significantly influenced by the state of the labour market in both origin and destination countries. However, the labour market indicators most closely related to the fluctuations in the flows differ between the sending countries.

With regard to the net flow from Denmark to Sweden the levels of unemployment at home and in the host country are not significant for the whole period. This was clearly connected to the big increase in Danish emigration to Sweden in 1974/75 which can not be explained by the level of unemployment since this is well below the average level of later years

when emigration is much lower. Thus, when the analysis of the flow is restricted to the period from 1976 to 1990 the unemployment rates for both Denmark and Sweden are significant and have the expected signs. This shows that big differences in the level of unemployment can co-exist with the same level of net migration.

Pedersen (1996) finds that with regard to the Danish flows to both Norway and to Sweden, changes in the indicator variables for home and host country labour market states had a higher explanatory power than the corresponding levels. Thus, a model which includes the relative change in the origin country unemployment and the change in the destination country average vacancy rate was the one that clearly best explains the fluctuations in net migration from Denmark to Sweden. According to Pedersen (1996) this clearly higher explanatory power related to changes in the independent variables instead of levels, was not present in relation to migration movements from the other Nordic countries included in the study. It seems reasonable to interpret these results in relation to the conclusions Lundborg (1991) reached with regard to the adverse effect on out-migration of the development in the Danish unemployment benefits system from the mid-1970s.

As in the earlier studies that analyze the driving forces behind migration from Finland to Sweden, Pedersen (1996) finds that the pull effect from a reduction in the level of Swedish unemployment is much stronger than the push effect from an increase in the level of Finnish unemployment.

Røed (1996) analyzes the intra-Scandinavian migratory patterns by level of education and by occupational groups. The dependent variables in this analysis are yearly migration rates among the three Scandinavian countries in the period 1981–1989. These rates are defined according to three levels of education or according to seven occupational groups. Measures of the education/occupation specific unemployment situations and the average wage levels facing the groups in each country enter as the main explanatory variables. In addition the migration rates to alternative European destination countries are included to explain the variations in the intra-Scandinavian migration flows. One particular focus of this study is to explore if the Scandinavian migratory behaviour varies among educational/occupational groups. The term migratory behaviour in this context refers to the propensity to move as well as the sensitivity (elasticity) of migration rates to changes in the labour market conditions at home and abroad.

In general, inter-country differences in education/occupation specific wage and unemployment measures contribute noticeably to explaining Scandinavian migration. The overall pattern in this regard is the expected one, i.e., that the size of migration into a country increased with the average wage difference between the destination and origin. At the same time, it decreases with the level of unemployment in the destination country

and increases with the level of unemployment in the home country. The propensity to move and the sensitivity of the migration rates to inter-country differences in labour market conditions, vary considerably among educational and occupational groups. The following points constitute the main pattern in this respect:

- After accounting for inter-country differences in labour market conditions there is still considerable variation in the propensity to move among educational and occupational groups. The group with only basic education has a significantly lower inter-Scandinavian migration propensity than both the college and the university educated groups. The group with college education displays the highest inter-Scandinavian migration propensity. Among occupational groups, physicians, nurses and construction workers have relatively high inter-Scandinavian migration propensity, while skilled workers in the metal industry and college and university educated engineers have low propensity.
- The effect of unemployment on the migration rates decreases with the level of education.
- The negative influence of relatively high unemployment in potential destination countries seems to be equally strong for construction workers, workers in the metal industry, college educated engineers and nurses. At the same time it is considerably lower for physicians, civil engineers and university educated economists.
- The influence of inter-county wage differences is insignificant with respect to the variation in migration rate of the lowest educated group. For the groups with a college or university level of education, the income effect is positive and significantly stronger than the effect of unemployment. The college-educated group, however, seems to be the most strongly influenced by wage differences with regard to the determination of their Scandinavian migration pattern.
- The income effect is especially strong in the case of nurses and low in the case of skilled workers in the metal industry.

2.4 Concluding remarks

The above descriptions of fluctuations in the intra-Nordic migration flows and of changing labour market conditions indicate that economic push and pull factors have played an important part in the determination of the Nordic migratory patterns. The same conclusion may be drawn from the above summary of the statistical analysis concerning migratory driving forces within the region. These descriptions, as well as the statistical studies, particularly emphasize the pull factors in the receiving economies as the main triggering devices. All of the major peaks in the intra Nordic

migration flow during the period studied appear simultaneously with peaks in the vacancy rate in the main receiving country, i.e., Sweden.

However, the demand pull from the receiving economy does not seem to have been a sufficient condition for a significant increase in intra-Nordic migration flow. During the 1960s and early 1970s, labour shortage in Sweden coincided with excess labour supply in Finland. labour migration from Finland to Sweden appeared to be the answer to a problem in both countries. The much more severe unemployment problems in Finland during later periods did not trigger a rise in out-migration either to Sweden or other Nordic countries. The Norwegians did not move to Sweden during the 1960s and early 1970s even though the average welfare gap between Norway and Sweden was just as big as between Finland and Sweden. The general pattern during the period studied in this chapter seems to have been that excess supply of labour in the home country (unemployment and structural changes) builds up a migration pressure which was released if a pull effect was exercised from the labour market of a receiving country.

These findings are consistent with the "Lundborg (2006) hypothesis" presented in Chapter 2.1, i.e. that the institutions of the Nordic labour markets act as regulators of migration flows. Collective agreements and job security laws prevent immigrants from underbidding the native employees and, thus, from entering the labour markets of receiving countries when excess demand is not extensive. Thus, major inflows of labour immigrants only appear during business peaks. The macro economic benefits in receiving countries accordingly may be in terms of less wage drift and smoother business cycles.

As pointed out in the introduction there are no studies as far as we know that directly analyze the impacts of Nordic migration flows on labour market conditions in the home or host countries. However, two studies exist that analyze impacts of immigration from Western and non-Western countries in the Danish and in the Norwegian labour markets respectively. Since citizens from other Nordic countries in both Norway and Denmark constitute a clear majority among the immigrants from Western countries these studies may give relevant information in this regard. Wadensjö and Gerdes (2005) analyze the relationship between the proportion of immigrants in the population of Danish municipalities and the hourly wage rate of individual employees. They estimate a wage function where the proportion of immigrants as well as individual characteristics of workers and local unemployment enters as explanatory variables. The results indicate a positive relationship between hourly wage and the density of Western immigrants in the local labour market.

A study by Zorlu and Hartog (2005) utilizing the correlation between immigration rates and earnings across Norwegian counties, in two cross sectional samples from 1989 and 1996, give a similar result. This last study does not separate between Western and non-Western immigrants.

These results suggest the possibility of complementarity between Western immigrants and native workers. On the other hand a positive relationship of this kind may also result if the immigrants are particularly attracted to high wage areas within the Danish or Norwegian labour market. In his study of the US labour market for the period 1960–1980, Borjas (2001) finds that relatively newly arrived labour immigrants tend to cluster in growth areas; in geographical regions and industries with relatively high wage growth and many vacant jobs.

Røed (2005) analyzes the relationship between the hourly wage rate and the proportion of Western and non-Western immigrants within qualification groups in the Norwegian labour market as a whole. Qualification is defined by level and type of education and length of experience. The analysis is performed on individual employee data from 1997, 1999 and 2001. Contrary to the results of Wadensjö and Gerdes (2004) this study indicates a negative relationship between native hourly wage and the density of Western immigrants in the qualification groups. This result suggests that immigrant and native workers substitute each other within the qualification groups and thus that the immigrants exercise a downward pressure on the native wage level. One possible explanation for the diverging results in the Norwegian and Danish studies may be that in the qualification group approach the estimated relationship between immigration density and wage is less affected by the immigrants' tendency to cluster in high wage areas within the national labour market.

Due to collective bargaining agreements, laws, regulations and mobility costs related to movements between skill groups, areas and industries, wage formation adapts to changes in supply and demand with considerable lags. Thus, the existence of disequilibrium in some parts of the Nordic labour market may be the rule, and not the exception. Bottlenecks in the labour market may hamper economic growth, particularly during economic upturns. The results of Wadensjö and Gerdes (2005) may indicate that Western immigrants to Denmark are particularly attracted to high wage geographical areas, while Røed (2005) indicates that they have a moderating effect on wage growth. The statistical studies of migratory driving forces summarized point out excess demand in the receiving country as the most important triggering device behind migration flows between the Nordic countries. Thus, so far the research literature indicates that inter Nordic migration has contributed positively to the economic growth process within the region.

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3. The extent of mobility

By Peder J. Pedersen, Marianne Røed and Eskil Wadensjö

3.1 Introduction

People have migrated and migrate for many different reasons; for work, for study, for political and religious reasons (refugees), as family members of people who migrate or have migrated for various reasons, and to form a family (marriage migration). The decision to migrate may not be due to only one factor but be determined by a combination of different factors, and even if one factor dominates for the decision to leave a country (for example political reasons), another factor may be decisive for the decision for which country to go to (for example the labour market situation in a country or that relatives are living in a certain country).

International migration is not a new phenomenon for the Nordic countries. Migration between and to and from the Nordic countries has a long history. The focus of this study is labour migration between the Nordic countries since the founding of the Nordic labour market. labour migration is the dominating form of intra-Nordic migration in the period, but other forms of migration also exist such as migration of family members of the labour migrants, migration for study, and migration to change country of residence but retaining the job (and commute over the border).

It is not possible to distinguish between the different forms of migration in the statistics but as labour migration is the dominating form we will make use of aggregate data. We will use information on the flows – immigration, emigration, net migration and return migration – and the stocks – the number of foreign born and foreign citizens living in different Nordic countries. The picture given us by the statistics of the flows and stocks is not an exact picture of the actual flows and stocks. Some people move between the Nordic countries without registering, especially those who only stay a short period. Missing registration is most common among people who return to their home countries. This may lead to an underestimation of the emigration, especially the return migration, and also to an overestimation of the stock of migrants living in the country. Many of those who register as immigrants do not register upon arrival but later. This means that the immigration flows are registered with a lag. If we get a large increase in immigration in one year it will partially be seen in the statistics as an increase of the inflow of immigrants the year after the immigration takes place.

The statistics of the flows of migration and the stocks of migrants are probably considerably better for intra-Nordic migration than for migra-

tion between Nordic countries and other parts of the world for different reasons. Of importance is the introduction of a special inter-Nordic registration system from October 1, 1969 (*nordiskt flyttningsbetyg*)[8], but also the fact that the migration is free. An immigrant from a Nordic country does not have to hesitate to register when moving out, as there is no risk of not being accepted if wanting to move back again as no permit is needed for moving between the Nordic countries for those with a Nordic citizenship.

In this chapter we will deal with the extent of mobility between the Nordic countries. Section 3a deals with migration up to 1990 and section 3b presents the migration from 1990 on. 1990 is chosen as the dividing line as it signifies a large change in the migration pattern induced by macro-economic developments. Section 3a starts with the development of migration before the founding of the common Nordic labour market in July 1, 1954. To a high extent a common Nordic labour existed before that date. We then turn to the period 1954–1990. It is a period when the migration between the Nordic countries was dominated by the migration flow from Finland to Sweden, while there were large migration flows also between Denmark and Sweden and between Norway and Sweden. In Section 3b we deal with migration from 1990 up to the present date. It is a period characterized by lower and more balanced migration flows with Norway becoming more important as a destination country. We also underline the growing importance of commuting over the borders between the Nordic countries.

3.2 The extent of mobility before 1990

3.2.1 Migration before the founding of the common Nordic labour market

In the 19th and the early 20th century the Nordic countries were emigration countries. Many emigrated to overseas countries, primarily the United States but also to Canada, Australia and Argentina. The hope for better economic conditions, higher wages or the prospect of starting a farm, was the main driving force. However, at the same time there was also a non-negligible labour migration to Germany and more importantly to Denmark from especially the southern part of Sweden and to Norway from other parts of Sweden.[9] In the period 1860 to 1910, 81,000 moved from Sweden to Denmark, 66,000 to Norway and 28,000 to Germany. It was less expensive to move to Denmark than to the United States so for people living in poverty, Denmark was an attractive alternative with good

[8] See Diaconescu and Tryggvesson (1992).

[9] This section builds on Willerslev (1983). As emigration was regulated in Sweden at that time the migration to Denmark and Norway may to some extent be only a step on the way to the United States.

prospects of getting a job and higher wages than in Sweden. Many left for seasonal work and others for longer periods of stay.

Table 3.1 gives the numbers of people who were born in Sweden but living in Denmark according to the censuses in the period between 1870 and 1911. At the peak, the Swedish-born constituted more than 4 per cent of the population in Copenhagen and 1.5 per cent of the population in all Denmark.[10] Most likely the actual number was considerably higher. For a number of people information on where they were born is missing, and many of them may be from Sweden. More important is that the seasonal migrants are not included in the statistics. The censuses are carried out in winter time so the seasonal workers were not in Denmark during the time for censuses. The return migration was high among the Swedish emigrants but quite a few remained in Denmark.

Table 3.1 Number of people born in Sweden but living in Denmark, 1870–1911

Census year	Copenhagen		Denmark (incl. Copenhagen)	
	Number	Per cent of the population	Number	Per cent of the population
1870	4,293	2.37	15,388	0.86
1880	8,847	3.77	24,150	1.23
1890	12,892	4.13	33,802	1.55
1901	15,308	3.82	35,555	1.45
1911	16,942	3.03	33,312	1.21

Source: Willerslev (1983, p. 84).

It is difficult to say exactly how many who lived in another country when that they were born in. According to estimate made by the census in 1900, 700, 000 people born in Sweden lived in another country in 1900. Of them the majority, 535,000, lived in the United States, but large groups also lived in Norway, 50,000, and Denmark, 36,000. 6,000 lived in Finland according to the census.[11]

The inter-war years were years of low migration flows for the Nordic countries. The migration to overseas countries declined in the 1920s, and the migration to both overseas and to other countries including migration between the Nordic countries became low in the depression of the 1930s. With the Second World War a new form of migration started – an increasing number of refugees came to Sweden as it was the only Nordic country that was not involved in the war.12 We will show the development first by presenting the number of foreign citizens with permits to stay in Sweden. These figures include both refugees and others with a permit. The number with a permit increases much from 1943 on, especially for citizens of Denmark and Norway but also for citizens of Finland, and from 1945 from Estonia and Latvia (the people coming from those countries arrived in practice in 1944 but were registered later). The

[10] The highest share of Swedish-born is found for Bornholm County with 6.3 per cent in 1901.
[11] See Diaconescu and Tryggvesson (1992).
[12] This section builds on Olsson (1995).

number with Danish and especially with Norwegian citizenship with permits to stay in Sweden declined strongly after the war, but the number with Finnish citizenship remained at the same level. The refugees from Estonia and Latvia remained in Sweden after the war (some of them later continued to the United States and Canada).

Table 3.2 Number of foreign citizens with permits to stay in Sweden. October 1, 1940–1946

Country of citizenship	1940	1941	1942	1943	1944	1945	1946
Denmark	1,643	1,407	1,324	2,049	13,538	3,470	9,355
Norway	3,615	4,296	8,078	16,908	24,504	7,017	8,115
Finland	3,687	4,029	3,639	3,792	6,462	6,586	6,232
Estonia	…	…	…	…	…	22,213	22,335
Latvia	…	…	…	…	…	3,418	3,571
Lithuania	…	…	…	…	…	381	440
Poland	362	242	387	408	759	3,521	4,943
Germany	4,519	3,872	2,221	1,808	1,641	5,973	5,472
The Netherlands	205	191	207	357	626	823	520
France	97	92	143	282	581	532	455
Without passport from their home country	1,891	2,748	4,190	6,249	18,871	…	…
Others	2,695	1,966	1,672	2,149	2,792	7,087	10,815
All	18,714	18,843	21,861	34,002	69,774	61,021	72,253

Source, Olsson (1995, p. 24).

The picture given in table 3.2 is not complete. The majority of refugees staying in Sweden did not have a formal permit to live in Sweden but were granted the right to stay as refugees. Table 3.3 shows the number of refugees from December 15, 1944 to July 15, 1945, that is during the last half year of the war period and for two months after that. It shows that the number of refugees from Denmark and especially Norway was high and increasing up to the end of the war and that the number declined fast after the war. The number of refugees from Finland declined already in the early 1945 after the ending of the war with the Soviet Union, but the number of evacuated Finns (from the north of Finland) and Finnish children living in Swedish families did not decline during the first two months after the war.

The large flow of refugee immigrants during the Second World War meant that Sweden changed from being an emigration country to an immigration country. The majority of the refugees returned but many also stayed in Sweden. The number of foreign citizens staying in Sweden was much higher after than before the war. In 1946 more than 70 thousand foreign citizens lived in Sweden, four times more than in 1940. Even the number of people from other Nordic countries increased.

Table 3.3 Number of refugees in Sweden according to citizenship between 15 December 1944 and 15 July 1945

Country of citizenship	15/12	15/2	15/4	15/6	15/7
Denmark	14,700	15,400	16,200	6,200	5,000
Norway	31,500	36,100	40,700	19,000	8,000
Finland	6,500	4,200	3,400	3,000	2,800
Estonia (of Swedish descent)	6,500	6,500	6,500	6,500	6,500
Estonia	25,200	21,300	21,500	21,500	21,300
Latvia	3,700	3,000	3,000	3,500	3,400
Lithuania	300	300	300	400	300
Russia	700	900	900	200	800
Poland	1,000	1,000	900	8,600	10,100
Germany	5,400	5,200	5,500	6,000	5,700
The Netherlands	600	500	300	1,300	1,300
Belgium	100	100	100	600	200
France	500	500	400	2,000	1,800
Others	1,200	1,300	800	6,800	8,300
Evacuated Finns	37,800	30,600	21,500	14,000	7,300
Finnish children (living in Swedish families)	44,000	42,300	41,100	37,200	36,700
All	179,700	169,200	163,100	136,800	119,500

Source, Olsson (1995, p. 26).

Before the forming of a common labour market it was necessary to have a work permit to be able to work in Sweden. But already during the Second World War, from October 1, 1943, a work permit was no longer required for Danish, Finnish, Icelandic and Norwegian citizens. By that the first step was in a way taken to the forming of the common Nordic labour market. However, a visa was still needed for entering Sweden. The visa requirement was abolished for Norwegian citizens from August 11, 1945, for Danish and Icelandic citizens from August 19, 1945, and for Finnish citizens from December 15, 1949. That the visa requirement may have played a large role can be seen from the large increase in immigration from Finland between 1949 and 1950, from 6,414 to 11,851 immigrants.

In the early 1920s, a few years after the First World War Sweden had a large depression. Many feared a similar depression would occur after the Second World War. For various reasons – the cold war and Keynesian economic policy are two of them – the development became quite different. The economic growth became high and the unemployment low and that led to that many employers had difficulties in finding workers for vacant jobs. Employers started to actively recruit abroad, the labour market administration became involved in this recruitment, and it was easy for those who travelled to Sweden and looked for a job to find one. Agreements were reached in 1947 on recruitment of workers from Hungary and Italy and also of German speaking displaced persons from Czechoslovakia staying in Austria (according to an agreement with the British authorities in Austria). In the 1950s agreements were reached on recruitment of workers from Germany (Federal Republic), the Netherlands, Belgium and Greece. In the 1960s agreements were reached with Yugoslavia and Turkey.[13]

[13] See Frank (2003) and Nilsson (2004).

In Table 3.4 the numbers of foreign-born from different countries who were living in Sweden in 1950 are shown. Almost 200,000 foreign-born were living in Sweden at that time. Half of them, 50.0 per cent, were born in Denmark, Finland and Norway. Those born in Finland were the largest group followed by those from Norway. Other large groups of immigrants were refugees from Estonia who remained in Sweden after the war and labour migrants from Germany. The unemployment was very high in Germany in the first ten years after the war.

Table 3.4 Number of foreign-born in Sweden according to the censuses of 1950 and 1960

Country of origin	1950		1960	
	Number	Per cent	Number	Per cent
Denmark	22,801	11.5	35,112	11.7
Finland	44,821	22,7	101,307	33,8
Norway	31,312	15,8	37,253	12,4
Estonia and Latvia	29,485	14,9	…	…
Soviet Union	8,097	4.1	31,861	10.6
France	1,367	0.7	1,750	0.6
Italy	2,623	1.3	4,904	1.6
Yugoslavia	171	0.1	1,532	0.5
The Netherlands	1,213	0.6	2,105	0,7
Switzerland	903	0,5	1415	0,5
Poland	7,832	4.0	6,347	2.1
Great Britain	2,071	1.0	2,738	0.9
Czechoslovakia	3,548	1.8	3,562	1.2
Germany (Federal Republic)	21,652	10.9	37,580	12.5
Hungary	2,030	1.0	8,544	2.8
Austria	2,655	1.3	5,809	1.9
United States	10,713	5.4	10,874	3.6
Others	4,506	2.3	7,186	2.4
All	197,800	100	299,879	100

Source: SOU 1967:18 (p. 28).

3.2.2 The foundation of the Nordic labour market

The founding of the common Nordic labour market was a process that took time. As already mentioned steps were taken in Sweden in the 1940s to open up the labour market for immigrants from the other Nordic countries. The work permit and visa requirements were abolished. Also Denmark abolished the work permit requirement for Swedish citizens in 1946 and for Icelandic and Norwegian citizens in 1952.

The common Nordic labour market came into force on July 1, 1954. One part of it was the abolishment of the work permit requirement for citizens from other Nordic countries. For migration to Sweden it did not mean any change and for migration to Denmark only for Finnish citizens. Other parts of the agreement stated that the public employment offices should be responsible for labour exchange and the exchange of information between the countries. The Nordic countries also abolished the passport requirement as a part of the agreement. Iceland was not part of the agreement but was included the year after.

The 1954 agreement did not mean that all hinders for mobility were eliminated. Further steps were taken in the years to come. In 1955 an agreement was reached regarding social security giving immigrants from Nordic countries more or less the same rights as natives. This agreement came into force in 1957.

The labour market was however still not common for all occupations. National regulations made it impossible to get some jobs in the public sector without a citizenship in the host country. And it was not possible to get a job in some occupations without long complementing education, for example for personnel in the health sector. Steps were taken in the different Nordic countries to abolish that public sector jobs were reserved for citizens in country in which they were working. In the health sector different agreements were reached to make it easier to get a job in another Nordic country; in 1960 a convention with that content was reached regarding medical doctors, in 1964 regarding dentists, and in 1968 regarding nurses.

As seen from Table 3.4 the number of immigrants living in Sweden increased much between 1950 and 1960. Especially the numbers of immigrants from Finland but also from Denmark and to some extent Norway increased. Also the immigration from other countries increased, but the share born in one of the Nordic countries of all foreign-born in Sweden was higher in 1960 than 10 years earlier, 57 compared to 50 percent.

Table 3.5 Net migration to Sweden, 1951–1965

Net migration	Period			
Net migration to Sweden from	1951–1955	1956–1960	1961–1965	1951–1965
Denmark	7,294	6,788	1,136	15,218
Finland	32,095	33,038	53,665	118,798
Norway	3,087	3,508	5,629	12,296
Germany (Federal Republic)	17,140	3,869	5,814	26,823
Rest of Europe	6,480	11,980	22,415	40,875
Non-European countries	-13,728	-5,674	3,945	-15,457
All	52,368	53,581	92,604	198,553

Source: SOU 1967:18 (p. 25).

Table 3.5 shows the development of net immigration to Sweden in the period from 1951 to 1965, divided into three five-year periods. It shows that the net migration is much higher in the 1960s than in the 1950s and also that the migration from the Nordic countries constitutes the majority in all three periods. There are however some noteworthy changes of the pattern. The immigration from Finland became even larger in the first half of the 1960s than in the 1950s. The net immigration from Norway also increased but that from Denmark declined. The net immigration from Germany was still high in the early 1960s, but much lower than in the early 1950s. Important to note is that the net immigration from other European countries (except the Nordic countries and Germany) increased strongly in the first half of the 1960s and that the negative net immigra-

tion to countries outside Europe turned to become positive if still small. The increase of the net immigration from other countries in Europe shows that Sweden was turning into a country of large scale labour immigration. From these figures it is obvious that the Nordic migration was dominated by migration from Finland to Sweden.

3.2.3 The migration to Sweden from the other Nordic countries up to the first oil crisis in 1973

Sweden became an immigration country already in the 1940s, but the migration increased considerably in the 1950 and especially in the 1960s. The Nordic migration was dominating but in the second half of the 1960s labour migration from other countries increased much. Employers recruited abroad and many workers arrived spontaneously to Sweden looking for a job. The immigration to Sweden from Nordic and other countries is shown in Table 3a.5. The reaction to this new labour migration was positive and it was easy to get a work permit for those coming from countries outside the common Nordic labour market. Only a few applications were turned down. In 1965 critical voices became more common especially from the trade unions and the policy gradually changed. In 1966 the border control became stricter making it more difficult to enter Sweden with the intention to find a job and from 1967 it became not possible any more to apply for a work permit if already in Sweden. The share of applications not accepted also increased strongly. It meant that employers turned even more strongly to look for labour in Finland and more immigrants than ever arrived to Sweden in 1970 and 1971. It led to a reaction both in Sweden and Finland. In the Swedish *Riksdag* it was in 1971 discussed to introduce employer paid education for all immigrants except those with Swedish, Danish and Norwegian as their mother tongue. The stated aims of this proposal were two: to integrate immigrants in the labour market and to dampen the immigration from Finland. The *Riksdag* followed the proposal and a law obliging the employer to pay their employees wages for 240 hours of education was taken and became valid from 1973.

On the Finnish side the employers were objecting to the large outmigration making it difficult for them to recruit workers. An agreement valid from July 1, 1973 was reached with the employer associations, unions and the labour market administrations on both sides.[14] The main content of the agreement was that the Swedish employers should stop recruit in Finland themselves and only recruit through the employment offices of the labour market administration.

[14] See Nelhans (1981) pp. 61–62.

Table 3.6 Immigration to Sweden in 1946–73.

Year	Denmark	Finland	Iceland	Norway	W. Europe	E. Europe	S. Europe	Outside Europe	Total
1946	3641	3980	20	3560	2844	15325	121	1931	31422
1947	6144	6568	50	4175	4211	7837	554	1860	31399
1948	6833	8934	19	4208	6407	3998	974	1562	32935
1949	4934	6414	33	3884	4711	1690	561	1770	23997
1950	4044	11851	28	3210	5493	688	653	1973	27940
1951	4716	12803	35	3185	7808	357	746	1953	31603
1952	4092	8158	57	2314	8754	305	628	1951	26259
1953	2555	6811	45	1854	5235	148	482	2045	19175
1954	2764	8440	71	1780	5046	130	397	2189	20817
1955	5557	11267	44	2373	7412	182	997	2237	30069
1956	6572	9134	50	2335	6383	234	1133	2188	28029
1957	5599	11020	53	2291	5337	5484	948	2291	33023
1958	3661	7645	82	1752	4288	1455	655	2559	22097
1959	2492	7518	54	1708	3695	498	617	2567	19089
1960	2695	12311	60	2281	4381	385	1130	2900	26143
1961	2695	12830	137	2364	6200	241	1844	3308	29619
1962	2411	9770	92	2090	4980	297	2061	3383	25084
1963	2990	10385	110	2155	5389	290	2229	3442	26950
1964	2783	19302	117	2582	5481	380	4034	3655	38334
1965	2831	21852	90	3600	6156	797	10528	3732	49586
1966	2556	16617	111	3158	5592	892	14059	3985	46970
1967	1869	10616	81	2072	3829	696	7089	3731	29983
1968	2725	17338	108	2210	3744	1585	4563	3705	35978
1969	3261	38607	395	2650	5082	3269	6750	4489	64563
1970	3609	41479	772	2837	5550	3502	14106	5465	77326
1971	2431	16601	294	2258	4215	1806	9556	5450	42615
1972	2126	10313	171	1996	3574	1514	4729	5488	29894
1973	2357	9013	201	2286	4038	1446	4163	5939	29443

Source: Wadensjö (1974).
W. Europe=Western Europe, E. Europe=Eastern Europe, S. Europe=Southern Europe

Table 3.7 Emigration from Sweden in 1946–73

	Denmark	Finland	Iceland	Norway	W. Europe	E. Europe	S. Europe	Outside Europe	Total
1946	1984	333	27	1914	710	89	74	1784	6915
1947	1464	424	14	1232	629	122	77	2489	6451
1948	1902	618	43	1076	996	107	97	4945	9784
1949	2879	983	22	1445	1161	332	148	7204	14174
1950	2679	1242	26	1743	1350	242	177	5401	12860
1951	2361	1986	32	1607	1568	102	215	8709	16580
1952	2634	3692	8	1883	2098	66	221	4396	14998
1953	3015	3922	31	2073	3305	68	435	4631	17480
1954	2422	2963	35	1487	2968	89	331	3527	13822
1955	1958	2830	40	1364	3175	54	335	2919	12675
1956	2234	3418	49	1450	3472	85	271	3758	14737
1957	2434	2703	46	1444	3671	100	303	4370	15071
1958	2791	2603	20	1423	3577	112	351	3370	14247
1959	3456	2700	38	1283	4006	126	442	3556	15607
1960	3316	3166	54	1187	3686	96	515	3118	15138
1961	3115	3768	53	1293	3522	82	616	2570	15019
1962	2686	4271	85	1451	3208	39	665	2523	14928
1963	2160	4071	89	1397	3556	67	832	3168	15340
1964	2463	3824	61	1449	3772	55	881	3200	15750
1965	2150	4540	51	1572	3586	69	935	3074	15977
1966	2386	6378	71	2037	4096	61	1476	3225	19730
1967	1986	6061	90	2177	3762	69	1809	4025	19979
1968	2173	6108	88	2397	4516	140	3045	4019	23162
1969	2229	5858	85	1984	4044	138	2491	3352	20360
1970	3397	10961	397	2602	4404	186	2920	3868	28653
1971	3403	18712	334	2969	5111	233	2909	5366	39560
1972	3070	17596	356	3209	5845	357	5351	5152	41579
1973	3383	16118	263	2671	5919	378	5538	5282	40342

Source: Wadensjö (1974).
W. Europe=Western Europe, E. Europe=Eastern Europe, S. Europe=Southern Europe

The migration from Finland to Sweden also declined in the first half of the 1970s. The policy changes may be part of the explanation but much more important is probably the change in the economic situation in Finland and Sweden. Sweden had a recession in 1971–1972 and in the 1970s a period with low growth started. The unemployment was still very low in Sweden but the job vacancies fewer. In Finland the unemployment was higher than in Sweden but the growth rate was higher and the income and wage differences between Sweden and Finland gradually declined.

3.2.4 The migration from the first oil crisis up to 1990

Migration to Sweden (and return migration from Sweden) dominated the Nordic migration up to 1970. From 1970 to 1985 Sweden had a period with relatively low inflow of migrants compared to both the post-war period up to 1970 and to the period from 1985 on. labour migration from countries outside Sweden was restricted and fewer arrived from the Nordic countries. However, the immigration from Denmark was large in one year, 1975, much larger than in other years. The explanation is probably the increase in unemployment after the first oil crisis. The immigration was also relatively large in the second half of the 1970s, but not as large as in the late 1960s and in 1970. The refugee migration was increasing but still rather low.

The number of foreign born in Sweden was 538,000 in 1970 and increased by 118,000 to 656,000 in 1985. The number of foreign born from Nordic countries declined slightly with 6,000 in the period and the number of people born in non-Nordic countries increased with 124,000. Refugees arrived especially from Poland, Chile and Iran in this period. The number of people born in non-Nordic countries living in Sweden were in 1985 larger than the number of people born in Nordic countries living in Sweden.

In the mid-1980s the refugee migration started to increase. Many of them came from the Middle East and from Iran. The migration of family members of earlier arrived refugees and labour migrants also grew. The number of people living in Sweden and born in another Nordic country continued to decline.

3.2.5 Return migration

It has been easy to move to Sweden from another Nordic country and it has also been easy to move back to the home country. As the costs to move from a Nordic country have been relatively low it has been easy to test how it is to stay in Sweden. The return migration has been extensive. It is best seen by studying different cohorts. Cross-section comparisons of inflows and outflows are difficult to interpret as the number returning is

determined by the size and the composition regarding year of arrival of the stock of immigrants.

Of those who came from Denmark in 1970 64.4 per cent had returned in 1989, and of those from Finland and Norway coming the same year 58.7 percent and 64.7 had returned in 1989.[15] The corresponding numbers for those who came in 1975 were 70.5, 52.0 and 57.3 per cent and for those who come in 1980 56.8, 63.2 and 53.7 per cent. Note that the follow-up period is shorter for those immigrating in 1975 and 1980, but that the share of immigrants who have returned is more or less the same. Most immigrants from the Nordic countries who return do that in the first few years after arrival. For most other groups of immigrants the return rate is much lower, especially in the first years after arrival. Immigrants from Greece has returned in about the same extent as migrants coming from the Nordic countries, but the average period of stay before returning is much longer.

The non-permanent character of the Nordic migration is also seen by the share who becomes Swedish citizens. Of those coming from Denmark in 1974 13.6 per cent had become Swedish citizens in 1989. The corresponding figures for those coming from Finland and Norway are 21.0 and 8.7 per cent. As a comparison 12.8 per cent of those coming from Yugoslavia, 72.0 of those coming from Poland and 22.6 per cent of those coming from Germany in 1974 had become Swedish citizens in 1989. Part of the differences is explained by the differences in the propensity to return. It should be noted that it is and has been easier to become a Swedish citizen for those coming from other Nordic countries.

3.3 The extent of mobility after 1990

In this section of the chapter we describe mobility patterns in the post-1990 period. We emphasize again that the data does not enable us to identify the motive behind migration, i.e. whether it is job related or not. In the first part of this section we focus on four different dimensions of gross emigration from each of the Nordic countries:

- The absolute number of emigrants from each country to each of the other Nordic countries
- The relative distribution of the annual emigration flow on four major areas of destination: other Nordic countries, the rest of the EU/EEA, North America and the rest of the world
- The female share among emigrants to each of the other Nordic countries, the rest of the EU/EEA and North America
- The share of citizens in the source country among emigrants to each of the other Nordic countries, the rest of the EU/EEA and North America

[15] The information is from Diaconescu and Tryggvesson (1992).

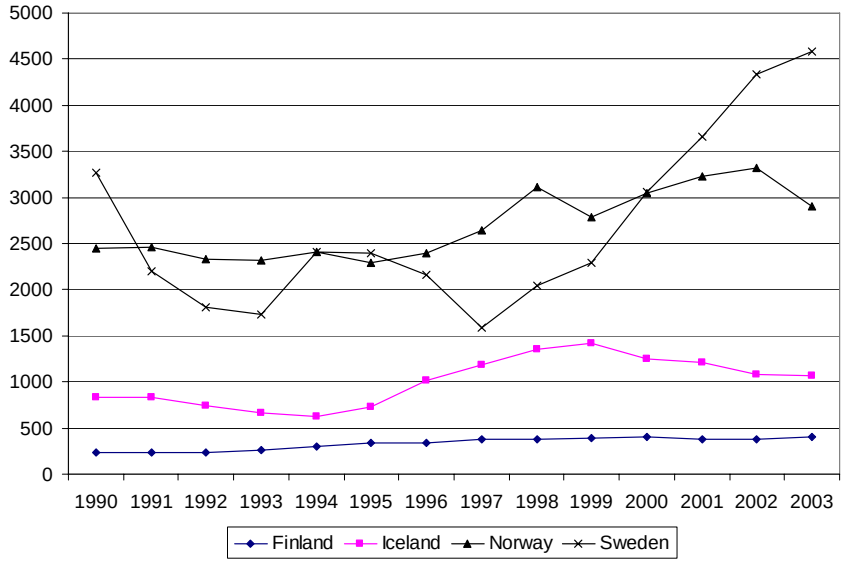

Figure 3.1 Emigrants from Denmark to other Nordic countries, 1990–2003

Figure 3.1 shows the absolute number of emigrants from Denmark to each of the other Nordic countries. The gross flow consists of Danish citizens as well as citizens of other countries. Most likely, the majority of citizens of other countries are immigrants returning to their home countries. Traditionally, Sweden has been the major receiving country for emigrants from Denmark. In the early 1990s emigration to Sweden fell to half the earlier level as unemployment increased strongly in Sweden. From the mid-1990s emigration to Sweden tripled which may reflect an impact from non-economic factors to which we return below. Migration to the other countries had an increasing trend during the 1990s.

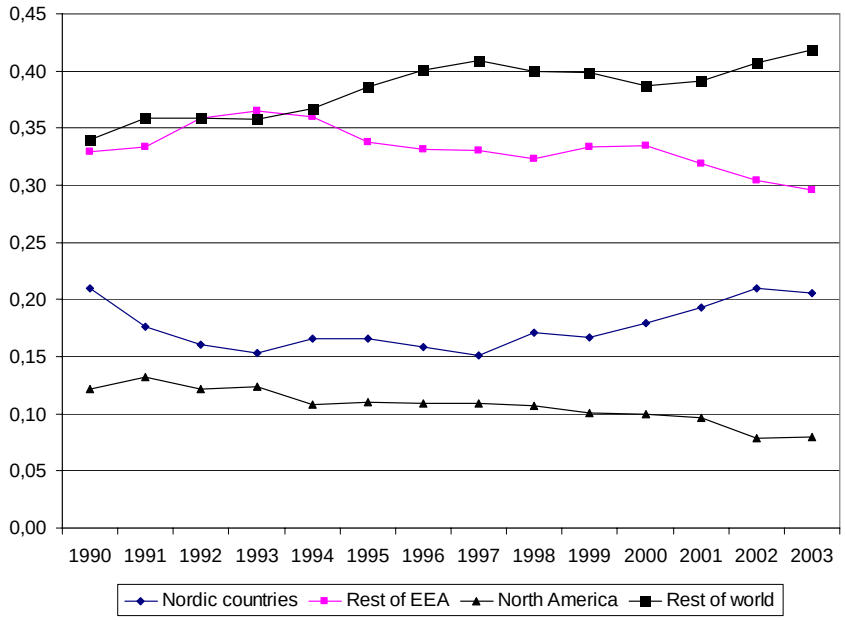

Figure 3.2 The relative distribution of emigrants from Denmark by destination, 1990–2003

In Figure 3.2 we show the trend in the relative composition on destinations for emigrants from Denmark. The major change is an increase in the share going to the rest of the world, matched by decreasing shares to North America and the rest of EU/EEA (EU/EEA except the Nordic countries). The share of the emigrants going to the other Nordic countries is about the same at the end of the period as in the beginning.

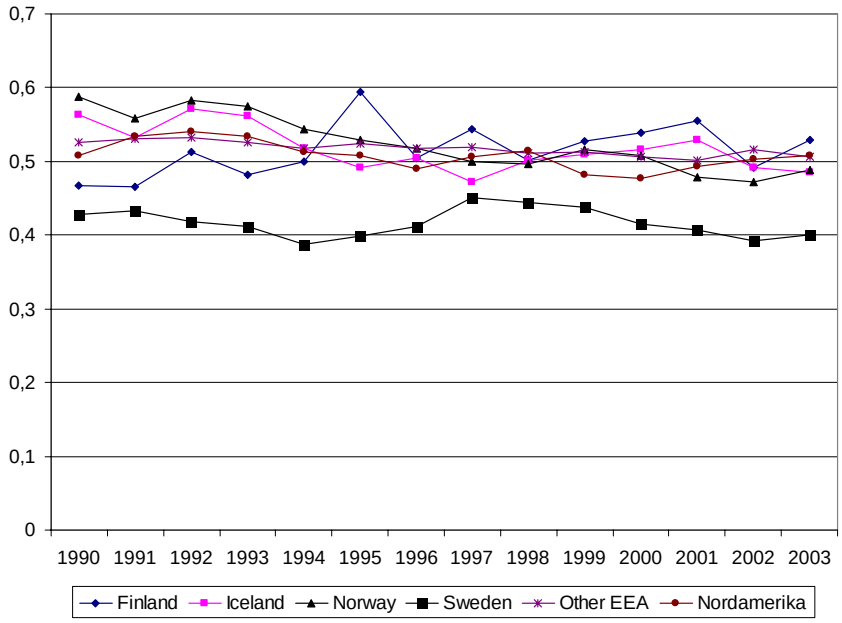

Figure 3.3 Share of female emigrants from Denmark by destination, 1990–2003

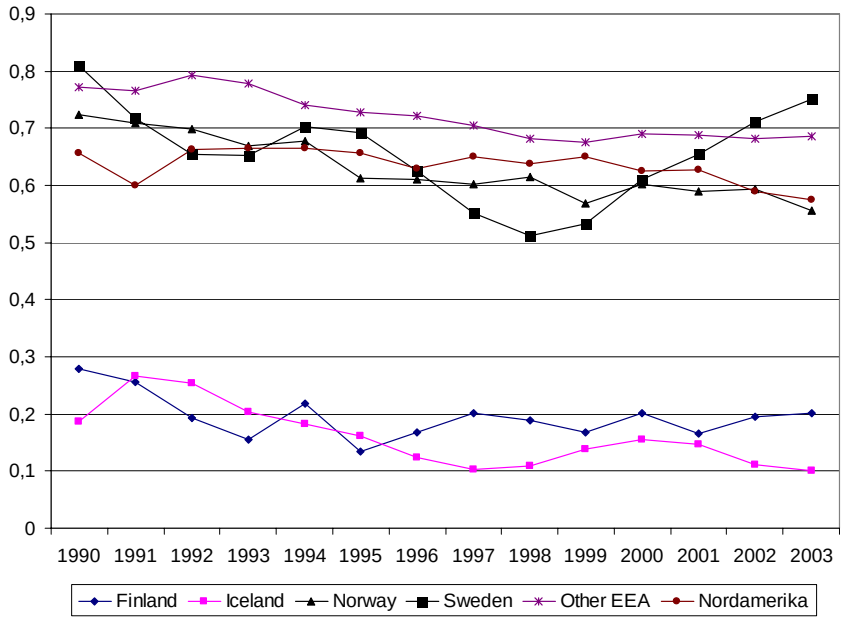

Figure 3.4 Share of Danish citizens among emigrants from Denmark by destination, 1990–2003

The share of women in the emigration flows to the different destinations shows no trend at a level close to 0.5, with the flow to Sweden as the only exception at a somewhat lower share close to 0.4. See Figure 3.3. The low shares of Danish citizens in the emigration flows going to Finland and Iceland seen in Figure 3.4 reflect that these flows are dominated by return migration of Finnish and Icelandic citizens to their home countries.

Next, we look at the same type of graphs for Finland from 1990. In Figure 3.5, the U-shape in the dominant flow to Sweden reflects a reaction to the Swedish depression in the early 1990s. The most spectacular development is the strong increase in the flow to Norway which tripled in the period. The relative distribution of Finnish emigrants on destinations changed dramatically in the first half of the 1990s. A very strong decline in the share going to other Nordic countries is matched by a doubling of the relative share going to the rest of the EU/EEA. The shares of women and of Finnish citizens among the emigrants from Finland are stable to all major destinations.

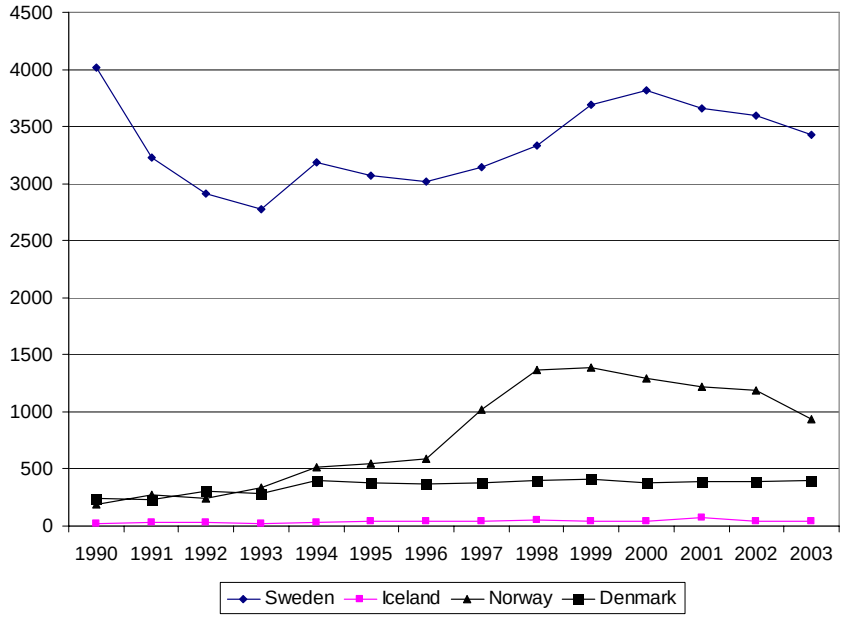

Figure 3.5 Emigrants from Finland to other Nordic countries, 1990–2003

The corresponding figures on the emigration from Iceland since 1990 show more volatility, reflecting also that the absolute numbers are small compared to the other countries. The major shift regarding emigration to the other Nordic countries is the strong decline in the number of emigrants going to Sweden. See Figure 3.9. This is matched by a strong, but volatile, increase in the number going to Denmark. Figure 3.10 shows that about two thirds of the emigrants from Iceland move to the other Nordic countries. Looking at Figures 3.11 and 3.12, most volatility is found with Finland as destination, reflecting the very small number of individuals going from Iceland to Finland.

Of the emigration flows from Norway to the other Nordic countries, the decline in the flow to Sweden in the early 1990s is even stronger than the one we saw in the case of Finland. Looking at the relative distribution on destinations, the share to the other Nordic countries follows a U-shape, while the share to North America goes down, and the share to the rest of the world goes up. The female share is about the same independent of destination, see Figure 3.15. Quite big changes are seen in Figure 3.16 regarding the composition on Norwegian and non-Norwegian citizens. The share of Norwegian citizens in the flow to Sweden goes down strongly, reflecting that an increasing share of the fairly stationary number of people going to Sweden is composed of returning Swedish citizens. An increasing share of the increasing number of people going to Denmark, on the other hand, is composed of Norwegian citizens.

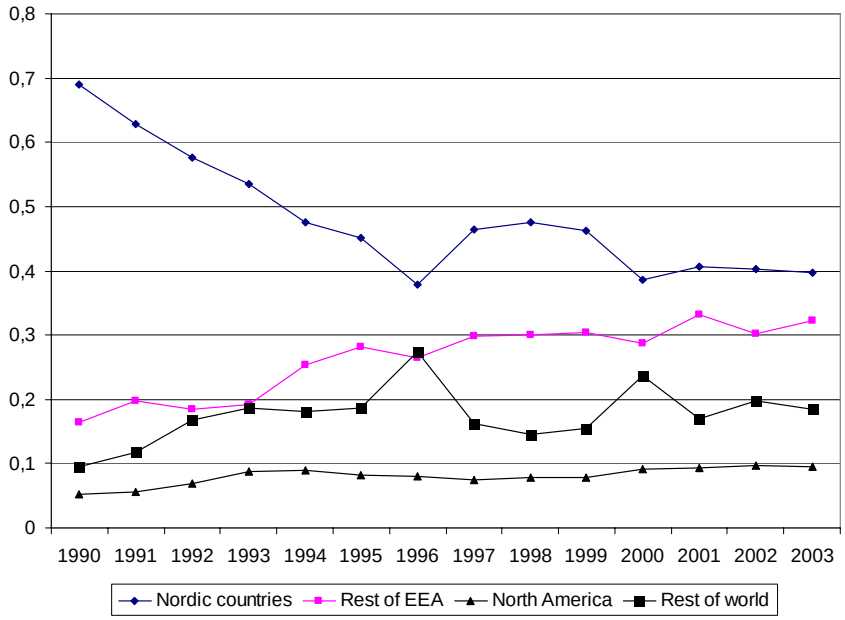

Figure 3.6 The relative distribution of emigrants from Finland by destination, 1990–2003

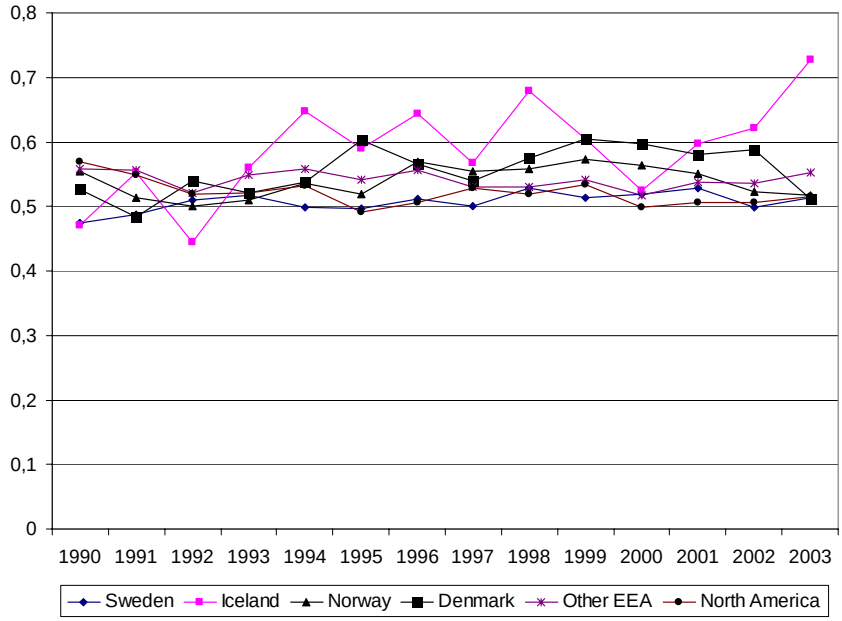

Figure 3.7 Share of female emigrants from Finland by destination, 1990–2003

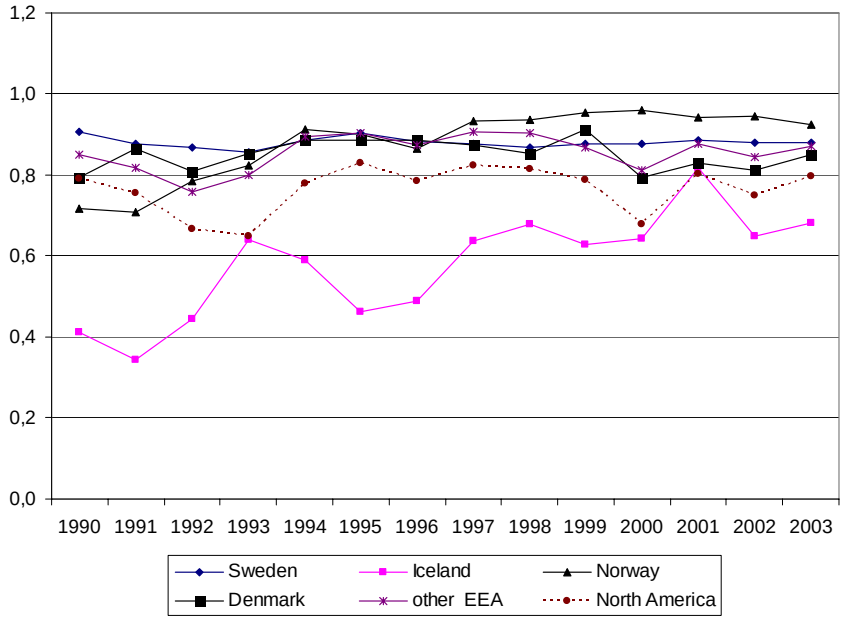

Figure 3.8 Share of Finnish citizens among emigrants from Finland by destination, 1990–2003

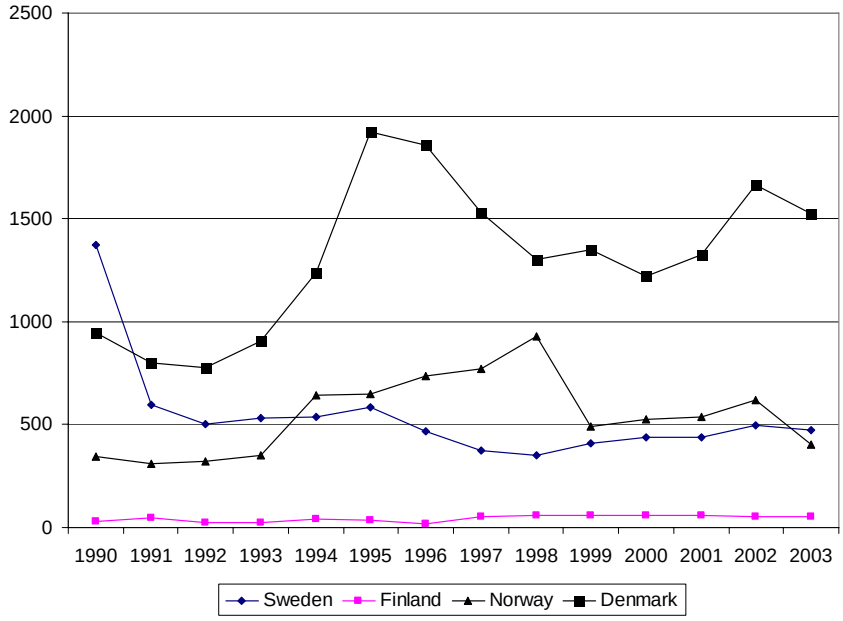

Figure 3.9 Emigrants from Iceland to other Nordic countries, 1990–2003

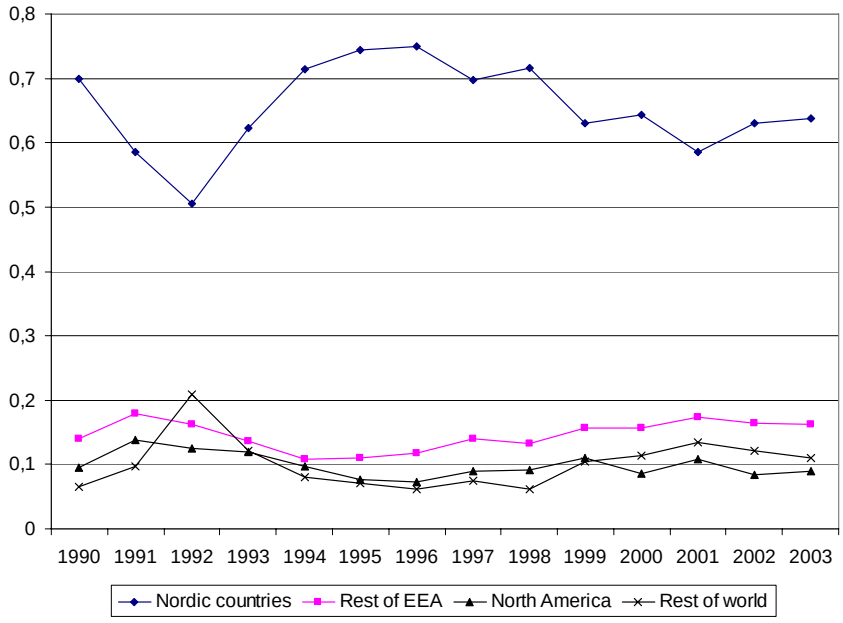

Figure 3.10 Relative distribution of emigrants from Iceland by destination, 1990–2003

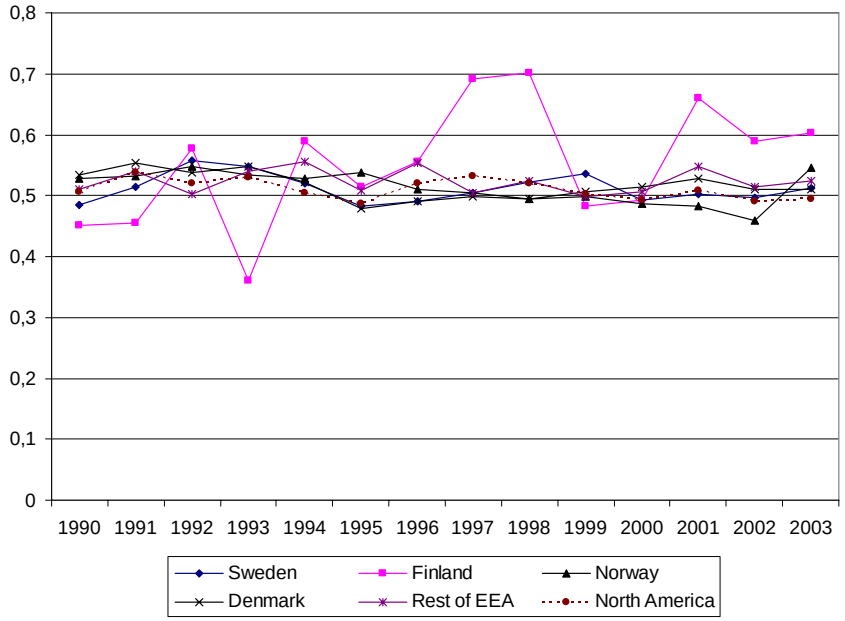

Figure 3.11 Share of female emigrants from Iceland by destination, 1990–2003

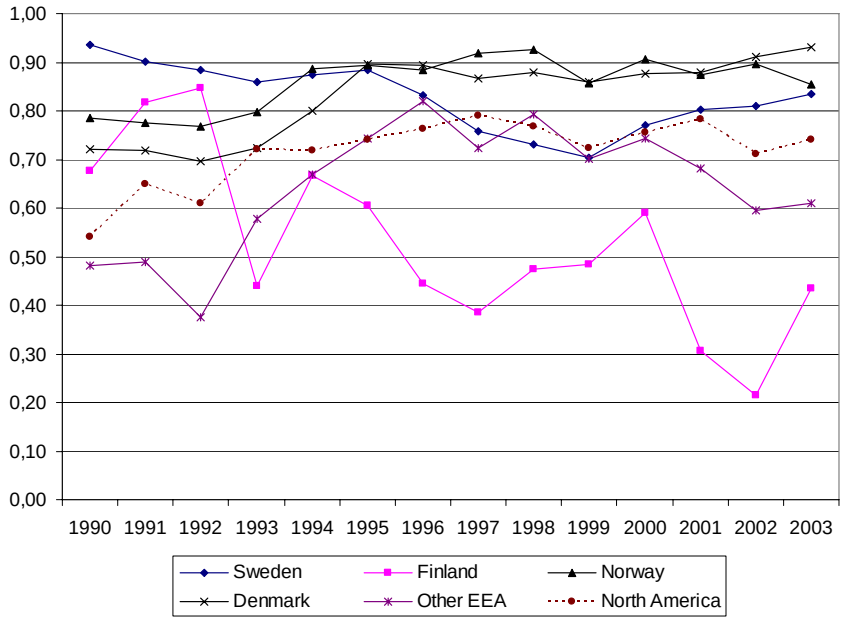

Figure 3.12 Share of Icelandic citizens among emigrants from Iceland by destination, 1990–2003

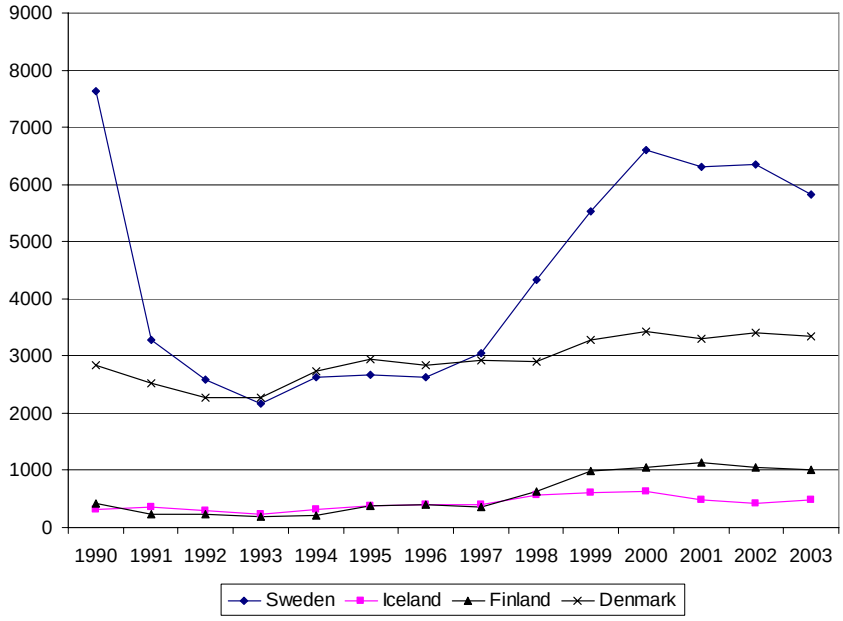

Figure 3.13 Emigrants from Norway to other Nordic countries, 1990–2003

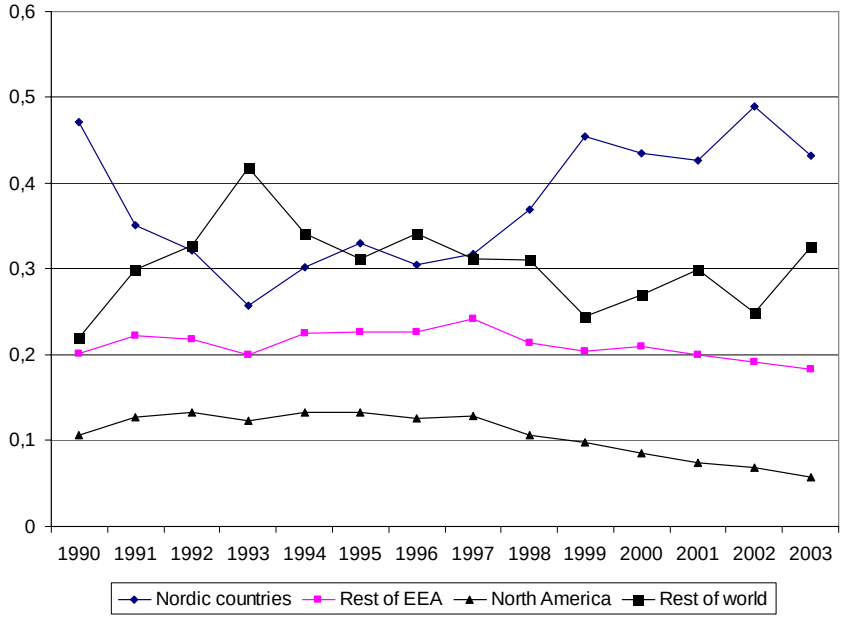

Figure 3.14 The relative distribution of emigrants from Norway by destination, 1990–2003

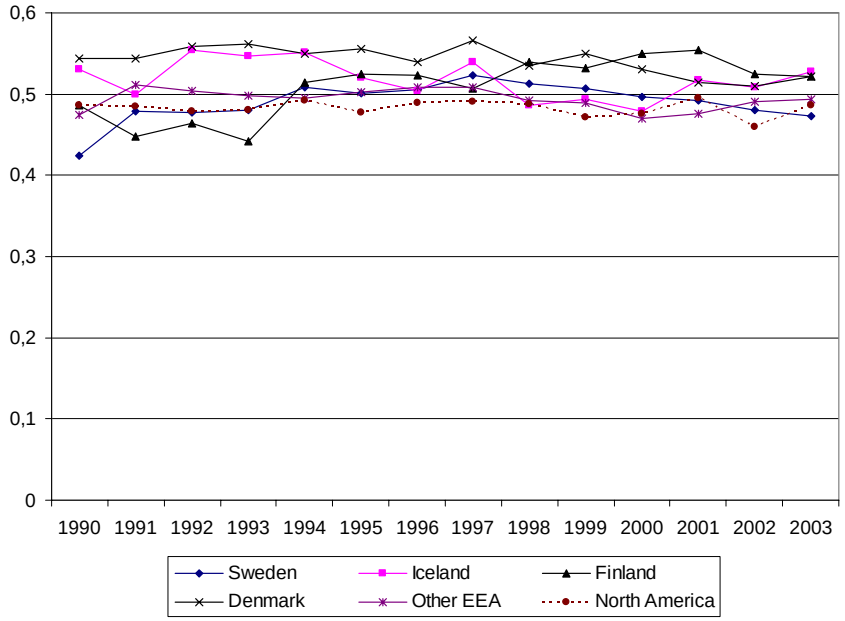

Figure 3.15 Share of female emigrants from Norway by destination, 1990–2003

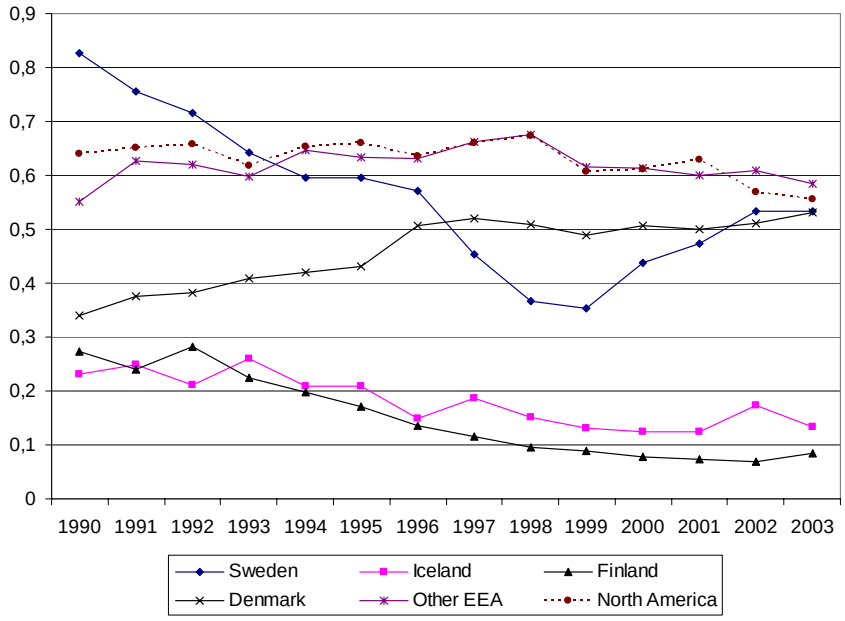

Figure 3.16 Share of Norwegian citizens among emigrants from Norway by destination, 1990–2003

Next, we present a summary survey of the net flows between the Nordic countries, i.e. the net flow from country A to country B consisting of citizens of A emigrating to B, citizens of B returning home and finally the net flow of citizens of other countries from A to B. We have chosen to present the most important intra-Nordic flows in quantitative terms.

From Denmark the most important flows are directed to Iceland, Norway and Sweden. The net flows to Norway and Sweden are shown in Figures 3.17 and 3.18. The net migration to Norway is volatile for men, but fairly small. For women, we see the same volatility. The net migration flow is highly correlated with the one for men, but the level is negative except for two years in the early 1990s. For both men and women net migration from Denmark to Norway is negative in all years since 1990 except 1998. Compared with the gross numbers shown in Figures 3.1 and 3.13, the positive net migration flow to Denmark is the result of increases in both gross flows, with the increase of the gross flow from Norway outnumbering the increase of the gross flow from Denmark. For Sweden, the net migration is negative throughout the 1990s. From 2000 there is instead a strong increase in net migration levelling off from 2002. We return to this profile in more detail below.

The traditionally large net flows from Finland to Sweden have changed to very small net flows. See Figure 3.19. The net flows for men and women are highly correlated, but differ regarding the level where the net migration of women to Sweden is consistently higher than that for men. The net migration is mostly positive for women but with few exceptions negative for men. Overall, the negative male net flows dominate throughout the 1990s. So, while the gross flows from Finland to Sweden are still large, see Figure 3.5, the significant change reflected in Figure 3.19 is the finding of even greater gross flows from Sweden to Finland resulting in the small net mobility from the early 1990s on.

Next, Figures 3.20, 3.21 and 3.22 show the net migration from Iceland to Denmark, Norway and Sweden. The number of men and women are almost the same in all these flows. Further, the profiles in the net migration flows show a certain similarity in the case of Denmark and Norway with a peak in the mid-1990s, near zero net mobility around the turn of the millennium, followed by a new increase. The flow to Denmark is nearly three times as large as the flow to Norway in the peak years. The net migration from Iceland to Sweden is small and in most years negative. Finally, Figure 3.23 shows the net migration from Norway to Sweden illustrating the big negative net migration during the 1990s, followed by positive net migration after 2000.

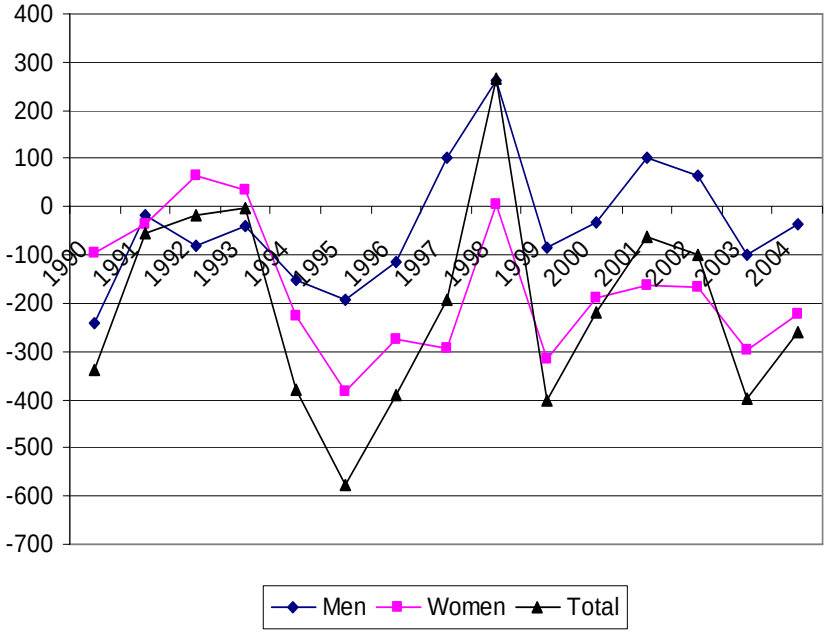

Figure 3.17 Net migration from Denmark to Norway, 1990–2004

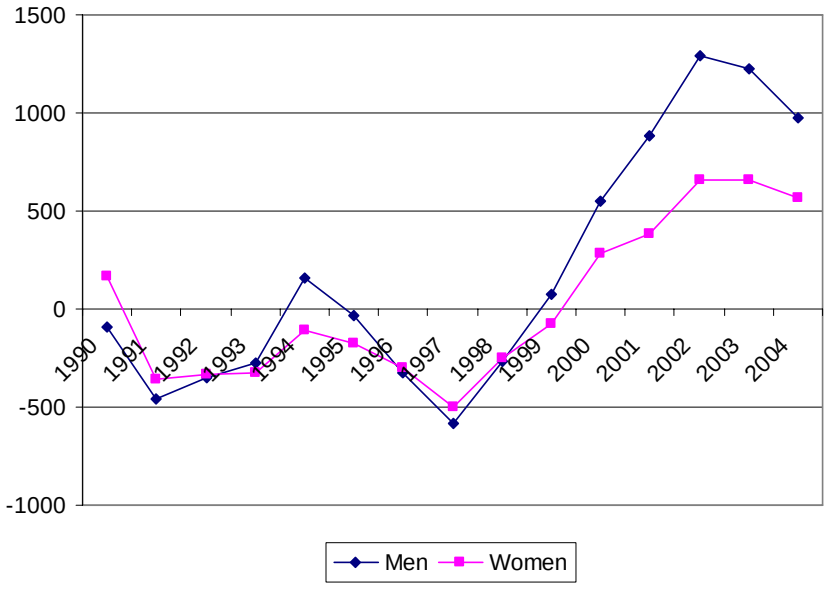

Figure 3.18 Net migration from Denmark to Sweden, 1990–2004

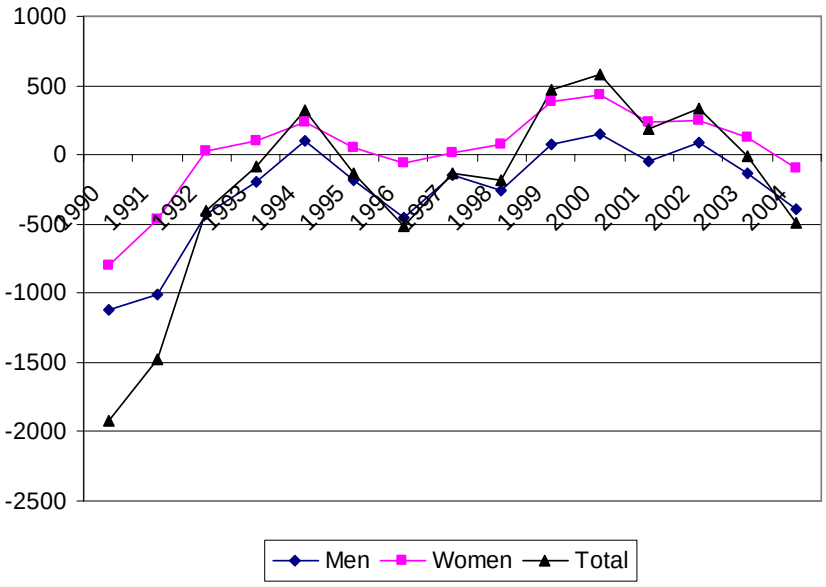

Figure 3.19 Net migration from Finland to Sweden, 1990–2004

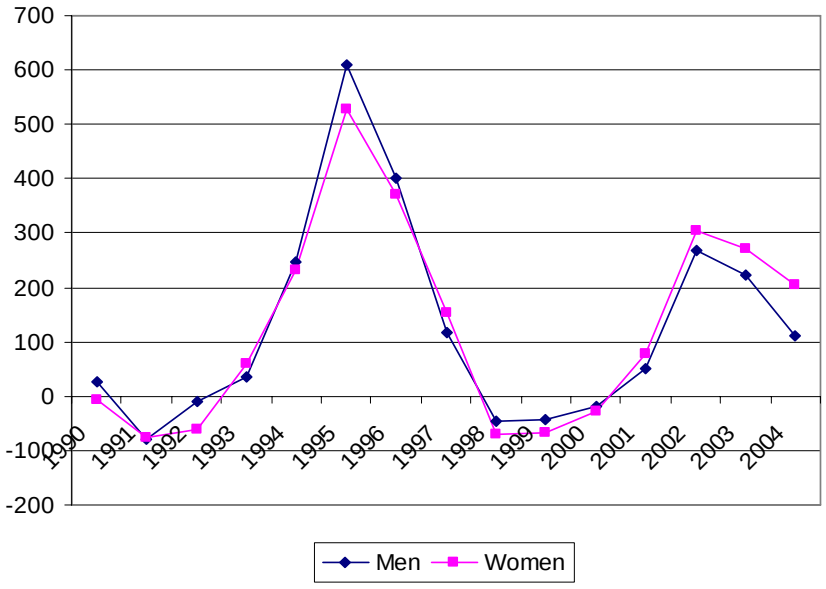

Figure 3.20 Net migration from Iceland to Denmark, 1990–2004

Figure 3.21 Net migration from Iceland to Norway, 1990–2004

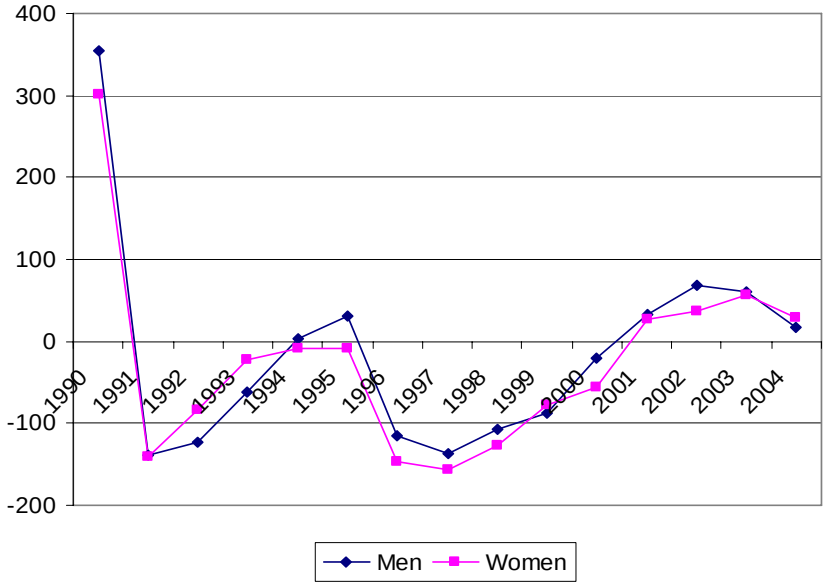

Figure 3.22 Net migration from Iceland to Sweden, 1990–2004

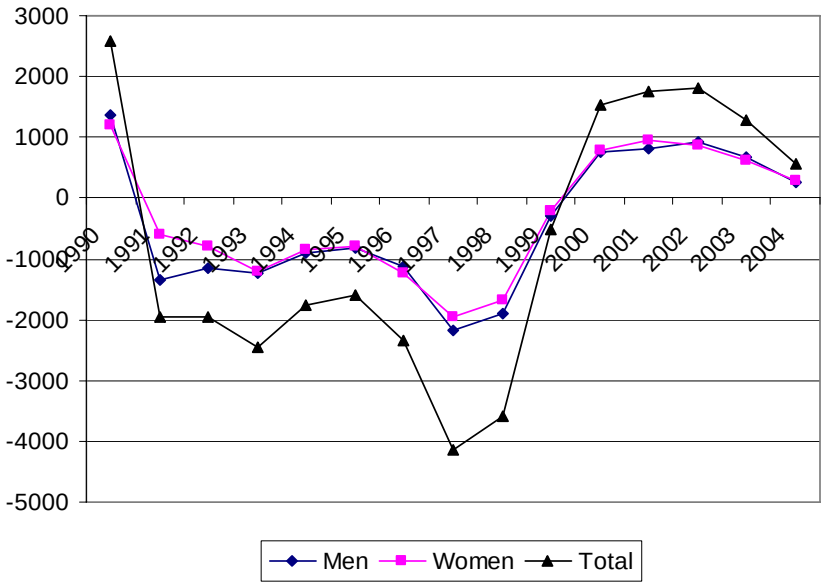

Figure 3.23 Net migration from Norway to Sweden, 1990–2004

It is obvious from the graphs above that the years since 1990 could be separated into two distinct phases, the 1990s and the years from 2000. We summarize the trends from the graphs in two tables showing the cumulated net flows in the two periods 1990–1999 and 2000–2004. In Tables 3.8 and 3.9 we use the symmetry restriction on bilateral flows and a relevance criterion to motivate two fairly simple tables instead of two 5*5 tables. Looking first at Table 3.8 it is evident that the 1990s are much different than earlier phases in the common Nordic labour market. Denmark is a net attractor both regarding Iceland, Norway and Sweden. Even more strongly, Norway received a cumulated net flow of nearly 18,000 people from Sweden. Comparing with the profiles in Figure 3.16, where the share of Norwegian citizens in the gross migration flow to Sweden falls from 80 per cent to 40 per cent during the 1990s, we conclude that much of the large cumulated negative net migration reflects a large decline in the incentives for Norwegian citizens to emigrate to Sweden during most of the 1990s. See also Figure 3.14. From the late 1990s we observe in Figures 3.14 and 3.16 an increase in the gross migration from Norway to Sweden of which an increasing share are Norwegian citizens. Finally, Table 3.8 summarizes the complete break in the Finnish-Swedish mobility pattern showing up in the negative cumulated net migration, i.e. a net flow going from Sweden to Finland.

In Table 3.9 we find indications of a completely different pattern in the five years since the turn of the millennium. Denmark is still a net cumulated attractor relative to Iceland and Norway, but a completely different situation turns up relative to Sweden with a big positive net cumulated migration flow to Sweden. The same shift is observed regard-

ing the cumulated net flow from Norway to Sweden. Comparing with Figures 3.14 and 3.16 it seems to be composed of a big increase in gross migration up to the same level as in 1990, but with a much greater share who are not Norwegian citizens, probably mostly being Swedish citizens returning as a reaction to an improved business cycle situation in Sweden.

Table 3.8 Selected Cumulated Net Flows, 1990–1999

	To		
From	**Denmark**	**Norway**	**Sweden**
Denmark	-	-2,089	-4,400
Finland	-	-	-4,059
Iceland	2,323	1,683	-851
Norway	-	-	-17,751

Table 3.9. Selected Cumulated Net Flows, 2000–2004

	To		
From	**Denmark**	**Norway**	**Sweden**
Denmark	-	-1,040	7,471
Finland	-	-	600
Iceland	1,461	-108	252
Norway	-	-	6,932

As mentioned above, and as evident from Figure 3.17, net migration from Denmark to Sweden shows a very different pattern from 2000 compared with earlier years. On July 1, 2000 the bridge over Øresund opened between Malmoe and Copenhagen making it much easier to live in Sweden and work in Denmark or the other way around.[16] Differences in gross wages, institutional differences regarding taxation and social contributions along with lower costs of living in the Malmoe region seem in combination to create a big increase in Danish emigration to Sweden. Furthermore, Figure 3.24 shows an interesting pattern regarding the choice of destination for young emigrants, 20–24 years old. Regarding total emigration to all other countries than Sweden, the level is stationary since 2000, while there is a slight decline in the number of young people emigrating to all other countries than Sweden. Looking at the emigration flow to Sweden, the pattern is completely different, i.e. not only a tripling of the total number of emigrants to Sweden since 1999, but a stronger relative increase for the 20–24 year olds.

[16] SCB (2005) contains information on commuting in 2001.

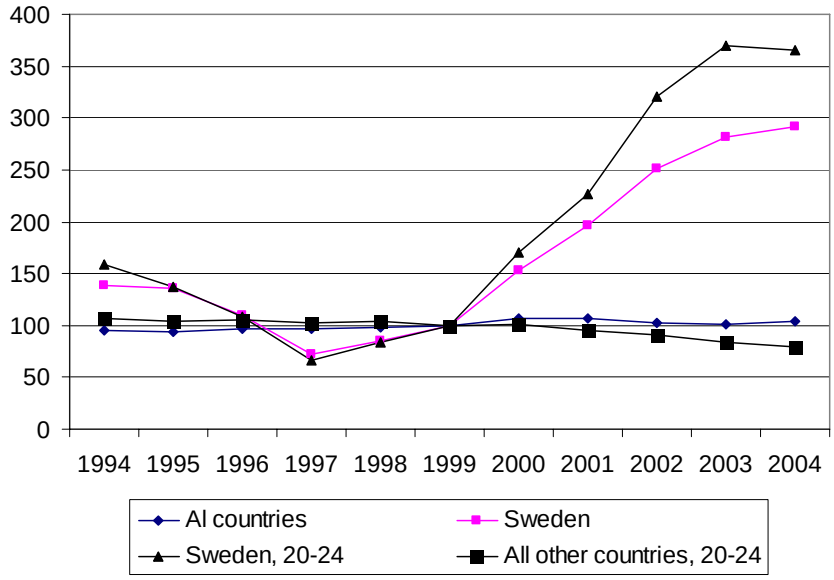

Figure 3.24 Emigration of Danish citizens to Sweden and rest of the world, 1994–2004; emigration in 1999 = 100

This could reflect another, not labour market related factor, i.e. the more restrictive Danish immigration policy since 2002 regarding the rules for marriage migration. It became no longer possible for Danish citizens younger than 25 to have a spouse entering the country from countries outside EU or EES. One way to avoid the restrictions from this policy change is to emigrate and live with the spouse in Sweden. This is an option for young second generation immigrants in Denmark being Danish citizens, but no longer able to marry a person entering from the country of origin of his or her family before turning 25.[17] Many young first and second generation immigrants from non-Western countries are living in the suburbs of Copenhagen, i.e. the County of Copenhagen. In 2001, of all aged 20–24 years the share being first or second generation immigrants from non-Western countries was 11.8 per cent in Copenhagen municipality, 16.5 per cent in Copenhagen county and 6.6 per cent in the rest of the country.[18] A possible reflection of this is shown in Figure 3.25. Figure 3.25 compares the relative increase in emigration to Sweden for three groups of 20–24 year olds, i.e. people coming from the County of Copenhagen, from the Municipality of Copenhagen (being the inner city metropolitan area), and finally from the whole country (emigration in 1999 is set to 100).

[17] See Celikaksoy (2006) for a study of marriage migration to Denmark.

[18] The information is from a calculation from the Ministry of Finance Law-model data base (3.3 per cent sample of all people living in Denmark).

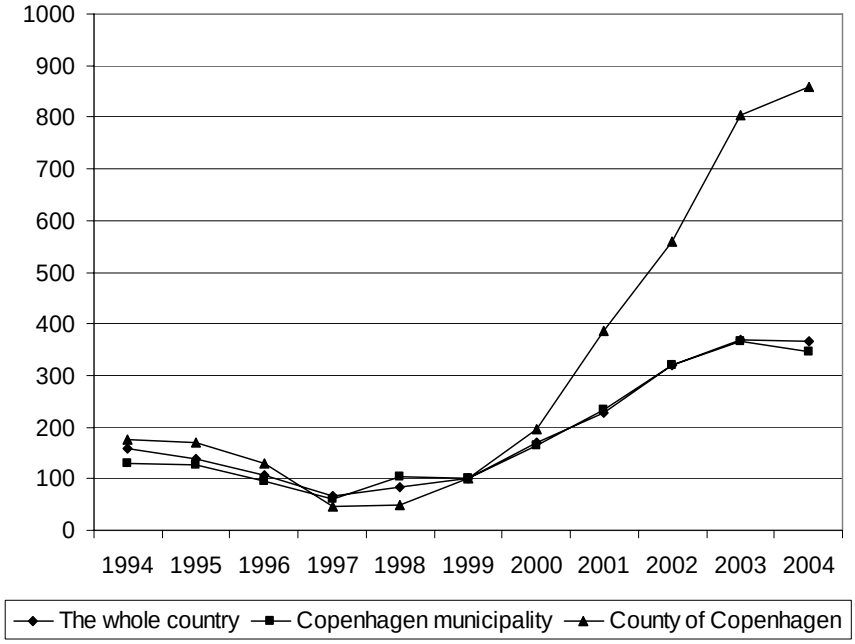

Figure 3.25. Emigration of Danish citizens to Sweden, 20–24 years old. The whole country and two metropolitan regions; emigration in 1999 = 100

As mentioned, the tightening of the immigration policy was enacted in 2002. Looking at emigration from the whole country and from Copenhagen Municipality we see a flat profile in the most recent years reflecting that the "Bridge effect" has stabilized. Looking at the 20–24 year olds coming from the County of Copenhagen, a possible interpretation is that an "immigration policy effect" results in a continued increase in emigration to Sweden.

3.4 Conclusions

Migration flows between the Nordic countries are overall much smaller in the post 1990 years. Further, the period divides into the 1990s and the years from 2000 with different characteristics regarding the intra-Nordic flows.

The most significant deviation from the earlier history of the common Nordic labour market is found in the early 1990s reflecting the deep depression in the Swedish economy. Gross migration to Sweden falls strongly in the other Nordic countries. For Finland, this implies a more permanent reduction in the share of emigrants going to other Nordic countries from about 70 percent to about 40 percent. In Denmark and Norway, gross migration to the other Nordic countries follows a U-shape. In Denmark the initial and the final level is around 20 percent, while it is

about 50 percent in Norway. Finally, in Iceland the share of emigrants going to other Nordic countries moves around 60 percent.

The years in the 1990s and the years – so far – from 2000 differ very much regarding the direction and magnitude of the *net* intra-Nordic flows. In the 1990s Denmark receives a net flow from Iceland, Norway and Sweden, and both Finland and Norway receives a net flow from Sweden. From 2000 this picture shifts. Sweden once again becomes the net receiver of people from Denmark and Norway, while Denmark receives a net flow of people coming from Iceland. The significant shift in the Danish-Swedish flows seems to reflect the opening of the Øresund Bridge between Copenhagen and Malmö more than cyclical changes in the national economies.

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4. Mobility factors

By Peder J. Pedersen and Eskil Wadensjö

4.1 Cyclical differences and the impact on mobility

Studies on the cyclical sensitivity of migration flows before 1990 were surveyed in Chapter 2. Here we focus on the cyclical sensitivity in post-1990 years. In the first section of this chapter we survey three cyclical indicators for the Nordic countries – the real GDP growth rate, the unemployment rate, and the rates of change in total employment – and analyze to what extent intra-Nordic migration flows are related to differences and changes in the cyclical indicators. In the second section we present some recent Nordic studies on cross-border commuting. Commuting – individuals who either stay in their home country and work in a neighbouring country or move to a neighbouring country and work in their home country – is an alternative way to reap the benefits from a common labour market.

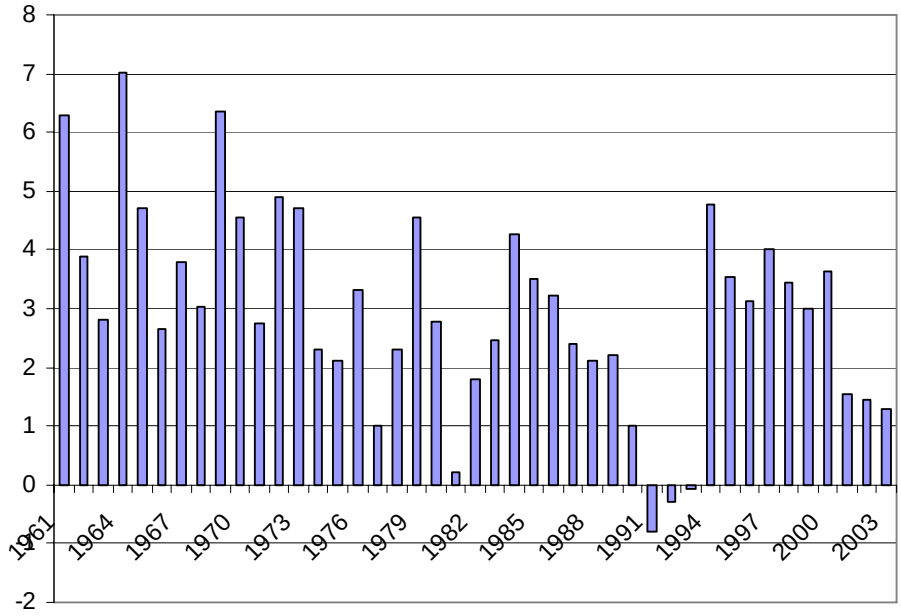

Figure 4.1. Average GDP growth rates for Denmark, Finland, Norway and Sweden, 1961–2003

In Figure 4.1 we summarize the average cyclical situation in the four big Nordic economies by looking at the average growth in real GDP since 1961. The cyclical variations until 1990 related to intra-Nordic mobility are treated in a number of earlier studies surveyed in Chapter 2. The years

since 1990 show a big decline in GDP growth in the early 1990s, especially in Finland and Sweden, with three consecutive years with negative growth on average for the Nordic countries. This is followed by years of recovery later on in the 1990s, somewhat lagging growth in the first years of the decade, and a recovery in the last few years (the last years are not included in the figures).

Figure 4.2 shows that the variation in cross-country economic growth rates measured by the standard deviation is extremely volatile in the beginning of the 1990s. Average growth and its standard deviation move in opposite directions, reflecting the dramatic decline in economic activity in Finland and Sweden in these years. In contrast, we see that the decline in growth in the first years after 2000 is about the same in the four Nordic countries.

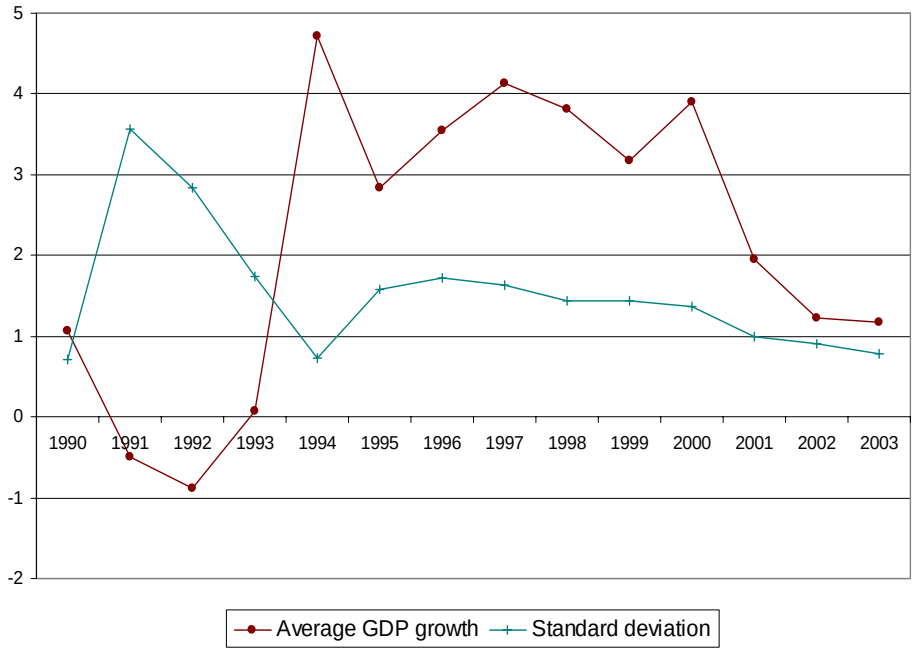

Figure 4.2. Average GDP growth and standard deviation for Denmark, Finland, Iceland, Norway and Sweden, 1990–2003

Figures 4.3 and 4.4 show average unemployment rates for the four big Nordic economies and the coefficient of variation (the ratio between the standard deviation and the average), respectively. In 1993 the average unemployment in the Nordic countries peaked at nearly 11 per cent. The coefficient of variation, on the other hand, was fairly low in 1992/93 reflecting that the standard deviation increased less than the average unemployment. The Finnish and Swedish depressions were much stronger than the recessions in Denmark and Norway. The profiles in the period after 1993 are characterized by declining average unemployment until 2000. Since then the unemployment rate has been around 6 per cent. Figure 4.4 shows that the declining average unemployment becomes more evenly

distributed between the Nordic countries. The expectation regarding intra-Nordic mobility based on Figures 4.3 and 4.4 is a decline in the sensitivity to cyclical differences. There may be flow-specific exceptions, but the general impression is a structural shift in the interaction between the cyclical factors and mobility after 1990 compared with earlier years.

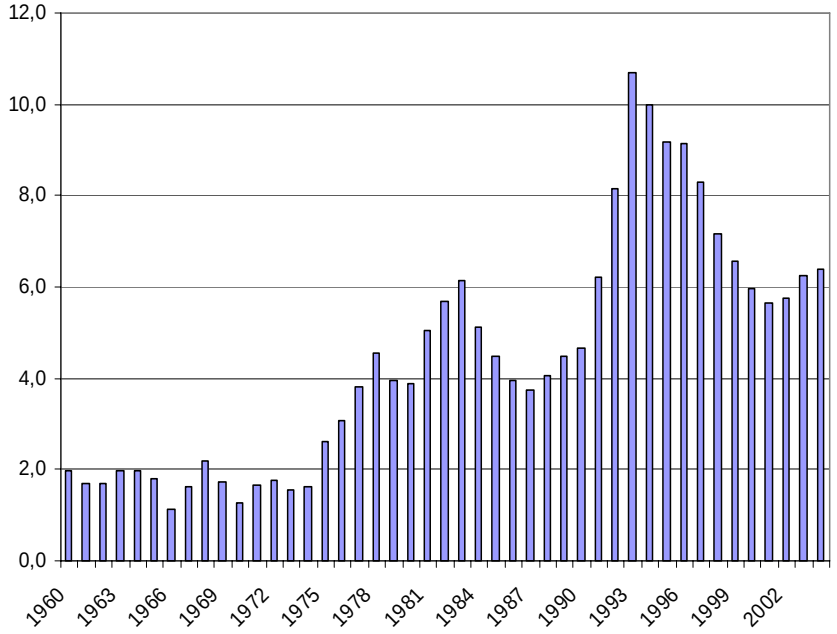

Figure 4.3. Average unemployment rates for Denmark, Finland, Norway and Sweden, 1960–2004

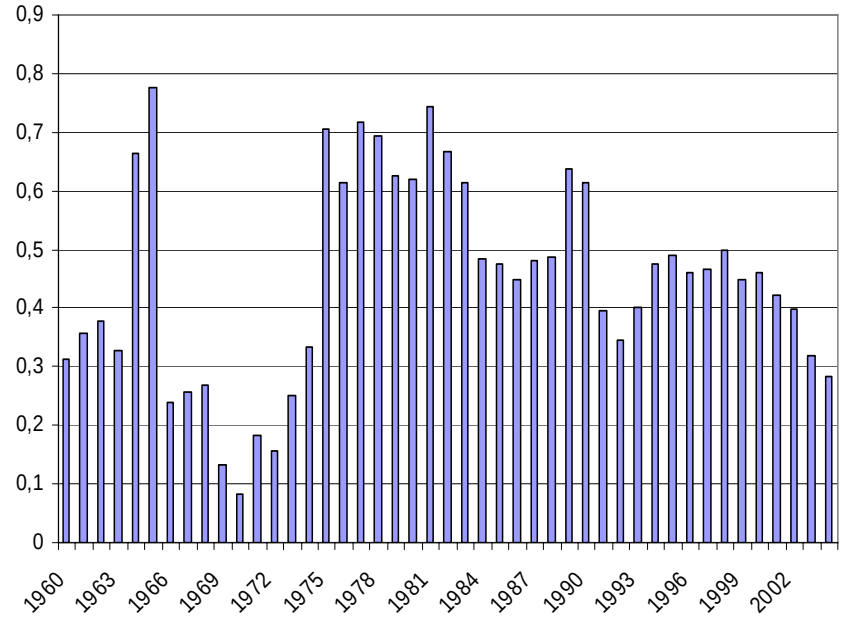

Figure 4.4. The coefficient of variation of unemployment rates for Denmark, Finland, Norway and Sweden, 1960–2004

Another labour market indicator, the annual rate of change in total employment since 1990, is presented in Figure 4.5. Its development illustrates very clearly how the post-1990 years differ from the preceding period as the two countries who have dominated intra-Nordic mobility, Finland and Sweden, move into a phase with unprecedented reductions in total employment. In the most recent years aggregate employment is nearly constant in all four countries.

We notice in Figure 4.6 that the standard deviations of the growth rates in total employment are very high and of equal magnitude in 1974/75 and 1992/93. This was in the first situation an indicator of room for intra-Nordic mobility from low to high employment growth countries. The environment was completely different in 1992/93, however. This is illustrated in Table 4.1 showing the growth in total employment in 1975 and 1993, the years with the lowest overall employment growth in the Nordic countries during the first oil price crisis and the early 1990s depression, respectively. It is obvious that in 1975 Danes and Finns had the option of searching for a job in two other Nordic countries with quite high growth rates in employment, while such options were not available in 1993.

Table 4.1. Total employment growth rates in 1975 and 1993

	1975	1993
Denmark	-2.76	-2.30
Finland	-0.36	-6.00
Norway	2.81	0.00
Sweden	2.54	-5.82
Un-weighted average	0.56	-3.53

We notice in Figure 4.6 that the standard deviations of the growth rates in total employment are very high and of equal magnitude in 1974/75 and 1992/93. This was in the first situation an indicator of room for intra-Nordic mobility from low to high employment growth countries. The environment was completely different in 1992/93, however. This is illustrated in Table 4.1 showing the growth in total employment in 1975 and 1993, the years with the lowest overall employment growth in the Nordic countries during the first oil price crisis and the early 1990s depression, respectively. It is obvious that in 1975 Danes and Finns had the option of searching for a job in two other Nordic countries with quite high growth rates in employment, while such options were not available in 1993.

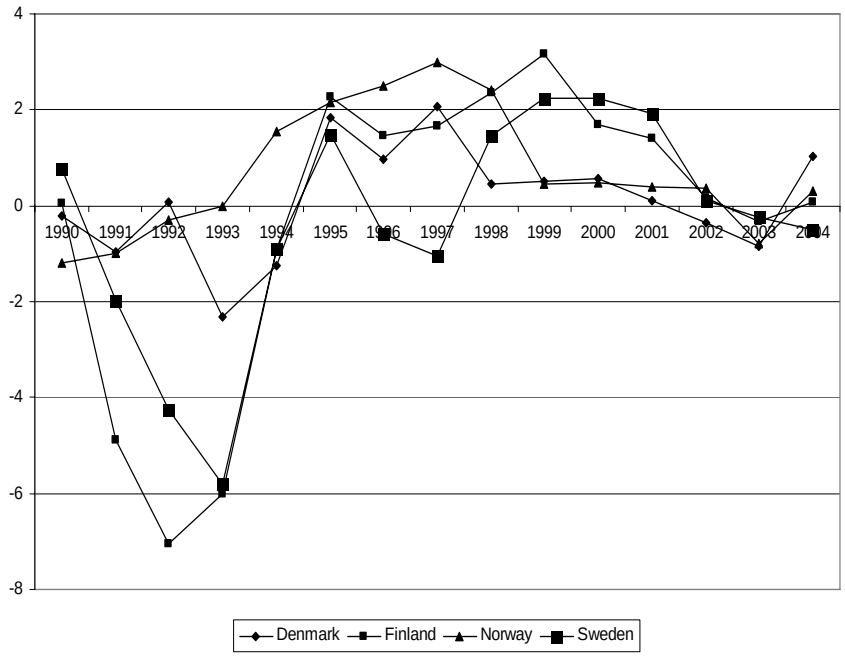

Figure 4.5. Relative change in total employment in Denmark, Finland, Norway and Sweden, 1990–2004

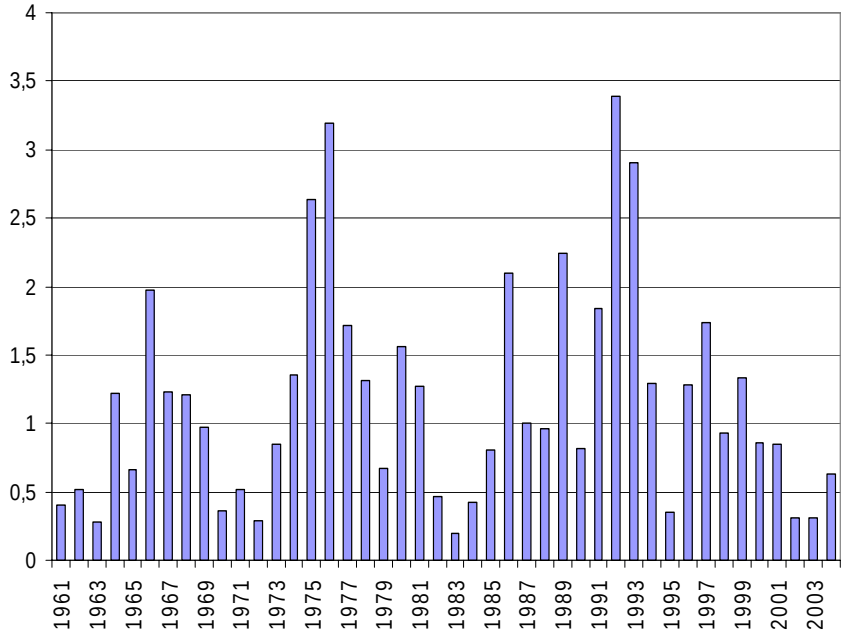

Figure 4.6. Standard deviation of growth rates in total employment, Denmark, Finland, Norway and Sweden, 1961–2004

In Table 4.2 we present the results from a number of simple regressions of net migration flows on the rates of unemployment in the country of origin, $U_{o,}$ and the country of destination, U_d. We also report whether the unemployment coefficients were significant or not in the same type of

regressions estimated for the years 1970–1990 as reported in Pedersen (1993).

Table 4.2. Net mobility and the level of unemployment in countries of origin and destination

Mobility flow	Constant	U_o	U_d	Bridge dummy	R^2	Significance, 1970–1990
DK_N	38	118	-229		0.19	Yes
	(0.13)	(1.63)	(-1.65)			
DK_S	3434	-328*	-142		0.51	No[1]
	(3.66)	(-3.00)	(-1.76)			
DK_S	-48	-20	-32	1825*	0.85	
	(-0.05)	(-0.23)	(-0.61)	(5.00)		
SF_S	-1290	66	49		0.28	Yes[2]
	(-2.45)	(0.57)	(0.29)			
IS_DK	90	254*	-102*		0.48	na
	(0.29)	(3.27)	(-2.15)			
IS_N	40	122*	-76		0.36	na
	(0.19)	(2.58)	(-1.36)			
N_S	5740	-504	-599*		0.56	Yes
	(2.54)	(-1.21)	(-3.74)			

Notes: 1. 1976–1990; 2. 1971–1990. t-values in parentheses.

Overall, the picture for the recent 15 years is very much different from that for the 20-year period up to 1990. The coefficients have the expected signs for the net flow from Denmark to Norway, i.e. higher unemployment in Denmark leads to an increase of the net outflow and higher unemployment in Norway leads to a decline of the net outflow. The coefficients are not significant, however, not even at a 10 per cent level, in contrast to the results for the 1970–1990 period where both coefficients were highly significant with expected signs.

Looking at the net flow from Denmark to Sweden, a graph in Chapter 3 gave an early warning that cyclical factors were hardly important. This is confirmed by the second regression in Table 4.2 where the coefficient for unemployment in Denmark is significant but with the wrong sign. In the preceding 1976–1990 period both coefficients were significant, but not when the first five years in the 1970s were included in the estimation. The third regression tries to accommodate the very special profile of the net migration flow to Sweden since 2000 by including a "Bridge dummy" set at 1 from 2000 and 0 before. Not surprisingly, this is found to be highly significant, but when the Bridge dummy is introduced both unemployment coefficients become insignificant. For the earlier dominant intra-Nordic flow between Finland and Sweden we find no impact at all from unemployment rates in the post 1990 period, in contrast to the finding of highly significant coefficients for the 1971–1990 period.

The exceptions to the results so far are found for Iceland and Norway. The net flow from Iceland to Denmark is related to the unemployment rates with significant coefficients having expected signs. We illustrate the very close relationship, especially since 1995, between net migration to Denmark and the unemployment rate in Iceland in Figure 4.7. The net flow from Iceland to Norway reacts significantly to the rate of unem-

ployment in Norway. Finally, there is a significant reaction with expected sign to the level of unemployment in Sweden for the net flow from Norway to Sweden, but the coefficient for the unemployment in the home country is insignificant. In the 1970–1990 regressions both unemployment coefficients were highly significant with expected signs.

The conclusion from Table 4.2 seems to be that unemployment rate differences in recent years only have a significant impact on net migration from Iceland to Denmark and Norway and from Norway to Sweden, which is clearly different from findings for earlier periods.

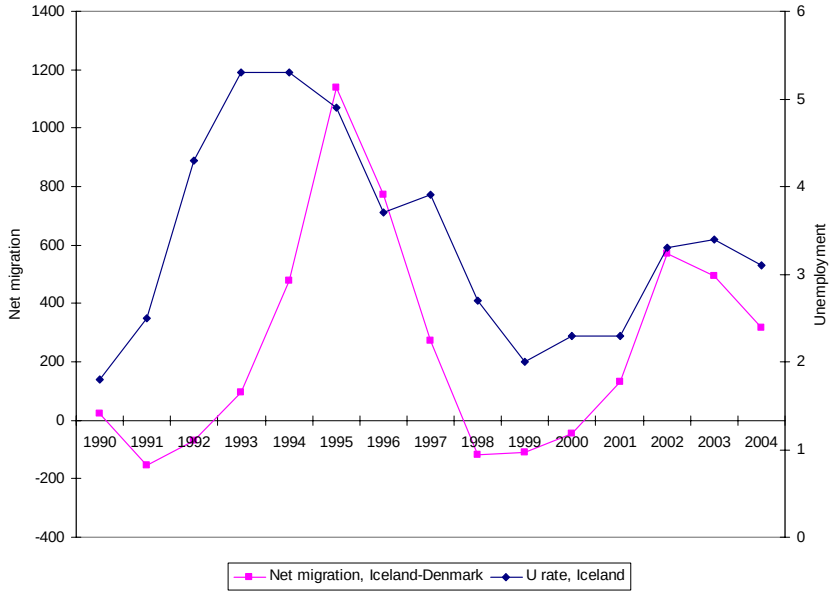

Figure 4.7. Net migration from Iceland to Denmark and unemployment in Iceland, 1990–2004

Next, Table 4.3 presents the results from replacing the level of unemployment rates used in Table 4.2 with the relative change in total employment in the countries of origin and destinations. Regarding the net flow from Denmark to Norway, there is no significant reaction to employment growth in either of the countries, in contrast to highly significant results for the 1970–1990 period. The net flow from Denmark to Sweden reacts significantly and with the expected sign on employment growth in Sweden. This is the same result as found for the preceding period. The degree of explanation is low, however, and when the Bridge dummy is introduced, the employment growth coefficients have the expected signs, but they are both insignificant. Net migration from Finland to Sweden was significantly related to employment growth rates in the 1971–1990 period, while no impact at all is found after 1990. The background for this is illustrated further in Figure 4.8. In the first years of the 1990s employment went down faster in Finland than in Sweden, but employment also declined in Sweden, so migration to Sweden was not an option. In the second half of the 1990s recovery in relative terms was

faster in Finland than in Sweden, and consequently there was no obvious incentive to migrate to Sweden. Finally, employment growth becomes equal in the two countries from 2000.

Table 4.3. Net mobility and the rate of change in total employment in countries of origin and destination

Mobility flow	Constant	∂E_o	∂E_d	Bridge dummy	R^2	Significance, 1970–1990
DK_N	-221	-73	29		0.10	Yes
	(-3.31)	(-1.15)	(0.52)			
DK_S	337	-372	266*		0.28	∂E_t significant
	(1.34)	(-1.47)	(2.10)			
DK_S	-336	-189	95	1781*	0.88	
	(-2.45)	(-1.74)	(1.65)	(7.61)		
SF_S	-220	135	-96		0.13	Yes
	(-1.21)	(1.03)	(-0.54)			
N_S	308	-1221*	548*		0.73	∂E_f significant
	(0.85)	(-4.93)	(3.84)			

Note: t-values in parentheses

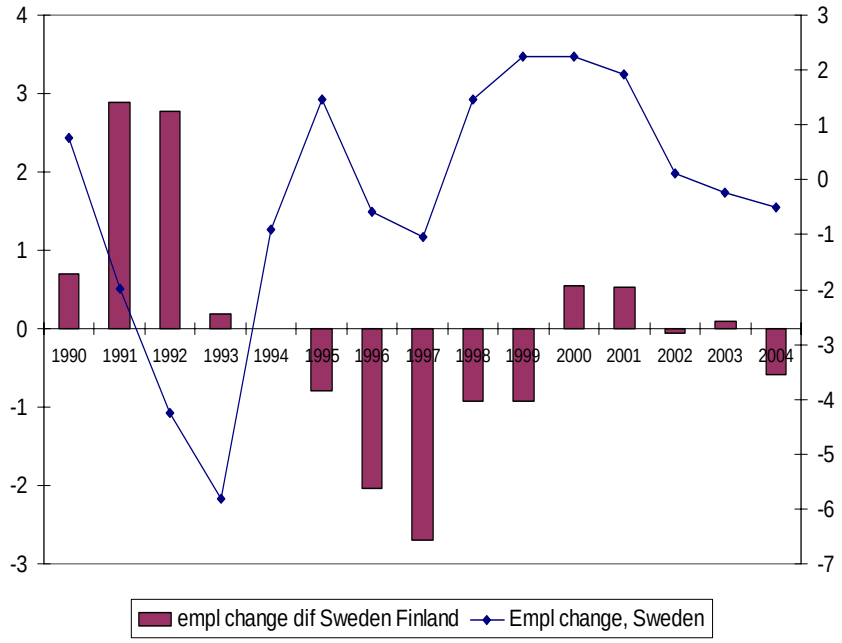

Figure 4.8. The growth difference regarding total employment between Sweden and Finland (left scale) and employment growth in Sweden (right scale), 1990–2004

The net flow from Norway to Sweden, where both employment growth variables have highly significant coefficients with expected signs, is the major exception to the general pattern in Table 4.3. Net migration reacts as expected more strongly to employment growth in Norway than in Sweden. In the 1970–1990 period only employment growth in Norway was significant. The peak employment growth year in Norway was 1997 (see Figure 4.5). The employment growth in Norway was the highest among the Nordic countries with about 3 per cent at the same time as employment in Sweden went down by 1 per cent. The importance of the

common Nordic labour market in this year was noted by Bank of Norway (1997) "An increasing number of workers from neighbouring countries explains some of the growth in labour supply. To some extent there is a common Nordic labour market within some sectors, which has enhanced the flexibility of labour supply".

4.2. Commuting and other cross-border work in the Nordic countries

Migration to another Nordic country is not a necessary condition for being active in a national labour market other than in the country of residence. One possibility is commuting, working in one Nordic country and living in another. Another possibility is to work for an employer in another Nordic country, doing the job in your own home country or working temporary in the other country, but without the change of residence implied by emigration. The last option is widely used by for example nurses and physicians, doing temporary work in another country than their home country.

No long data series are available on the extent of commuting and other types of work in another Nordic country without change of residence. There are, however, a number of recent studies giving details on the current state in this area. In the following we present a summary of these studies, building mainly on Nordisk Pendlingskarta /Nordic Map of Commuting (2004 and 2005). The most recent evidence is collected in these reports, covering the situation in 2001 in the four big Nordic economies. A joint project between the national statistical offices building on administrative registers made it possible to determine which residents in each of the Nordic countries had salaries or wages earned from an employer in another Nordic country.[19] People who fulfil this condition are next divided into two categories, i.e. commuters defined as those for whom earnings in the other country dominates earnings in the country of residence and a group of non-commuters, where earnings in the home country are dominant. This second group consists of people who either work in their home country for an employer in another Nordic country, or of people in temporary jobs in another Nordic country than they are living in. Table 4.4 presents the total number of people with a wage income from another Nordic country, i.e. both commuters and non-commuters.

[19] Data were presented for the countries pairwise according to where commuting is a relevant option, i.e. Finland-Sweden, Denmark-Norway, Denmark-Sweden and Norway-Sweden, but not between Finland and Denmark or Finland and Norway.

Table 4.4. Number of people with labour income from another Nordic country in 2001 and 2004

	Income earned in							
	Denmark		Finland		Norway		Sweden	
Country of residence	2001	2004	2001	2004	2001	2004	2001	2004
Denmark	-	-	na	na	9,735	8,842	1,712	3,751
Finland	na	na	-	-	na	2,369	6,335	6,182
Norway	2,275	1,641	na	655	-	-	4,291	4,177
Sweden	7,082	11,483	4,206	4,571	28,285	27,722	-	-

Note. Some of the figures for 2001 are revised compared to the report published in SCB (2005).

The number of people living in Norway who have a wage income from Denmark is larger than the number of people living in Denmark who have a wage income from Norway. The number of people living in Sweden who have a wage income from Norway is much larger than the number of people living in Norway who have a wage income from Sweden. The number of people living in Sweden with a wage income from another Nordic country is 27,235 in 2001 and 29,666 in 2004 more than the number of people living in another Nordic country having a wage income from Sweden. However, more people in Finland get a wage income from Sweden than the number of people in Sweden who get a wage income from Finland. These numbers are what we can expect from the wage levels and employment situations in the border regions.

Table 4.5. Number of people with labour income from another Nordic country who commute from their country of residence in 2001 and 2004

	Income earned in							
	Denmark		Finland		Norway		Sweden	
Country of residence	2001	2004	2001	2004	2001	2004	2001	2004
Denmark	-	-	na	na	3,370	3,303	1,410	1,831
Finland	na	na	-	-	na	1,152	2,525	3,784
Norway	798	494	na	214	-	-	1,300	1,725
Sweden	4,583	8,496	1,599	2,360	13,343	13,233	-	-

Note. Some of the figures for 2001 are revised compared to the report published in SCB (2005).

Next, in Table 4.5 we present the number of commuters, i.e. those for whom the wage income from the neighbouring country is dominating. In relation to the magnitude of the four national labour markets, the total number of commuters of about 28,900 in 2001 and 36,600 in 2004 is small but increasing. Geographical and/or professional concentration of this small group of commuters, however, may imply that it adds flexibility to the Nordic labour markets, along with the option of migrating to another national labour market. The net commuting flows show the same pattern as in Table 4.5, i.e. Denmark and especially Norway are "in-commuting" countries, while Sweden is an "out-commuting" country, reinforced by the fact that commuters make up a bigger share of the people in Table 4b.1 in Sweden than in the other Nordic countries. Note the

large increase in commuting from Sweden to Denmark before 2001 and 2004 which most likely is a result of the bridge effect and the Danish marriage migration laws.

Based on the 2001 studies, Table 4.6 shows the average wage incomes for the group of people in Table 4.6 divided into commuters and non-commuters.

Table 4.6 Average wage income for residents in one Nordic country with income from another Nordic country, Commuters and all in 2001

	Average income earned in							
	Denmark		Finland		Norway		Sweden	
Country of residence	Comm.	Non-com	Comm.	Non-com	Comm.	Non-com	Comm.	Non-com
Denmark	-	-	na	na	283,543	364,851	340,000	451,859
Finland	na	na	-	-	na	na	192,600	228,346
Norway	255,162	216,656	na	na	-	-	180,700	341,691
Sweden	364,891	250,737	157,865	296,126	244,861	275,197	-	-

A characteristic difference is the finding that commuters to Denmark have significantly higher wage incomes on average than non-commuters, in contrast to the finding of higher average wage incomes for non-commuters than commuters in the other countries. This could be explained by that most commuters to Denmark commute to the Copenhagen area, an area characterized by high incomes.

Table 4.7 shows the share of women separately for commuters and for all with a wage income from another Nordic country. For the commuters the share varies quite a lot. About a quarter of the commuters from Sweden to Norway and half of the commuters from Finland to Sweden are women. These differences probably reflect differences in the composition sector of occupation of the commuter groups. See Table 4.7 below.

Table 4.7 Share of women among residents in one Nordic country with income from another Nordic country, Commuters and all in 2001

	Income earned in							
	Denmark		Finland		Norway		Sweden	
Country of residence	Comm.	All	Comm.	All	Comm.	All	Comm.	All
Denmark	-	-	na	na	0.34	0.41	0.43	0.42
Finland	na	na	-	-	na	na	0.47	0.48
Norway	0.36	0.42	na	na	-	-	0.44	0.40
Sweden	0.34	0.35	0.44	0.42	0.26	0.34	-	-

Table 4.8 illustrates the share of people with intermediate or higher education in the group of commuters and for all with a wage income from another Nordic country. The highest shares are found for non-commuters from Denmark to Sweden and for commuters from Sweden to Denmark, probably reflecting the beginning of a common metropolitan labour market in the Øresund region. The lowest shares are found for the Norway-

Sweden commuters, probably reflecting differences in the occupational composition relative to the Denmark-Sweden flows.

Table 4.8 Share of people with higher education among residents in one Nordic country with income from another Nordic country, Commuters and all in 2001

Country of residence	Income earned in							
	Denmark		Finland		Norway		Sweden	
	Comm.	All	Comm.	All	Comm.	All	Comm.	All
Denmark	-	-	na	na	0.27	0.44	0.34	0.49
Finland	na	na	-	-	na	na	0.29	0.35
Norway	0.30	0.33	na	na	-	-	0.23	0.39
Sweden	0.45	0.43	0.30	0.44	0.20	0.33	-	-

Finally, Table 4.9 contains indicators on the occupational composition both for all earning a wage income in another Nordic country and separately for the commuters. The health sector has traditionally been considered as an important area where a common Nordic labour market has been able to respond to national imbalances between demand and supply for specific skill groups. At the same time, language problems in relation to patients are small and recognition of educational credentials from another Nordic country is fairly straightforward. We return to indications of this below.

Table 4.9 Main occupational shares among commuters and for all with a wage income from another Nordic country; pair wise country flows in 2001

	Industry	Commuters	All
Denmark – Norway	Financial and Business Services	0.14	0.19
	Building and Construction	0.21	0.13
	Health	0.08	0.11
Denmark – Sweden	Health	0.17	0.20
Finland – Sweden	Health	0.23	0.23
Norway – Denmark	Health	0.14	0.18
Norway – Sweden	Transport	0.26	0.17
	Trade	0.28	0.18
	Health	0.14	0.17
Sweden – Denmark	Transport	0.27	0.25
	Health	0.10	0.10
Sweden – Finland	Education	0.07	0.12
	Manufacturing industry	0.16	0.11
	Health	0.09	0.09
Sweden – Norway	Trade, hotels, transport, communication (NACE 50–64)	0.24	0.21
	Building and construction	0.28	0.21
	Health	0.07	0.12

The share in the health and welfare sector is included for all the flows in Table 4.9. In addition, we include the biggest sector in the commuter group and the biggest sector of occupation in the "All" group. For some

of the flows this implies that only one sector is included in the table. Health and welfare is the dominant sector in the flows from Denmark to Sweden and from Finland to Sweden both for all and for the group of commuters. The very high share of health workers from Finland could be related to the high share of women found in Table 4.7. In the same way, we see that the flows of commuters between Norway and Sweden are dominated by occupational groups with fairly low shares of people with theoretical educations.

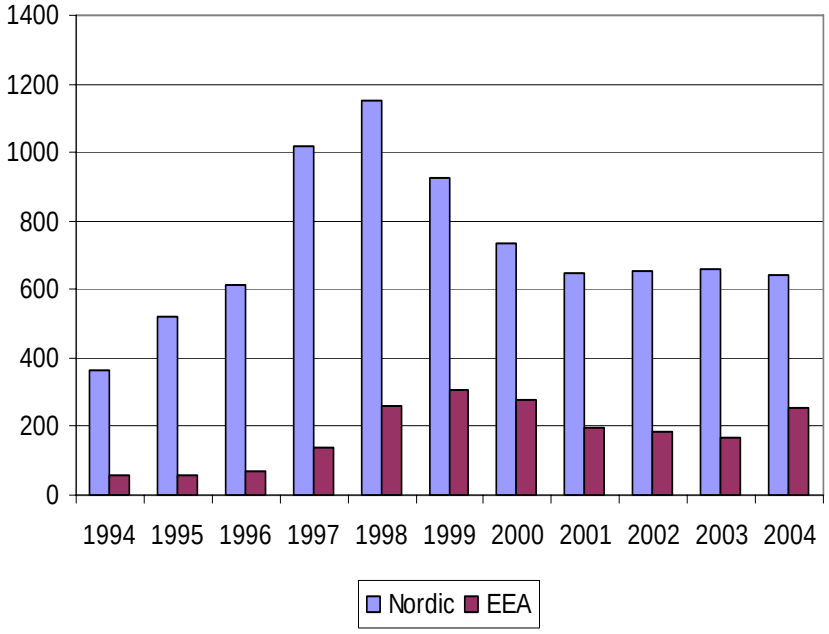

Figure 4.9 Number of authorizations given to physicians in Norway to individuals from other Nordic countries and from the rest of EU/EEA countries, 1994–2004

A final example of the volume of intra-Nordic mobility is the number of authorizations to work in Norway given to medical doctors from the other Nordic countries and from other EU/EEA countries. See Figure 4.9. Throughout the period these numbers dominate the number of authorizations given to physicians educated in Norway. Notice that the peak numbers are found in the years with a very high increase in aggregate employment growth in Norway. In Sweden authorizations of doctors educated abroad also dominate those educated in Sweden, and the numbers have increased very strongly in recent years. However, there is no data available to decompose the authorizations of doctors into those coming from another Nordic country and those coming from other countries as were possible to do for Norway.

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5. Who are the intra-Nordic migrants and who migrates out of the Nordic region?

By Peder J. Pedersen, Marianne Røed and Eskil Wadensjö

5.1 The skill composition of Nordic migration flows – introduction

Who have been the users of the common Nordic labour market during the last thirty years, and who have moved from the Nordic countries to more distant destinations? The objective of this chapter is to describe the skill composition of the intra-Nordic migrants, i.e. their education and other characteristics which may affect their labour market performance.

The description has two main parts. First, individuals who have moved between the Nordic countries are compared to the home country population, and to migrants moving to other regions in regard to their educational and professional composition. These comparisons are based partly on publicly available statistics and partly on summary statistics produced for this study by the national bureaus of statistics in Denmark, Finland, Norway and Sweden. Second, based on a micro data set containing information about characteristics of individual movers and stayers, Norwegian emigrants are described more closely with regard to earlier labour market performance, skills and demographic features. More precisely, the relationships between such characteristics and the probabilities to move within the Nordic region, or to other destination regions, are analyzed. The micro-data set is produced from administrative population registers by Statistics Norway.

It is well established in the economic literature that migrants in general do not make up a random sample of the population in their home countries. One main issue in part of this literature which treats the question "who are the migrants?" is whether migrants are positively or negatively selected with regard to productivity (Chiswick 1978, 2000; Borjas 1987). In other words, are they better or worse endowed than the population in their home or host countries with skill characteristics and abilities, which increase the expected labour market performance?

This issue is clearly related to "the brain drain – brain gain discussion". The composition of migrants according to formal skills and other labour market qualities affects the economic implications of migration in both sending and receiving countries. When the evaluation is based on

economic measures, a positive selection of migrants most often benefits the destination country while it represents a loss to the sending country. This is meant in relative terms in the sense that the gains from immigration and the loss from emigration tend to increase with the productive capacity of the movers. It does not mean that migration of workers with a low *level* of productivity necessarily is unfavourable for the immigration countries and favourable for emigration countries.

The average labour market performance of individuals generally increases with formal education and also up to a certain level with work experience.[20] These are factors that are relatively easy to observe. Other individual characteristics that affect the individual earning capacity, like motivation and intelligence, are not directly observable. However, corrected for education, work experience and other observables, measures of earlier labour market performance in the home country may indicate how emigrants are distributed with regard to productive capacities. Likewise, studies of how emigrants perform in the labour market of the receiving countries may contain indications about their individual efficiency.

This chapter pursues and updates earlier research describing the skill composition of Nordic emigration flows. Myrskylä (1978) studied the characteristics of Finnish emigrants to other Nordic countries in the early 1970s. This group was relatively poorly educated, well below the average of the Finnish population. A clear majority were farmers and blue-collar workers with only basic education. Fisher and Straubhaar (1996) showed that in the late 1980s this picture was turned around. The educational level of the Finnish emigrants to other Nordic countries was at that time well above the average in the Finnish population.

Schröder (1996) examined the average propensity to emigrate in the three Scandinavian countries during the 1980s by level of education. In all three countries this propensity clearly increased with level of education. The Swedish propensities were stable and, compared to the Danish and Norwegian, on a fairly low level during the whole decade. In Denmark, an upward trend in the emigration propensity was clearly visible, particularly among the highly educated.

Schröder (1996) found that the choice of destination varied quite a lot with levels of education. In Denmark and Norway, those with only basic and secondary education were clearly the most intensive users of the Nordic labour market. The shares of these low educated emigrant groups moving to Nordic destinations also increased significantly over the years studied. Among the intra-Nordic migrants from Sweden, the relationship between level of education and emigration to Nordic destinations is not that clear. However, also in the Swedish case the share of emigrants moving to other Nordic countries is markedly lower among those with a long

[20] In the Western European context, research on the effect of education and work experience on earnings is documented in a study focusing particularly on the Nordic countries; see Westergård-Nielsen (1996).

university education. In Sweden and Norway the shares of emigrants moving to EU countries were nearly the same across different levels of education. During the 1980s an increasing share of the emigration flow from Denmark went to the EU countries irrespective of education. This change in the direction of migration flows towards EU destinations did not take place in Sweden and Norway. One explanation for this diverging development may be related to the fact that Denmark at the time was the only EU member in Scandinavia and that Danes therefore faced lower institutional barriers against moving to other EU countries.

In a study of net migration flows between the Scandinavian countries during the 1980s, Schröder (1996) found that Sweden was the dominant receiver of migrants with a low level of education, while Norway attracted the majority of the highly educated. Røed (1996) analyzed the intra-Scandinavian migratory behaviour during the 1980s, by level of education and by occupational groups in a multivariate regression framework. After accounting for country differences in education/occupation specific income and unemployment measures, there were still considerable differences in the migration propensities among the groups. Those with an education not higher than upper secondary level had a significantly lower intra-Scandinavian migration propensity than the college or university educated groups. After control for cross-country differences in labour market conditions, it was the group with a college level of education that displayed the highest Scandinavian migration propensity.

Pedersen et al. (2003) estimated the probability to emigrate from Denmark, Norway and Sweden with regard to educational characteristics, demographics and earlier income levels, in some years from the early 1980s to the late 1990s. This analysis shows that Scandinavian citizens who move to other countries tend to be younger, single, highly educated and not located in the middle to lower part of the income distribution. This study gives no indication that the positive relationship between level of education and emigration is reinforced during this twenty year period.

The productive capacity of migrant groups may also be deduced from their relative performance in the labour market of the receiving countries. Based on micro-data from 1985 and 1995, Rosholm et al. (2006) analyze the effect of time since immigration on the employment probabilities of immigrants from Norway in Denmark and Sweden. Corrected for demographic and educational characteristics, the employment rates of Norwegians were around 70 percent of the native level in both the receiving countries and were not very much affected by the "years since immigration" variable. Based on micro-data that covered the complete immigration population of Norway in 1980 and in the first half of the 1990s, Barth et al. (2004) analyzed the earnings assimilation of (among other groups) Nordic immigrants in Norway. This analysis indicated that Nordic immigrants earned a little less than natives with similar educational and demographic characteristics during the first ten years following their

arrival to Norway. After that, the earnings of Nordic immigrants are not significantly different from those natives with similar characteristics. While the earnings profiles of immigrants to Norway from other rich OECD countries are on about the same level, the immigrants from less developed countries perform much worse in this respect.

These earlier studies indicate that intra-Nordic emigrants are less educated on average than emigrants to other destinations. However, at least from the early 1980s, migrants to the other Nordic countries tend to be better educated than the home country populations on average. Summarizing studies undertaken before the mid 1990s, Fisher and Straubhaar (1996: 147) concluded: "The 'under-qualification' of Nordic emigrants was probably typical of Nordic migration until the late 1970s. In the last few years, however, a different trend has appeared. In absolute terms, the number of people migrating within Nordic countries has fallen, but those who do migrate nowadays usually have a higher level of education and are more often white collar workers."

In the following we first briefly discuss theories which aim to explain the skill composition of migration flows. In later sections we discuss the patterns found in the summary statistics and in the Norwegian micro dataset in relation to these theories and in relation to the results of earlier studies.

5.2 Why some move and others stay

How are migrants sorted from non-migrants and how are they allocated among different destination countries? Broadly speaking there are two main mechanisms which select migrants from the rest of the population and at the same time distribute them among different destinations. First, we have the self-selection process determining who wants to go and where. The second selection mechanism is the screening process managed by the public authorities in the receiving countries according to immigration laws and the international agreements they have entered into. This screening decides whom among the willing that are admitted. When the institutional barriers against moving between countries have been removed like in the Nordic region, the selection of migrants from non-migrants is the result of decision-making by individuals and their relatives alone. The difficulties and costs related to migration may still be high of course, but it will be the potential migrant and his/her close relations who decide if the project is worthwhile.

Within the economic migration literature *self selection* is the result of economic calculations made by the individual.[21] Migration is seen as an investment that is carried through when expected benefits exceed expected costs, where the benefits and costs are pecuniary as well as non-

[21] See Sjaastad (1962) for the first study of migration using that framework.

pecuniary. In the case of labour migrants the main benefits from moving are related to the expectations of improved income prospects which are the joint result of higher employment probabilities (reduced unemployment risk) and/or a higher wage level conditional on getting a job. To answer the question "who wants to go?" we must find out which characteristics of the workers are most likely to improve their labour market prospects by moving.

In general, both the level and type of education affect the career opportunities an individual has outside the home country. Many studies indicate that the relative demand for highly educated labour has grown faster than the supply in many countries during the last thirty years, (see among others Katz and Autor 1999, Caroli and Reenen 2001). This development is related to profound technological and organizational changes in the world economy. A shortage of highly educated workers has developed, which generates a migration pull effect on these groups from the demand side of the labour markets in the destination countries. In general, this process may work to increase the average level of skills in international migration flows.

A hypothesis within the literature on labour migration is that moving and establishing costs decrease with formal qualifications (see among others Chiswick 2000). The general line of argument seems to be that the types of skill accumulated during the educational course increase efficiency in the spatial job search and increase the ability to adjust in a culturally and socially foreign environment. If this is the case it establishes a positive relationship between the level of education and migration which may be stronger in relation to more distant destination countries. In the Nordic countries fluency in English is an example of a skill that is more widespread among the highly educated and which reduces migration costs to destinations outside the Nordic countries.

Figure 5.1 shows measures of gross and net wage differences in 16 OECD countries. It illustrates the fact that the Nordic countries have more compressed income distributions than most other rich OECD countries.[22] This is partly an effect of a low return to education in the labour markets of the Nordic countries. The increases in average wage resulting from the attainment of higher levels of education are higher in most other Western European countries (Harmon et al. 2001) and even higher in the rich OECD countries outside Europe. Studies indicate that return to education is somewhat higher in Finland than in the other Nordic countries, but still the differences are small within the Nordic region (Harmon et al. 2001; Asplund et al. 1996).

[22] This is also the case with regard to Sweden even though Swedish data comparable to those used in Figure 5.1 was not available.

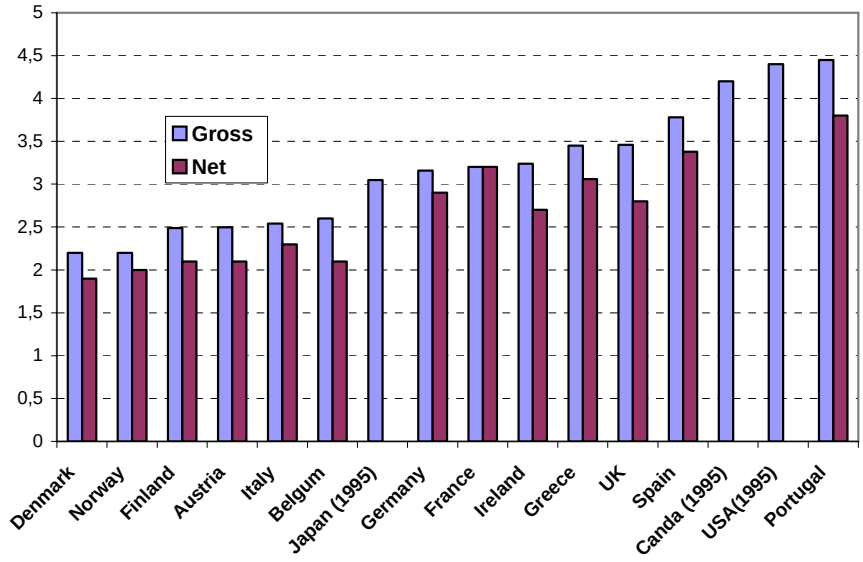

Figure 5.1 Gross – and net hourly wage differences in 16 OECD countries measured by the ratio between the ninth and first deciles in the wage distribution 2001(1995)

The relative compression of the income distributions in the Nordic countries is, however, also a result of small differences between individuals at the same level of education. The earning differences between the more and less productive workers within each educational group are small compared to those in most other countries.

Borjas (1987) analyzes how the composition of the migrants is affected by the shape of the earnings distribution at home compared to the distribution in the destination countries based on the Roy model. According to his analysis, emigrants will be positively selected with regard to productivity if the distribution of earnings at home is relatively more compressed than in the destination country. If skills and abilities are evaluated in the same relative manner between countries,[23] a more dispersed distribution of earnings at the destination increases the return to migration for the high capacity earners. That is so, since they move from the upper part of the income distribution at home to the upper part of the income distribution in the destination countries. For low capacity earners it is the other way around.

According to this line of argument the compressed income distribution in the Nordic countries increases the economic incentive for highly educated, and particularly for the more productive individuals within this group, for emigration to destinations outside the region. For the low educated, and particularly the less productive among them, it is the other way around.

[23] By this we mean that the individual workers get the same ranking in the earnings distribution in the sending and in the receiving countries.

Some types of education are easily transferred to other countries. Other types of education are not transferable outside of the country from where they were attained. The degree to which educations are transferable across borders to some extent depends on the socio-economic and cultural closeness between the countries. Thus, skills acquired in Norway may be moved to Sweden without losing much of their value, but may be less easily utilized in the US labour market. According to this line of argument the type of education may be less important for intra-Nordic migration than for migration flows destined to countries further away.

People from certain professions are employed in the internationally oriented sector of the economy to a greater extent than others. Thus, they establish contacts in other countries to a greater extent which may be useful if they want to look for job openings abroad. People in these professions also move abroad more often than other groups without changing employer, if they move within the same multinational company.

Many considerations determine and affect the *screening process of the immigration authorities* in the receiving countries. Quite often, the needs of the domestic labour market seem to be an important factor, and types of labour that are relatively scarce are more often admitted. In the EU countries and in the USA a general rule, at least since the early 1970s, has been that types of labour that are not available in the domestic or common regional labour markets should be admitted. In Australia and Canada, point systems that rank the applicants for immigration according to the needs of the domestic labour markets have been applied for many years.[24] Thus, the screening process of the authorities may in general reinforce the pattern of immigrant composition induced by the pull effects from the demand side of the labour market in the receiving countries. This mechanism has probably increased the level of education in international migration flows during the last thirty years.

Since the movement of individuals among Nordic countries has been unrestricted for more than fifty years, the immigration policy in the receiving countries does not affect the composition of these flows. According to the above arguments this may work to decrease the level of education in the intra-Nordic migration flows compared with flows moving to countries where immigration restrictions are enforced. Denmark entered EU and the EU common labour market in 1973, and Finland and Sweden in 1994. In 1994 Icelandic and Norwegian citizens got access to the common European labour market – through the EEA-agreement – on the same terms as the EU members. Thus, after that time all Nordic citizens may move for a job within the whole EU labour market with little interference from the national authorities. In some of the rich OECD countries outside Europe the authorities played an important part in the determination of the skill composition of immigrants during the entire post war period.

[24] See for example Green (1995) for Canada.

5.3 Migration patterns of educational and occupational groups

In this section we look at summary statistics which describe educational and professional groups of Nordic citizens with regard to their emigration propensities and the geographical direction of their moves. To capture the migratory pattern of individuals with a relatively stable residence in the Nordic countries only citizens are included in the calculations. To become a citizen individuals have to legally reside in the destination country for a number of years. The years of stay needed for citizenship varies among the five Nordic countries and has also varied over time.

The data we present are based on administrative registers of geographical mobility in the Nordic countries. These sources give a total account of all individuals who report their migratory moves to the authorities in the Nordic countries, including date of departure and destination country. This data source is described in more detail in Chapter 2, section 2.2.

5.4 How much do Nordic citizens move?

We first look at the general tendency to move abroad among Nordic citizens and how this varies over time by level of education and among a selection of professional groups. Table A5.1 in the appendix shows the emigration propensities in the adult populations by level of education.

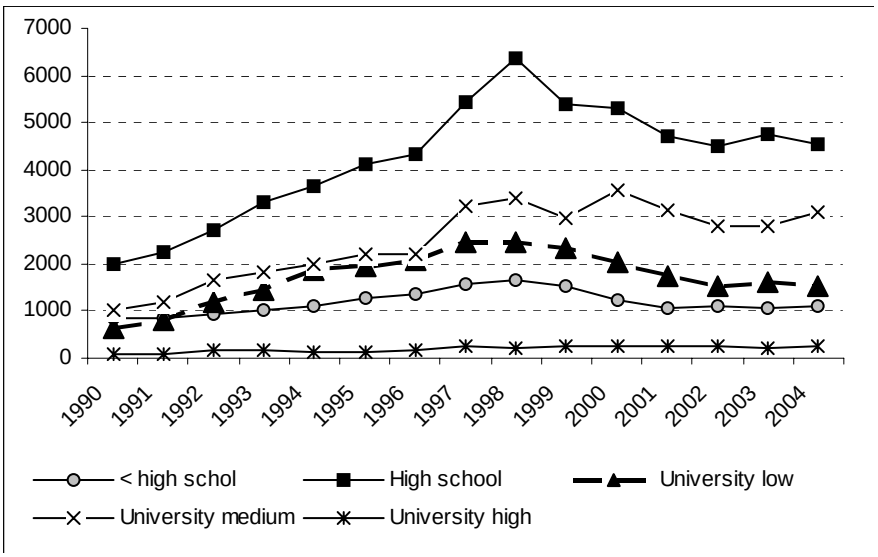

Figure 5.2. The absolute number of Swedish born individuals, 17 to 75 years, of age, who moved from Sweden each year, from 1990 to 2004, by level of education.

Source: Statistikbanken, Statistics Sweden (SCB)

The table reports the percentage within each group who has emigrated during the selected years, from the early 1980s until the early years of the new millennium. Evaluated from the years included the Danes are the most mobile people. Given the migration history of Finland, described in Chapter 2, the relatively low Finnish emigration propensity is surprising. The unemployment situation in Finland after 1992 has been much worse than in any of the high emigration episodes in the country.

The numbers give no clear indication that the Nordic populations in general have become more internationally mobile over time. The total emigration propensities of Norwegian and Finnish citizens have been remarkably stable during the periods observed. The total Swedish propensity increased sharply from the late 1980s to the late 1990s, but has decreased significantly since then. This is clearly illustrated in Figure 5.2 which describes the absolute number of Swedish born individuals 17 to 75 years of age by level of education, who moved from Sweden each year from 1990 to 2004. This figure clearly indicates that 1998 was a peak year for Swedish emigration. The growth in the number of emigrants during the 1990s coincides with an increase in the Swedish unemployment that started in 1990. Compared to the early 1980s, the emigration propensity of the Danish population seemed to have settled on a higher level during the 1990s. In the first years of the new millennium the total Danish emigration propensity appears to have made another jump.

In the Scandinavian countries, Denmark, Norway and Sweden, the average emigration propensities clearly increase with level of education. This is not the case in Finland, where those who have completed high school as their highest level of education seem to be the most eager migrants. There are no indications that the Scandinavian pattern, the positive relation between emigration and education, was reinforced during the period we study, but rather the opposite seems to have happened from 1998 to 2004. In Norway the three groups with a university level of education decreased their average propensity to move out of the country between these years. The same was true regarding the groups with medium and low levels of university educations in Sweden. In Denmark the three groups with lowest education increased their emigration activity, while the medium and high level university educated groups reduced or did not increase their propensities to move. Thus, according to these numbers the Scandinavian "brain drain" concern from the late 1990s may be put to rest at least for the time being.

Table A5.2 shows the emigration propensities for seven professional groups. Two of these groups, physicians and civil engineers, are educated on the highest university level. The skills of these two groups are also considered to be relatively internationally transferable compared to many other groups with higher education. Both medical and technical knowledge move relatively freely across national borders. A relatively high

share of civil engineers work in private sector firms, which in the small open Nordic economies often are internationally oriented.

In the early 1980s and early 1990s physicians had an average emigration propensity more or less equal to the one which prevailed in the whole group with the highest university level. However, towards the end of the 1990s and in the early years of the new millennium, the common pattern in all the Scandinavian countries seems to be that their emigration propensities are well below the average level of the highest educated group. Nurses tend to have a somewhat lower emigration rate than others at the medium university level.

In the Scandinavian countries, civil engineers are characterized by a high tendency to move abroad compared to other professional groups. In nearly all the years observed the emigration propensities of this group are considerably higher than for the whole group with high level university education. The only exception is Norway in 2004. Since the private sector in Norway was booming in the first years of the new millennium, the demand for civil engineers in the home country labour market was probably quite high during that period. In Finland the emigration propensities for civil engineers are not particularly high compared to other occupational and educational groups. As for the whole group of highly educated, these numbers do not indicate that the tendency of the Nordic civil engineers to move abroad has increased over time. In Norway the development was rather in the opposite direction. In both Denmark and Sweden the emigration propensities peaked in the late 1990s, but were considerably lower only a few years later, in 2003/04. The "Other engineers" are educated on a medium university level. In all the four countries this group has had emigration propensities similar to all educated on this level.

The economist group also has a type of competence which is considered to be relatively internationally transferable. Like the two engineer groups, they are relatively strongly demanded by employers in internationally oriented establishments in the private sector. In some of the years observed, this group has had a higher tendency to move abroad than any of the other professional or educational groups in Denmark, Finland and Sweden. However, also among the economists the numbers indicate that this propensity to move abroad has weakened during the first years of the new millennium.

5.5 Where do Nordic citizens move?

Next, we will look at the geographical directions of the international migration undertaken by Nordic citizens, since the early 1980s. What are the main destination regions of emigrants, by levels of education and professions?

Table A5.3 shows the shares of emigrants from Nordic countries on each level of education who move to three different destination regions: another Nordic country, a EU15 country outside the Nordic region, or a rich OECD country outside Europe. [25] These numbers indicate quite clearly that those with lower education use the Nordic labour market more intensively than those with higher education. As mentioned in the introduction of this chapter, Schröder (1996) showed that this was the case for emigration flows from the Scandinavian countries also during the 1980s. Table A5.3 shows that this pattern continues into the 1990s and the first years of the new millennium. Table A5.3 also shows that it was even more pronounced for the migration flows from Finland. However, the numbers give no clear indications that the negative relation between the emigrants' level of education and the choice of Nordic destinations is weakened or reinforced over the years.

The time path of the shares of emigrants headed for different destination regions shows that the flows from the four Nordic countries have turned in different directions during the 1980s and 1990s. Norway and Finland represent polar cases; Norwegian emigrants are increasingly turning in the direction of the Nordic region, while the Finnish emigrants abandon it. In the late 1980s the share of emigrants moving to another Nordic country was clearly highest among the Finnish emigrants. After 2000 this lead has been taken over by the Norwegian emigrants. In this respect the time trend is less clear for Danish emigrants. The Swedes seem to have turned away from the Nordic labour market during the first years of the new millennium. The different country specific trends are illustrated in Figure 5.3 for two levels of education; high school and medium university. As the curves in the two panels of Figure 5.3 indicate, the changing directions of the emigration flows appear to be more related to home country than to level of education.

Among the Norwegian emigrants, educated on the highest university level, we find a slight shift in direction of the EU countries during the period observed. However this is the only case in which the Norwegian emigrant groups increased their share to a destination region outside the Nordic. The Finnish emigration flows, however, turn sharply in the direction of the EU countries. This is to some extent also the case for university educated Danish emigrants, while the lower educated emigrants from Denmark turn in the direction of destinations outside the OECD countries. This is also the case irrespective of educational level for the flows from Sweden. This trend may be related to the fact that Sweden, in the Nordic context, has a relatively large immigrant population from countries outside the OECD region. Many of these people have now lived in Sweden long enough to have become Swedish citizens.

[25] By EU15 we refer to the EU member countries before the enlargement of the European Union in 2004.

Table A5.4 shows the percentages of emigrants from the Nordic countries in each professional group who moved to the different destination regions. The civil engineers and economists clearly stand out in all the countries as the groups with the lowest shares of intra-Nordic movers among their emigrants. Other engineers are also underrepresented in the intra-Nordic labour market. Among the physicians moving from a Nordic country a relatively high share moves within the region. The same is true for nurses.

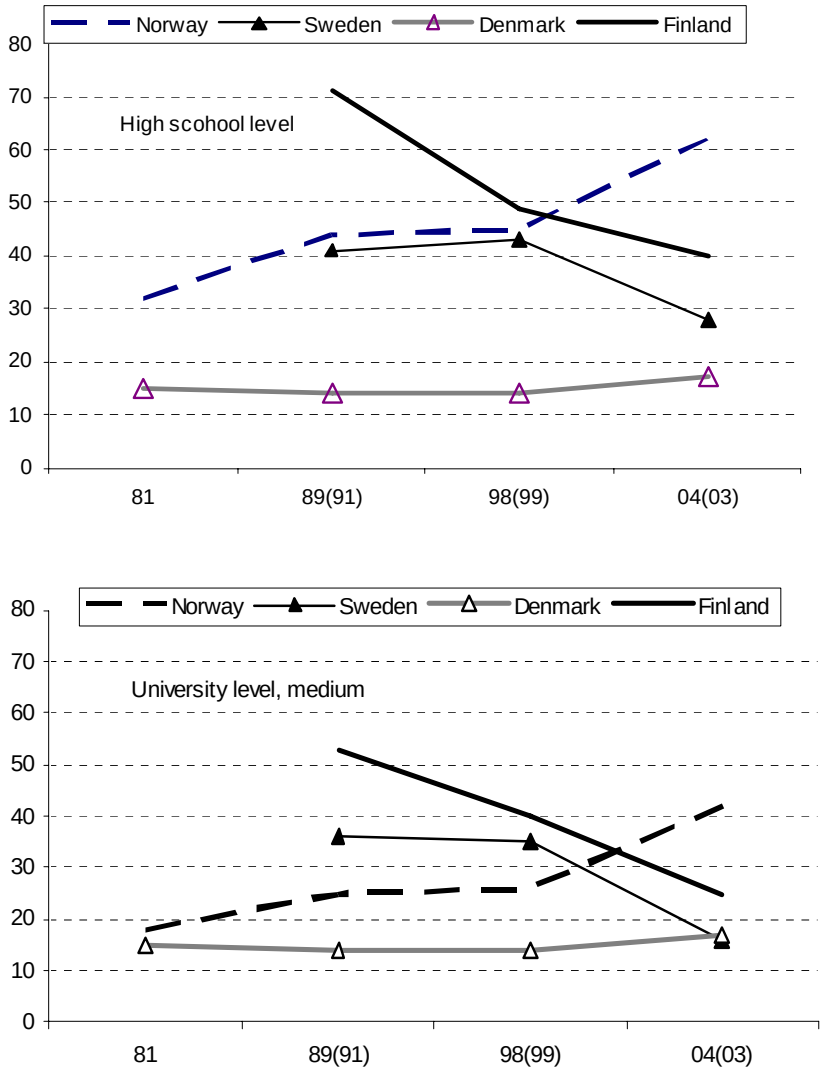

Figure 5.3. Share of total emigration flows to other Nordic countries, Nordic citizens 21–65 years of age, high school and medium university levels of education

For all professions, we find opposite trends even here for the shares that are migrating from Finland and Norway to other Nordic countries. The Norwegian professions increased their emigrant shares that moved to

Nordic destinations, while the Finnish professions did the opposite. However, when looking at these specific professions we find that the Finnish pattern also applies to the Swedish and Danish development.

5.6 The Norwegian case

In this section we present a more detailed analysis of the composition of emigrants from Norway. Based on a representative sample of individual movers and stayers we describe the relationships between individual characteristics and the probability of emigration to different destination regions. The emigration probabilities are estimated by binary logit regression. The main focus is on the question concerning whether the migrants are positively or negatively selected with regard to productivity. Thus, the emphasis is on characteristics that are correlated with the earnings capacity of the individual, i.e. indicators of skills and of earlier labour market performance. However, we also look at the relationships between emigration probabilities and demographic characteristics which may affect the migration costs, such as marriage and number of children.

The econometric analysis is built on a micro dataset, constructed from Norwegian administrative registers. All registered emigrants aged 20 to 65 years who moved in 1991 and 1998 are included. In the following we refer to the years in which migration is registered as the *observation years*. Furthermore, we have a 5 per cent random sample of the population in each of the observation years.

As indicators of pre-emigration labour market performance we use information about earlier income and unemployment experience which is available for both emigrants and the population sample. Income is measured in the year prior to the observation year. This information is collected from the tax-register and defined as the total sum of wages, salaries and all kinds of income related to market work. Income from self-employment is included but not capital income. Transfers are only included if related to loss of income from work. Unemployment experience is measured by the number of days registered as unemployed in the year preceding an observation year.

The main skill characteristics we observe are the level and type of education attained by the individuals. This information also includes the approximate number of years the individuals have spent in school. Corrected for the number of school years, age is used as an indicator of work experience. In addition, the dataset contains information on demographic characteristics which may affect emigration costs: marital status, children (age and number), citizenship and country of birth. For the individual migrants we know the date of departure and the reported country of destination.

Table A5.5 presents average values of variables measuring earlier labour market performance, skills and demographic characteristics in the population and in three groups of emigrants. The observation year is 1998. The three groups of emigrants are defined according to their destination regions; another Nordic country, a EU15 country outside the Nordic region or a rich OECD country outside Europe. To exclude return migrants we have left out individuals born outside Norway.

Compared to the Norwegian population, the Nordic migrants have lower incomes on average and a higher share that has been unemployed during the preceding year. For the two other migrant groups it is clearly the other way around. This pattern is much more pronounced for men than for women. Among the unemployed the Nordic migrants have experienced fewer days of unemployment than those born in Norway.

The group with less than high school education is underrepresented in all the migrant groups compared to their share in the population. Even though this tendency is much stronger among the migrants moving to EU15 and to the non-European OECD countries, it appears also among the intra-Nordic migrants. The Norwegians who are university educated at medium and high levels are strongly overrepresented among the migrants moving to the EU15 and other rich OECD countries. Among the intra-Nordic migrants those with medium level university education are slightly overrepresented compared to the total population.

Table 5.6. Logit estimation of the probability that a Norwegian citizens, 21–64 years of age, moved to another Nordic country, in 1991 or 1998

	Male		Female	
Intercept	-4,913	0,318	-2,915	0,335
High school[1]	0,033	0,061	0,175	0,064
University low	-0,018	0,155	0,145	0,163
University medium	0,428	0,071	0,183	0,072
University high	1,018	0,107	0,852	0,149
General, humanistic and esthetics[2]	0,014	0,078	0,251	0,067
Teaching	-0,437	0,184	-0,085	0,139
Social science and law	-0,346	0,163	0,098	0,139
Industry, craft. natural science	-0,415	0,079	-0,070	0,112
Health service	0,216	0,140	0,161	0,085
Transport and security	-0,706	0,189	0,104	0,232
Primary industry	-0,038	0,119	0,016	0,173
Age	-0,020	0,018	-0,108	0,020
Ager2	0,000	0,000	0,000	0,000
Year of observation 1998	-0,237	0,048	-0,136	0,049
Number of days unemployed yare before observation	0,006	0,001	0,002	0,001
Number of days unemployed 2	0,000	0,000	0,000	0,000
Total income year before observation	-0,015	0,003	-0,034	0,004
Total income 2	0,003	0,001	0,252	0,031
Number of children	0,041	0,061	-0,295	0,060
Number of children 2	0,013	0,012	0,047	0,012
Married or cohabitant	-0,636	0,078	-0,688	0,079
Self employed	-0,226	0,111	-0,238	0,204
Youngest child < 18 years of age	-0,572	0,063	-0,719	0,061
Number of observations	111282		97691	

Only individuals with income in the year preceding emigration or non-emigration are included

1. Compulsory is the reference

2. Administration and economics is the reference

Individuals with an education within general, humanistic or aesthetic fields are to some extent overrepresented among the Nordic migrants, while those with an economic and administrative background are overrepresented among the emigrants moving to EU15 countries. Otherwise, the three emigrant groups are not very differently distributed than the rest of the Norwegian population with regard to their fields of education.[26]

Concerning the demographic variables the Norwegian emigrants are younger, have fewer children and more seldom have a partner. This pattern is most pronounced among the emigrants to Nordic countries.

Table 5.7. Logit estimation of the probability that a Norwegian citizens, 21–64 years of age, moved to a rich country outside the Nordic region, in 1991 or 1998

	Male		Female	
Intercept	-7,381	0,313	-6,912	0,318
High school[3)]	0,760	0,073	0,630	0,068
University low	1,235	0,121	0,948	0,125
University medium	1,755	0,071	1,343	0,065
University high	2,682	0,076	2,224	0,096
General, humanistic and aesthetics [4)]	0,024	0,069	-0,068	0,062
Teaching	-1,125	0,144	-0,473	0,094
Social science and law	-0,844	0,118	-0,539	0,120
Industry, craft. natural science	-0,467	0,065	-0,050	0,092
Health service	-0,886	0,128	-0,419	0,077
Transport and security	-0,923	0,196	-0,469	0,266
Primary industry	-0,206	0,097	0,132	0,143
Age	0,021	0,016	0,057	0,018
Ager2	-0,001	0,000	-0,001	0,000
Year of observation 1998	0,069	0,043	-0,009	0,045
Number of days unemployed yare before observation	-0,002	0,001	-0,002	0,001
Number of days unemployed 2	0,000	0,000	0,000	0,000
Total income year before observation	0,012	0,001	-0,029	0,003
Total income 2	-0,008	0,002	0,200	0,024
Number of children	-0,237	0,049	-0,444	0,051
Number of children 2	0,034	0,010	0,051	0,010
Married or cohabitant	0,287	0,060	0,498	0,057
Self employed	-0,556	0,111	-0,371	0,150
Youngest child < 18 years of age	-0,328	0,057	-0,289	0,056
Number of observations	111771		98150	

Only individuals with income in the year preceding emigration or non-emigration are included
1. Compulsory is the reference
2. Administration and economics is the reference

In Table 5.6 the results from the estimation of the probability that an adult individual, born in Norway, moves to another Nordic country are shown. Table 5.7 shows the results from the estimation of the corresponding probability of moving to a rich OECD country outside the Nordic region. A binary logit regression model is applied in both cases. Since men and women in many respects have different labour market behaviour, the models are estimated separately for males and females. Only adults with a positive income in the year prior to the observation year are

[26] The group with a missing educational registration is also to some extent overrepresented in all the migrant groups, but more strongly so among the intra-Nordic migrants. Since educations acquired abroad are not well captured by the Norwegian registration system this may reflect that many of these migrants have completed their education in another country.

included in the analysis. The reason is that we are primarily interested in labour migration. Thus, we exclude those who most likely have a weak labour market attachment. The interpretation of the coefficients in the tables is the effect of one unit change in the independent variable in question on the log to the probability of moving relative to the probability of not moving. Since the effect of each independent variable is estimated keeping all other variables constant, this statistical procedure gives a systematic description of how the different individual characteristics are correlated with tendency to emigration.

The signs of the coefficients show if the variables have a positive or negative influence on the emigration probabilities. The values of the coefficients associated with the same variables indicate the relative influence on these variables on the various probabilities. Otherwise, the interpretation of the coefficients is not quite intuitive. To make the results more understandable we will make some graphic illustration of the estimated relationships between the emigration probabilities and the characteristics of individual Norwegians.

Looking at the coefficients of the level of education dummies, the pattern in Tables 5.6 and 5.7 confirms that the positive correlation between level of education and emigration is much stronger to destinations outside the Nordic region. The groups with a medium and high level of university education still have significantly higher probabilities to move to another Nordic country than the group who has not completed high school. This effect is clearly strongest on the highest level of education.

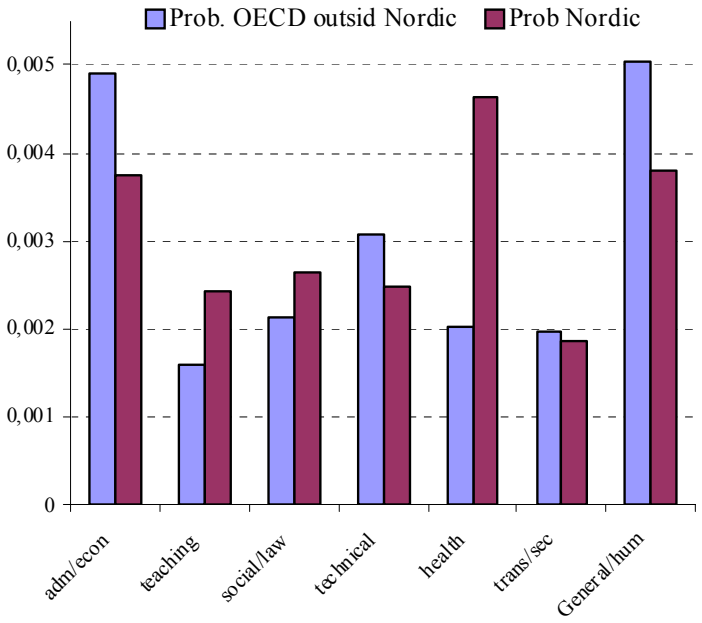

Figure 5.4. Probabilities to move, variation between types of education and destination regions. Men 25 years, income preceding year 200 thousand, medium level university education.

Based on the estimated coefficients the emigration probabilities for men with education in the different fields are shown in Figure 5.4. Both to Nordic and the more distant OECD destinations, economics and administration, together with general and humanistic fields, seem to be types of education which are most positively correlated with emigration. However, with regard to the destinations in other Nordic countries it is medical education that is most positively related to emigration. In relation to destinations in other OECD countries this field of education, on the contrary, seems to be negatively correlated with the tendency to move. Since the category general education is not a completed education, but rather a preparation and qualification for further education, it is tempting to interpret the positive relationship between this field and the probability to move abroad mainly as a result of student migration.

Up to a certain number of days, the probability to move from Norway to other Nordic countries is positively related to number of days the individual was unemployed in the preceding year. This relationship is illustrated in Figure 5.5 for men and women who had completed a high school level of education. As we can see, the peak value is around 180 unemployment days for men and a little less for women. The probability of moving to another OECD destination clearly decreases with the number of days an individual was unemployed in the year before. This relationship is also shown for high school educated men and women in Figure 5.5.

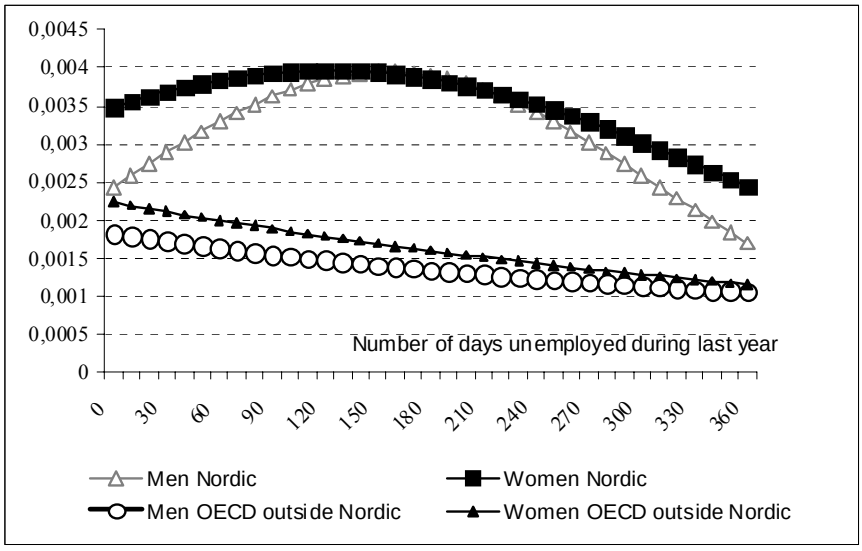

Figure 5.5. Probability to move with respect to number of days unemployed last year. Men and women 25 years of age, income preceding year 200 thousand, completed high school level of education or lower.

The estimated coefficient in Table 5.6 shows that the probability to emigrate from Norway to another Nordic country clearly decreases with the level of total income in the preceding year. The corresponding coefficients in Table 5.7 show that the opposite relationship applies for the probability of moving to OECD countries outside the Nordic region. In

Figure 5.6 these relationships are shown for Norwegian men with different levels of education.

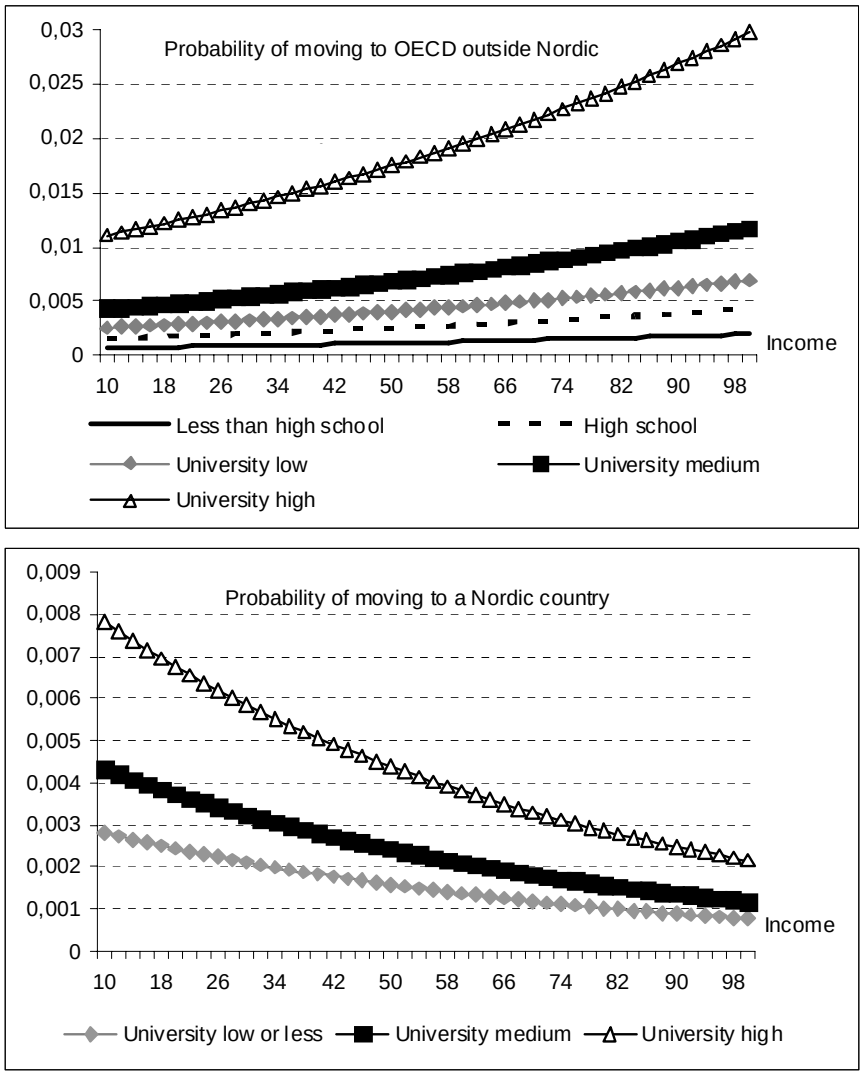

Figure 5.6 Probability to move depending on total income last year. Men 25 years of age. Different levels of education

5.7 How do the intra-Nordic migrants manage?

Migration from one Nordic country to another has, cf. earlier chapters in this study, taken place in large scale since the 1940s. Even if the migration is not as large now as it was in the 1950s and especially in the 1960s many people still migrate and many who were born in one Nordic country live in another Nordic country. There are especially many people living in Sweden who were born in another Nordic country. However, the studies of the situation of the situation of intra-Nordic migrants are few. Most studies of the immigrant's situation deal with the migrants coming

from non-Western countries. Here we will present some information on the situation of Nordic immigrants living in Sweden.

We will start with the wages of immigrants. In wage equations the effect of being an immigrant is often measured by including a dummy variable representing being born abroad or country of origin or dummy variables indicating different years of arrival. Wage equations generally include controls for education, labour market experience (or age) and gender. The result is in most cases a negative sign for the dummy variable representing immigrant status. The size of the coefficient varies in size depending on the country of origin. When dummies for different years of arrival are included the effect of immigrant status is in most cases more negative for those who arrived recently and less negative or even positive for those who have stayed in the country for many years. This pattern has been interpreted either as a sign of assimilation or of that cohorts arriving at different times differ from each other in various respects (education, ambition etc.).

Table 5.8. Sweden. Wage equations for 2005.

Year of arrival	EU10	Denmark	Finland	Iceland	Norway
2000–2005	-0.062***	0.065***	0.042***	0.032	0.004
1995-1999	-0.091***	0.057***	0.052***	0.039	0.030**
1990-1994	-0.087***	0.044**	-0.002	-0.038	0.029***
1985-1989	-0.060***	0.014	-0.013**	0.005	0.005
1980-1984	-0.028***	0.036***	-0.002	0.033	-0.007
1975-1979	-0.036***	0.017**	-0.013***	0.033	-0.022***
1970-1974	-0.012*	-0.013	-0.020***	-0.045**	-0.018**
Before 1970	0.023***	-0.013**	-0.015***	-0.009	-0.011**

Note: Dummy variable estimates for different groups from some of the EU countries, EU10 (the countries joining EU May 1, 2004), Denmark, Finland, Iceland and Norway. In each equation only Swedish born and people born in the country/countries are included in the estimations

*** = significant on the 1 per cent level; ** = significant on the 5 per cent level, * = significant on the 10 per cent level.

Source: Computation from SIEPS data base for study of EU migration to Sweden made for this study.

We will here use information for immigrants who were born in the new EU-countries and from the Nordic countries and lived in Sweden at the end of 2005. See Table 5.8. When we study the immigrants born in the ten new EU-countries (EU10) we find the typical pattern. The immigrants have lower wages than the natives and those who have arrived recently have lower wages than those coming earlier controlling for age, education and gender. For those coming from the Nordic countries the pattern is quite different. The wage differential is much smaller and those who have arrived earlier have a wage disadvantage compared to those who arrived in more recent periods. This should not be interpreted as negative assimilation. Explanations could be selective return migration[27] or that migrants who came from the other Nordic countries to Sweden when the labour market situation was worse in their home countries than in Sweden to a

[27] Rooth and Saarela (2007) find that the migrants from Finland to Sweden were negatively selected and that those of them returning are positively selected compared to migrants from Finland living in Sweden.

larger extent than at present were people with problems in the labour market, i.e. they were negatively selected. Those who arrived early have a wage disadvantage compared to natives and those who arrived in the 1990s have an advantage.

There are differences between natives and Finns in Sweden not only regarding wages but also regarding employment. Among those aged 36-50 years old, the Finns in Sweden had a much lower employment rate than natives in both 1990 and 2001, i.e. both before and after the economic crisis. This is case both for men and women, see Saarela and Rooth (2006). A part of the difference, but only a minor part, is explained by differences in education between those born in Finland and natives. The earnings were also lower for Finns than for natives, in this case only for men. Also here only part of the difference is explained by differences in characteristics.

Another measure of integration is the health situation. Albin (2006) studies the mortality rate in the period 1970–1999 among immigrants who lived in Sweden in 1970 compared to natives. He finds that the mortality rate is much higher among immigrants despite controls for age, sex, occupation, type of employment and county of residence. Among men the mortality rate is 21 per cent higher for immigrants from Finland, 11 per cent higher for those coming from Denmark and 7 per cent higher for those coming from Iceland/Norway (in the study counted as one group) than for natives. Among women the mortality rate is 10 per cent higher for those coming from Denmark, 8 per cent higher for those coming from Finland and 4 per cent higher for those coming from Iceland/Norway than for natives. There may be different explanations for this pattern; differences in consumption regarding tobacco and alcohol and stress related to migration are two candidates. Engdahl (2005) covers in her study mortality differences in more recent years, 1997–2001. She studies those aged 25–64 and finds that mortality is much higher among immigrants from the other Nordic countries, especially among men from Finland than among natives, even when different controls are made for individual characteristics.

Another measure of integration is the crime rate. Ahlberg (1996) has calculated the crime rate per thousand in the period 1985-1989 according to country of origin controlling for differences in age, sex and county of residence. The rate is 58 for natives, 105 for those born in Denmark, 132 for those born in Finland and 105 for those born in Norway. A follow-up study covering the period 1997–2001 gives similar results. Immigrants from the Nordic countries are as most other immigrant groups much over-represented among those registered for crimes. See BRÅ (2006).

A general conclusion is that the immigrants from the Nordic countries living in Sweden have more problems in different respects than the natives. It is important to study those differences and explanations of them in more detail.

5.8 Summary and discussion: Who are the Nordic migrants?

In this chapter we have investigated the skill composition of Nordic migration flows. Earlier studies, the summary statistics presented in section 5.3, and the analysis of the Norwegian micro-data in the preceding section clearly indicate that the emigration flows from the Scandinavian countries have been positively selected with regard to level of education since the early 1980s. However, the positive correlation between education and emigration seems to be considerably less pronounced for the migration flows between the Nordic countries.

In the introduction we argued that four factors in particular could increase the level of education in Nordic emigration flows:

- Pull effects from receiving countries experiencing a shortage of highly educated labour
- The relative low returns to education in the Nordic labour markets.
- A negative correlation between migration costs and level of education.
- The formal screening process by immigration authorities, favouring high productivity workers in excess demand.

At least the last three of these four factors are probably less operative within the Nordic labour market. Thus, the relatively low educational attainment of the intra-Nordic migrants compared to those moving to more distant destinations with is in accordance with these arguments.

However, the Scandinavian pattern of a positive correlation between level of education and emigration is not present in the Finnish case. The summary statistics show that in Finland individuals with a high school level of education as their highest, in all the years observed, have a higher tendency to move abroad than both those with higher and those with lower education. Fisher and Straubhaar (1996) also show that Finns with a high school level of education were strongly overrepresented among the emigrants in the mid-1980s. This represented a change from the mid-1970s when Finns with compulsory education constituted the only educational group with a higher share among the emigrants than in the Finnish population. Fisher and Straubhaar (1996) conclude that the level of education increased considerably more among the emigrants than in the whole Finnish population from the 1970s to the 1980s. Our data indicates that this development has not continued.

The Scandinavian pattern of a positive correlation between the level of education and emigration in the aggregate migration flows from Denmark, Norway and Sweden was neither weakened nor reinforced during the years we observe. That is, the changes in the propensities to move do not seem to be systematically different between groups on different steps of the educational ladder. However, since the average level of education

went up in the populations of the Nordic countries, the absolute number of emigrants educated at a university level increased considerably.

The summary statistics show that Scandinavian economists and civil engineers have had much higher emigration propensities than the rest of the population with medium and high university levels of education. Also in Finland, the economists have had a relatively high tendency to move abroad, while this tendency has been more or less in line with the rest of the population for the civil engineers.

The civil engineers and economists are clearly distinguished in all of the Nordic countries as the groups with the lowest shares of intra-Nordic movers among their emigrants. Other engineers are also underrepresented in the intra-Nordic labour market.

In the early 1980s and early 1990s the Nordic physicians had an average emigration propensity similar to the one which prevailed in the whole group educated on the highest university level. However, towards the end of the 1990s and in the years after 2000, a common pattern in all the Scandinavian countries seems to be that their emigration propensities fall well below the average level of the highest educated group. Nurses also tend to have somewhat lower emigration rates than those educated at the same medium university level. Nurses from Finland are an exception, particularly in 1999, with a very high emigration propensity. Among physicians and nurses moving from a Nordic country, a relatively high share move within the region.

The analysis of the Norwegian micro-data indicates that to be educated within economics and administrative fields increases the probabilities to emigrate, both to other Nordic countries and, even more so, to more distant OECD destinations. Individuals educated within technical fields and natural science also had a relatively high emigration probability in relation to destinations outside the Nordic regions.

Compared to other broad fields of education, the character of the economic and administrative education, and the types of work experience it leads to, may result in internationally transferable skills. Students within these fields are first of all educated to do administrative and management work within private firms. In small open economies, as the Nordic ones, these firms quite often are internationally oriented. Those who work in such firms must learn to work with people, institutions and markets in other countries. Through this work they also gain knowledge and contacts which may help them to establish themselves in the international labour market. Similar arguments may apply to the technical types of education. In addition, the migration of technical personnel may be stimulated by the relatively free flows of technical equipment as well as knowledge across national borders.

The analysis of the Norwegian micro-data confirms the pattern indicated by the summary statistics regarding the medical professions. The results show that to be educated within medical or other health related

fields increases the probability to become an intra-Nordic migrant. However, the analysis indicates the opposite relationship for the probability of moving to other OECD destinations. It may be that the Nordic orientation of the medical professions is related to the importance of communication in the tasks they fulfil. Thus, the similarity of the Scandinavian languages may have been particularly stimulating for the development of the regional labour market for these groups.

Comparing the magnitudes of the "type of education" dummies, in the models estimated for the two categories of destinations they may indicate to some extent that it is more important to have an internationally transferable type of education within the economic and administrative or technical fields to move out of the Nordic region than within this region. Thus, irrespective of type, educations from Norway may be perceived as less country specific by employers inside the Nordic labour market than by employers in the rest of the rich OECD countries.

The positive relationship between unemployment experience and intra-Nordic migration, found in the micro-data, indicates that Norwegians look for work in other Nordic countries to a greater extent when they have personally experienced it hard to find a job at home. However, the opposite result turns up in relation to other OECD countries, showing that the same mechanism does not apply in relation to destinations outside the Nordic region. On the one hand, these results support earlier research (see Chapter 2) which shows that business cycles affect the migratory movements within the Nordic region and, thus, may contribute to a moderation of the economic fluctuations. On the other hand, these results also contain a message about the selection to the two emigration flows analyzed since those who experience higher unemployment on average tend to be relatively low productivity workers.

The negative relationship between earlier income and the probability to move to another Nordic country also indicates that these emigrants are negatively selected with regard to labour market qualities. The positive relationship found between earlier income and the probability to move to OECD countries outside the Nordic region indicates that the Norwegians who move to these destinations are positively selected.

In this chapter we have also looked at the situation in Sweden for immigrants who were born in another Nordic country. We have presented results from different studies regarding wages, employment, health (mortality) and crime rates. The results indicate that the situation to a higher or lower extent is worse for immigrants than for natives. This is the case even if controlling for different observable characteristics. There may be several explanations for that: negative selection of those migrating, positive selection of return migrants, discrimination of immigrants and problems related to the process of changing country are only some of them.

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Tables

Table A5.1. Emigration propensities – percentage of emigrants among citizens, 21–65 years of age, by level of education, in Norway (N), Sweden (S), Denmark (DK) and Finland (SF)

	N				S			DK				SF		
	81	91	98	04	89	98	04	81	89	98	03	89	99	04
Total	**0,20**	**0,26**	**0,29**	**0,24**	**0,13**	**0,36**	**0,29**	**0,23**	**0,36**	**0,35**	**0,45**	**0,16**	**0,24**	**0,22**
Levels of education:														
Less then high school	0,10	0,13	0,13	0,17	0,06	0,19	0,20	0,16	0,25	0,26	0,29	0,13	0,16	0,15
High-school	0,30	0,33	0,29	0,24	0,09	0,21	0,24	0,22	0,31	0,23	0,44	0,39	0,60	0,62
University, low	0,59	0,44	0,28	0,17	0,22	0,59	0,34	0,43	0,52	0,35	0,58	0,13	0,12	0,11
University, medium	0,44	0,44	0,48	0,29	0,16	0,47	0,39	0,42	0,57	0,52	0,55	0,19	0,36	0,29
University , high	0,85	0,67	0,80	0,43	0,23	0,68	0,79	0,79	1,01	1,07	0,87	0,31	0,57	0,44

Table A5.2. Emigration propensities – percentage of emigrants among citizens, 21–65 years of age. Occupational groups in Norway (N), Sweden (S), Denmark (DK) and Finland (SF)

	N				S			DK				SF		
	81	91	98	04	89	98	04	81	89	98	03	89	99	04
Total	**0,20**	**0,26**	**0,29**	**0,24**	**0,13**	**0,36**	**0,29**	**0,23**	**0,36**	**0,35**	**0,45**	**0,16**	**0,24**	**0,22**
Occupational groups:														
Physicians	0,80	0,70	0,44	0,32	0,27	0,77	0,37	1,26	1,12	0,50	0,67	0,24	0,45	0,24
Nurses	0,35	0,29	0,29	0,13	0,21	0,42	0,17	0,43	0,59	0,36	0,46	0,18	0,74	0,31
Civil engineers	1,11	0,78	0,97	0,35	0,41	1,23	0,79	1,04	1,08	1,32	0,99	0,37	0,84	0,72
Other engineers	0,48	0,45	0,45	0,26	0,15	0,54	0,24	0,65	0,57	0,68	0,66	0,20	0,35	0,29
Economists	0,59	0,66	0,79	0,48	0,61	1,33	0,51	0,83	1,25	1,29	0,81	0,48	0,87	0,64
Skilled metal workers	0,12	0,12	0,12	0,11	0,10	0,21	0,14	0,20	0,29	0,14	0,28	0,15	0,10	0,07
Skilled building workers	0,05	0,16	0,44	0,07	0,11	0,24	0,14	0,30	0,35	0,16	0,28	0,14	0,11	0,10

Table A5.3. Percentage of the total flow of emigrants from Norway (N), Sweden (S), Denmark (DK) and Finland (SF), Nordic citizens, 21–65 years of age, by level of education, who went to different destination regions

Another Nordic country	N				S			DK				SF		
	81	91	98	04	89	98	04	81	89	98	03	89	99	04
Total	**28**	**38**	**32**	**50**	**33**	**35**	**22**	**23**	**30**	**16**	**24**	**72**	**49**	**38**
Levels of education:														
Less then high school	39	56	40	58	39	39	26	25	41	18	40	81	60	50
High-school	32	44	45	62	41	43	28	24	35	19	25	71	49	40
University, low	14	24	22	40	27	41	23	20	26	15	21	80	59	51
University, medium	18	25	26	42	36	35	16	15	14	14	17	53	40	25
University , high	13	16	13	24	21	21	16	26	17	11	14	39	42	19

EU15 outside the Nordic region	N				S			DK				SF		
	81	91	98	04	89	98	04	81	89	98	03	89	99	04
Total	**29**		**32**	**27**	**37**	**31**		**31**	**37**	**43**	**40**	**18**	**35**	**39**
Levels of education:														
Less then high school	25	21	30	23	34	26	21	34	33	49	20	12	28	30
High-school	33	29	29	20	30	25	19	31	35	45	25	19	38	43
University, low	36	32	38	28	43	32	23	29	33	39	44	12	28	32
University, medium	30	32	36	32	35	33	28	30	48	39	34	30	40	45
University , high	33	32	34	39	47	37	25	30	44	44	54	33	37	39

Rich OECD countries outside Europe	N				S			DK				SF		
	81	91	98	04	89	98	04	81	89	98	03	89	99	04
Total	**21**		**17**	**9**	**17**	**16**		**18**	**14**	**14**	**12**	**7**	**8**	**12**
Levels of education:														
Less then high school	25	11	14	4	15	12	11	19	13	21	7	5	6	9
High-school	20	18	13	7	17	14	17	21	15	17	11	7	8	9
University, low	29	18	16	8	19	16	19	16	13	29	12	6	7	7
University, medium	21	20	18	11	18	16	18	14	13	16	16	11	10	16
University , high	20	26	31	20	19	19	32	14	18	18	20	21	16	29

Table A5.4. Percentage of total flows of emigrants from Norway (N), Sweden (S), Denmark (DK) and Finland (SF), Nordic citizens, 21–65 years of age, by occupational groups, who went to different destination regions

Another Nordic country	N				S			DK				SF		
	81	91	98	04	89	98	04	81	89	98	03	89	99	04
Total	**28**		**32**	**50**	**33**	**35**		**23**	**30**	**16**	**24**	**72**	**49**	**38**
Physicians	41	37	19	43	43	54	34	67	59	39	20	68	67	33
Nurses	21	32	18	41	58	55	25	34	38	26	19	61	74	45
Civil engineers	5	13	11	21	11	12	8	15	7	12	4	40	20	14
Other engineers	9	19	17	42	27	27	13	15	9	11	17	54	29	22
Economists	15	28	17	28	11	13	11	5	9	11	10	39	26	25

EU15 outside the Nordic region	N				S			DK				SF		
	81	91	98	04	89	98	04	81	89	98	03	89	99	04
Total	**28**		**32**	**50**	**33**	**35**		**23**	**30**	**16**	**24**	**72**	**49**	**38**
Physicians	27	8	29	23	*37*	*31*	18	10	13	22	20	18	19	40
Nurses	29	23	44	32	*23*	*18*	16	18	23	29	25	21	22	39
Civil engineers	33	38	31	36	*24*	*21*	31	20	53	35	44	32	45	37
Other engineers	30	28	37	27	*50*	*37*	24	16	46	35	34	25	37	35
Economists	42	35	45	40	*39*	*28*	32	40	56	44	54	49	55	46

Rich OECD countries outside Europe	N				S			DK				SF		
	81	91	98	04	89	98	04	81	89	98	03	89	99	04
Total	**28**		**32**	**50**	**33**	**35**		**23**	**30**	**16**	**24**	**72**	**49**	**38**
Physicians	22	27	37	18	17	16	19	9	14	21	27	11	12	14
Nurses	12	15	16	9	25	17	20	17	11	17	13	10	1	9
Civil engineers	33	25	35	21	10	11	26	17	21	29	28	24	22	27
Other engineers	24	21	25	14	27	32	22	13	13	16	15	16	13	19
Economists	24	24	21	16	28	22	22	20	18	18	13	7	8	16

Table A.5.5. Summary statistics: average demographic and economic characteristics in the population and among emigrants to different destinations, Norwegian citizens 20–64 years of age in 1998

			Emigrants to					
	Population of citizens		Nordic countries		Other EU/EEA countries		OECD outside Europe	
	female	male	female	male	female	male	female	male
Share with Income last year	0,87	0,93	0,86	0,86	0,72	0,82	0,72	0,80
Level of income among income earners (in NOK 100, 1997 value)	1591	2536	1115	1921	1592	3168	1688	3748
Share unemployed at least one day last year	0,15	0,14	0,21	0,26	0,12	0,09	0,08	0,05
Number of days unemployed if registered at least on day	185	174	135	155	142	131	222	171
Level of education								
Less then completed high school (years <13)	0,526	0,433	0,268	0,288	0,222	0,191	0,222	0,139
Completed High school education (years =13)	0,189	0,281	0,373	0,294	0,218	0,220	0,190	0,187
University low (years =14)	0,024	0,035	0,018	0,019	0,036	0,029	0,026	0,023
University medium (years 15-17)	0,222	0,174	0,268	0,254	0,393	0,338	0,395	0,287
University high (years >17)	0,028	0,065	0,030	0,075	0,081	0,191	0,121	0,322
Type of education								
General, humanistic and aesthetics	0,403	0,295	0,513	0,368	0,375	0,284	0,342	0,248
Teaching	0,071	0,033	0,036	0,025	0,063	0,025	0,085	0,012
Social science and law	0,021	0,022	0,048	0,033	0,049	0,040	0,042	0,037
Administration and economics	0,192	0,112	0,143	0,119	0,223	0,189	0,175	0,153
Industry, craft. natural science	0,064	0,402	0,057	0,259	0,071	0,310	0,118	0,402
Health service	0,198	0,027	0,127	0,036	0,130	0,029	0,142	0,041
Transport and security	0,008	0,034	0,010	0,015	0,003	0,009	0,015	0,012
Primary industry	0,026	0,055	0,018	0,064	0,029	0,068	0,025	0,040
Age	41	41	29	32	35	39	35	36
Number of children	1,75	1,51	0,61	0,74	1,01	1,11	1,05	1,08
Share married or cohabitant	0,54	0,49	0,15	0,20	0,38	0,42	0,52	0,49
Share of self employed	0,03	0,09	0,01	0,04	0,02	0,05	0,03	0,03

6. Conclusions

By Peder J. Pedersen, Marianne Røed and Eskil Wadensjö

In this chapter we will summarize our study and also write about the prospects of the Nordic labour market and barriers to mobility between the different member states of the common Nordic labour market.

Summary

The Nordic labour market has a long history, much longer than the common Nordic labour market. In the late 19th century there was a migration of workers from Sweden to Denmark and Norway. Many workers moved from southern Sweden to the Copenhagen area but also to other parts of Denmark. Denmark was more economically developed than Sweden at that time and the wages were higher. It was less expensive to move to Denmark than to the United States and therefore Denmark was an attractive alternative for those without means to move overseas. From the western part of Sweden there was a similar migration flow to Norway. In practice there were no legal hinders for migration.

This mobility stopped more or less with the outbreak of WW1. The overseas migration started again after the war and continued for a few years, but the interwar period was characterized by low inter-Nordic migration. The migration became regulated during WW1 and continued to be regulated. More important was the high unemployment rate and that there were few job vacancies. Only a few people born in a Nordic country lived in another Nordic country at the outbreak of WW2.

WW2 meant that many from the other Nordic countries came to Sweden as refugees, the only Nordic country not involved in the war. The requirement of a work permit was abolished in Sweden for citizens from other Nordic countries in 1943. Most of the refugees from the Nordic countries returned after the war but some remained. More important was that Sweden, which had an intact production capacity after the war, entered a long period of high economic growth and strong labour demand. Workers were recruited from different countries, and many found their way to Sweden themselves. Those coming from Finland were the largest group but many also arrived from Denmark and Norway.

The common Nordic labour market was already a reality in many ways before it was formally founded in 1954, but the founding served to stabilize the rules governing migration and also opened up the other Nordic countries for inter-Nordic migration, even if the scale of that migration was small in the first decades of the common Nordic labour market.

Complementing agreements on social security and mutual acceptance of occupational credentials made for more migration between the Nordic countries. The dominating migration flows up to the early 1970s were migration from Finland to Sweden and return migration from Sweden to Finland. But many also moved in this period from Denmark and Norway to Sweden.

The migrants moved from countries with low wages to countries with high wages. More important was that people moved from countries with high unemployment to countries with many job vacancies. This is shown by several studies. The business cycle variations were also very pronounced in some of the countries, but not in Sweden. Sweden had a long period with low unemployment and many job vacancies. The migration to Sweden became large-scale and led to an intense political debate. The migration of workers from outside the Nordic countries became more strictly regulated and the rules were implemented more rigorously in the end of the 1960s. In the early 1970s different methods were also tried in an effort to diminish migration from Finland to Sweden without breaking with the legal framework of a common Nordic labour market.

Migration in the period when inter-Nordic migration was dominated by a flow of migrants from Finland to Sweden has been studied by many researchers. After that period a period with much less migration followed. The Swedish growth rate became much lower, the job vacancies fewer and the income differences much smaller. It did not lead to a stop in migration, but the migration became more balanced between the Nordic countries and Norway became gradually more important as a country of destination up to the end of the 20th century. Migration in this period has been met with much less interest from the researchers.

In the first years of the 21st century the migration pattern changed again. Sweden once again became a net receiver of migrants both from Norway (mainly returning migrants) and Denmark (people moving from the Copenhagen area to the Malmö area to get lower housing costs or to avoid the Danish regulations regarding marriage migration). There is a clear bridge (Öresundsbro) effect on migration and also a marriage law effect.

Commuting over the national borders is increasing. People are commuting from Värmland County to the Oslo area and an increasing number of Danes (and also Swedes) commute from Skåne to jobs in Ashland.

Studies show that the inter-Nordic migrants are different in various respects compared to non-movers, but also that the migrants are different compared to those who migrate to other parts of the world. Those who move outside the common Nordic labour market are on average better educated (and move from employment to employment) than those who move inside the Nordic labour market (who often move from unemployment). This selection of migrants regarding different migration destina-

tions resembles that we find when we study the migration in the end of the 19th century, the migration which took place more than 100 years ago.

How are the inter-Nordic migrants doing? They are doing better than most other migrants, especially those coming from non-Western countries. The labour migrants who arrived in Sweden in earlier periods from Denmark and Finland, however, are at present doing slightly worse than the natives (lower wages given education, age etc). This is not the case for those who have recently arrived to Sweden from Denmark and Finland. This is opposite of the pattern we find for most countries. There are also other research results which may be even more difficult to explain. The immigrants who arrived in the heyday period of labour migration from other Nordic countries have for example much higher crime rates than natives. Their health is also worse. They have for example considerably higher mortality rates compared to that of the natives even if they are compared (matched) with natives with the same characteristics. This is the case for migrants from all the other Nordic countries but the situation is worst for men from Finland and women from Denmark. It is difficult to explain the differences: selection, social customs from the home country preserved (drinking, smoking etc), and stress related to migration are some of the candidates.

Prospects

The migration between the Nordic countries is small compared to the internal migration in the Nordic countries. There are different barriers to migration between the Nordic countries. We will come back to those barriers in the next section. An important question is if the migration will continue to be on the same low level.

One factor speaking for more migration is improvement in the transportation system. It has become easier to commute between Skåne and Sjælland and also between some parts of Sweden and Norway and between some parts of Sweden and Finland. This may lead to commuting induced migration – moving to get lower housing costs.

Another factor leading to larger migration may be the Danish regulation of marriage migration. Young people move from Sjælland to Skåne to be able to marry. With larger cohorts of second-generation immigrants in Denmark, the regulation of marriage migration may have an increasing impact.

A third factor which may go in the direction of more migration is that the young people more often have higher educations than earlier generations and people with higher education have a higher propensity for mobility. On the other hand, we have shown earlier that those with higher educations more often move out of the common Nordic labour market (to continental Europe, the UK or the US).

The inter-Nordic migration is influenced by business cycle variations and differences in the business cycle situation between the countries. If these differences are due to different timing of sectoral changes in the countries, for example, this may lead to more migration than if the timing of business cycle variations is the same.

The common labour market has expanded by ten new member states since May 2004. Sweden did not introduce any transitional rules. This has led to higher migration from especially Poland and the Baltic states. The new migration may have an effect especially on the parts of the labour market where the new immigrants get jobs. Some employers may recruit workers from those countries instead of from the other Nordic countries. Such a development may be strengthened by the accession of Bulgaria and Romania in the European Union.

Barriers

As mentioned, the propensity to migrate – given the distances – is much less over a national border than within the borders. The possible only exception is the migration from Finland to Sweden in the period of large scale migration (1950–1970). It is easy to see this with the help of a hypothetical example. The number of migrants between Copenhagen and Malmö is increasing but the migration would have been much larger between two cities of the same size and the same distance if they had been at the same side of the border.

There are different barriers. One barrier is of course that the languages are different, even if not very different, between Denmark, Norway and Sweden. It means that it may be more difficult to get a job and also lead to various costs for those who are moving. For the children in the families who move it is not uncomplicated to change from one language to another. But there are also costs for the adults. Language could be seen as part of a person's social capital. Knowing the language makes it easier to communicate and part of that ability is lost if moving across the border. There are also other differences between the cultures of the Nordic countries that make it more complicated to move across the border than inside a country and involves costs. It is not possible to eliminate those differences and it is not something to strive for, but some knowledge of the languages of the other countries and their culture could be factors that would lessen the severity of the difficulties.

More important and in a way easier to change, though still very complicated, are barriers caused by differences in the social security schemes, educational systems, tax systems, health care systems etc. The social security system is difficult to understand for most people and a change of country makes it even more complicated. Mobility may lead to unexpected effects and risk adverse people do not like such insecurity. Differences in the educational system make it also more difficult to move. For

higher studies the Bologna system will lead to more similarity, but there is still a long way to go. Also tax system differences may have effects on mobility. It would be of value to study the differences in these respects between the countries, the costs they are leading to, and ways of reducing those costs.

Sammanfattning

Den nordiska arbetsmarknaden bildades formellt år 1954. Reellt växte en gemensam nordisk arbetsmarknad fram redan tidigare. Sverige avskaffade kravet på arbetstillstånd för medborgare från de andra nordiska länderna under andra världskriget och kravet på visum efter kriget (för medborgare från Danmark, Island och Norge 1945 och för medborgare från Finland 1949). Även Danmark avskaffade kraven på arbetstillstånd för medborgare från Island, Norge och Sverige före bildandet av den gemensamma nordiska arbetsmarknaden. Bildandet av den nordiska arbetsmarknaden innebar att krav på arbetstillstånd, pass och visum försvann i den mån de inte hade tagits bort redan tidigare. Det innebar inte att alla hinder för rörlighet var borta. Tvärtom fanns och finns fortfarande olika hinder för rörlighet. Olika steg har tagits för att minska dessa hinder för rörlighet inom Norden. Ett viktigt steg var en överenskommelse om att underlätta överföringen av rättigheter inom socialförsäkringarna vid byte av land under 1950-talet och avskaffande av hinder för rörligheten för läkare, tandläkare och sjuksköterskor under 1960-talet.

De nordiska länderna har också gradvis kommit att ingå i annan gemensam arbetsmarknad, den inom EU. Danmark anslöt sig redan under 1970-talet medan Finland och Sverige blev medlemmar två decennier senare. Island och Norge har genom EES-avtalet i praktiken kommit att ingå i EU:s gemensamma arbetsmarknad. EU:s arbetsmarknad har utvidgats under de senaste åren med tio nya medlemmar från den 1 maj 2004 och två nya medlemmar från den 1 januari 2007. Det är med två undantag, Cypern och Malta, länder i Central- och Östeuropa som blivit medlemmar. Initialt hade inte Sverige men däremot Danmark, Finland och Norge restriktioner för medborgare från de nya EU-länderna vad gäller deras möjligheter att ta ett arbete. Sverige och Finland har nu inga sådana restriktioner för invandrare från de nya medlemsländerna medan Danmark (och Norge som inte är medlem av EU) fortfarande har sådana restriktioner. Den gemensamma nordiska arbetsmarknaden håller på att utvecklas till en del av gemensam europeisk arbetsmarknad.

Det finns ett antal studier av vilka faktorer som påverkar migrationsströmmarna mellan de olika nordiska länderna. Dessa undersökningar sammanfattas i kapitel 2. En generell slutsats är att migrationen går från länder med lägre löner (lägre BNP per capita) till länder med högre löner (högre BNP per capita). Det är emellertid inte så att all migration går i riktning mot länder med i genomsnitt högre löner. Det är också viktigt att uppmärksamma att det finns en mycket omfattande återutvandring. Många stannar endast en kortare tid i det land de flyttat till. Utmärkande för migrationen inom Norden är de stora variationerna över tiden. De

förklaras huvudsakligen av variationer i arbetsmarknadsläget i de olika länderna. Det är främst arbetslösheten i utflyttningslandet och antalet lediga platser i inflyttningslandet som har betydelse. Vissa undersökningar pekar också på att invandringspolitiken har betydelse.

Hur har då migrationsflödena sett ut i Norden? I kapitel 3 behandlas denna fråga mer i detalj. Det har i perioder funnits en omfattande migration inom Norden även före bildandet av den nordiska arbetsmarknaden. Kring det förra sekelskiftet – i slutet av 1800-talet och början av 1900-talet – förekom en omfattande utvandring från Sverige till Danmark och Norge. Lönerna var högre i Danmark och Norge och det var lättare att få arbete – speciellt i de båda huvudstadsområdena men även till viss del utanför dem. Det var en migration av främst oskolad arbetskraft. Nästa större migration inom Norden skedde under andra världskriget då många flyktingar kom från Danmark och Norge till Sverige. Även från Finland kom inte så få till Sverige under denna tid. De allra flesta återvände efter kriget men samtidigt började en omfattande arbetskraftsinvandring till Sverige – alltså innan den nordiska arbetsmarknaden bildades. Invandringen till Sverige från de nordiska länderna blev fortsatt mycket omfattande under tiden fram början av 1970-talet. Andelen av personer födda i utlandet som kom från nordiska länder och främst från Finland ökade. Andeelen minskade därefter gradvis under 1970- och 1980-talen med vissa variationer över tiden. Utmärkande för den nordiska migrationen var att en stor andel återvände – 60-65 procent av dem som flyttade till Sverige år 1970 hade flyttat tillbaka tjugo år senare.

Utvecklingen efter 1990 skiljer sig från den tidigare utvecklingen. Från Dunmark har utflyttningen till Norge varit stabil över tiden med en svagt stigande tendens. Däremot har utflyttningen från Danmark till Sverige ökat markant under de senaste åren. Öresundsbron och lagstiftning vad gäller anhöriginvandring är faktorer bakom denna utveckling – ökningen av utvandringen har varit speciellt stark bland dem som är 20-24 år. Vad gäller emigrationen från Finland är Sverige den dominerande destinationen men Norge har fått ökad betydelse. Emigrationen från Island till andra nordiska länder går framför allt till Danmark medan den från Norge främst går till Sverige. Här finns i samtliga fall en omfattande återutvandring också av dem som kommit under tidigare decennier. Från Sverige har migrationen under denna tid främst gått till Norge. Summerat över 1990-talet gick nettoströmmarna främst från Sverige till Norge och i mindre utsträckning till Danmark. Under 2000-talet har Sverige varit en nettomottagare av invandrare från de andra nordiska länderna – till en viss del i form av återvändande svenskar.

I kapitel 4 granskas de faktorer som ligger bakom utvecklingen av den inomnordiska migrationen. Av intresse är den stora skillnaden i sysselsättning och arbetslöshet under 1990-talets första hälft med en starkt negativ utveckling i Finland och Sverige. Senare har skillnaderna i sysselsättningstillväxt varit betydligt mindre. Regressionsanalys av migrations-

strömmarna under perioden från 1990 till och med 2003 pekar på att Öresundsbron har haft betydelse för flyttningen mellan Danmark och Sverige (i riktning mot Sverige) och att sysselsättningsutvecklingen i Norge och Sverige har haft betydelse för flyttningen mellan dessa länder i den riktning som kunde förväntas. Få andra samband är signifikanta. I kapitel 4 behandlar vi också pendlingen över landsgränser inom Norden. Det största flödet under den tidsperiod vi behandlar går från Sverige till Norge men starkast växande (och troligen störst nu) är pendlingen från Sverige till Danmark. Den senare pendlingen är en kortdistanspendling, troligen i regel på en daglig basis, medan pendlingen mellan Sverige till Norge i merparten fall är över större avstånd och troligen oftare veckopendling.

I kapitel 5 behandlas sammansättningen efter utbildning av dem som flyttar inom Norden och också i viss utsträckning hur det går för dem som flyttar. Löneskillnaderna är relativt små i Norden. Det gör att de som har en högre utbildning får mindre avkastning på sin utbildning än i andra länder, vilket skulle kunna tala för att de högutbildade flyttar mer och i större utsträckning ut ur Norden än vad grupper med annan utbildning gör. Det är också det resultat som undersökningen ger. Ju högre utbildning desto större är flyttningsbenägenheten. Flyttningsbenägenheten varierar också markant mellan olika utbildningskategorier – vissa typer av utbildning är lättare att få användning för i andra länder som till exempel ingenjörsutbildning. En specialstudie av Norge pekar på att de med lägre utbildning flyttar inom Norden för att undvika arbetslöshet medan de med högre utbildning flyttar utom Norden för att få högre inkomster.

En undersökning av lönerna för personer födda i andra nordiska länder som hade en anställning i Sverige år 2005 visar att det endast finns små skillnader mellan invandrare och infödda när hänsyn tas till ålder, utbildning och kön. Mönstret är att de som anlänt för längre tid sedan, dvs. under en period där många kom till Sverige har något lägre löner än de infödda medan de som kommit under senare år har något högre löner än de infödda. Det är ett mönster som avviker från det gängse mönstret som är att de som anlänt för längre tid sedan har högre löner än de som nyligen har kommit. Resultaten pekar på att den inomnordiska migrationen har ändrat karaktär över tiden. Utökningen av EU:s gemensamma arbetsmarknad kan också indirekt påverka migrationen inom Norden.

I det avslutande kapitlet diskuterar den framtida migrationen inom Norden. Vi pekar på faktorer som kan bidra till att öka migrationen: förbättrade transportsystem, kvarstående skillnader i regler vad gäller anhöriginvandring och en ökad utbildningsnivå bland de unga. Konjunktursvängningars amplitud och om de är samtida eller inte i de nordiska länderna kan påverka migrationens omfattning. Vissa åtgärder kan öka migrationen som en samordning av skattesystem och social- och avtalsförsäkringssystem inriktad på att minska problemen vid byte av land inom Norden.