

Economic Renewal and Demographic Change

**Evaluation of policies for
well functioning local labour markets
in the Nordic countries**

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by

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Introduction

Although unemployment is a persistent problem in several countries, the issue of labour shortages is now emerging as an increasingly stubborn obstacle to growth across Europe (European Commission, 2001). The concurrence of relatively high levels of unemployment and labour shortages essentially reflects the highly differentiated nature of the labour market and the lack of coherence between the growth of demand for labour and the skills on offer among those looking for work. Recruitment difficulties tend to be reported in particular sectors even in periods of recession. In periods of recovery and as unemployment falls – or, more accurately, as the excess supply of labour diminishes – it is to be expected that skill bottlenecks will become more serious, the more so, naturally, in regions where unemployment is relatively low, but also in other areas where the skills of the unemployed do not match the demands of employers. If economic growth at present rates is sustained over the longer term, the problem of this “skills imbalance” is expected to be compounded by the projected slowdown in labour force growth over the next 10-15 years. In some regions we have already seen a decline.

In 2001 the employment rate was 63.9 percent on average for the European Union, but the objective has been set at 70 percent for 2010. At the Stockholm summit in 2001 agreement was reached on the overall goals required, which it was understood would require significant levels of commitment by the Union and by the Member States to the goal of full employment, as well as to the notion that a dynamic EU must consist of active welfare states. The EU heads of state and government were also unanimous in their belief that the path to such a goal requires investment in the areas of both employment and social policy (European Commission, 2004).

EU countries differ considerably in terms of their internal labour market structures and economic performance. Larger countries in particular display wide variations in the size of their Local Labour Markets (LLMs). Some countries, e.g. Germany display a wide variation in industrial structure and income levels. Other countries such as Portugal and Greece show wide variations along the rural – urban scale. Countries with small populations and large territories, such as Scotland, Finland, and Sweden, also display a wide variation in LLM size.

In order to diminish economic and social inequalities the EU has put forward the cohesion policy. It is a specific policy involving a transfer of resources between Member States via the budget of the EU for the purpose of supporting economic growth and sustainable development through investment in people and in physical capital. Due to the cohesion policy, and the Structural Funds, differences in income and employment in the EU have narrowed over the past decade, especially since the mid-1990s. Large differences in prosperity and economic performance, however, remain, and these will widen much further after the join of the new Member States in May 2004 (European Commission, 2004).

The concept of the Transitional labour market was launched by OECD in the mid 1990s (Schmid 1998, Schmid et al. 2002). Transitional labour markets are defined as legitimate, negotiated and politically supported sets of mobility options for the individual. These transitions can take place in different time scales, day, week,

month and year, but also under different phases of the life cycle. In the book on *The Dynamics of Full Employment*, it is stated that the individuals' increasingly frequent shifts of status from/to employment and education, disability and sickness, retirement, household work, unemployment, etc., are becoming increasingly important to deal with in a successful employment policy.

The first hypothesis put forth by Schmidt et al (2002) is that the functioning and dysfunctions of labour markets could only be understood in a systemic framework. Employment systems are defined as the set of policies and institutions influencing interaction between the production systems and the labour market systems. The outcome of this interaction determines the quality and quantity of employment.

The second key hypothesis is that transitional labour markets (TLM) are beginning to emerge across Europe. TLMs are used as both a theoretical and a policy-oriented concept. They are based on observations that the border between the labour market and other social systems – the educational system, the private household economy, etc. are getting blurred. The important policy recommendation is that these boundaries should become more open for transitions between formal employment and productive non-market activities. Opening up of these boundaries should reduce the permanent insider/outsider problem which is so typical for modern labour markets.

In the transitional labour market theory, employment is getting a new meaning. Traditionally, employment is defined as the act of employing someone, the state of being employed or a persons regular occupation. In the emerging transitional labour market, employment is rather a temporary state or the current manifestation of long term employability. The prototype for this new employment concept, is the network labour market, with flexible entries and exits contingent on opportunities and individual expertise and continuous and flexible paths of accumulating work experience.

Thus, transitional labour markets are arenas for new forms of self-employment, where social integration is developed through the individuals' relation with others. In this form, social integration is taking place by productive social interaction not only within the field of paid work, but also in family work, cultural activities and voluntary work. Transition does not only mean movements between employment statuses, but also stands for flexible employment careers, including stages for preparation, encounter, adjustment, stabilization and renewed preparation for a new job or a new task.

This way of analyzing labour market performance makes it very obvious that simple, one-dimensional measures to achieve "full employment" such as minimum wages or negative income tax are not expected to be efficient. There is little doubt that the concept TLM provides a richer and realistic model for proactive and cooperative labor market policy.

Well functioning labour markets are those which secure high labour force participation for all groups on the labour market, where transition from unemployment, sickness or education to work is relatively easy, and opportunities to lifelong learning are present. Labour market performance has been closely

related to labour market and welfare policies. Thus, labour legislation on hiring and firing workers, maximum working hour's regulation, work environment regulation etc. have a clear impact on labour market participation. Similarly, social security systems (unemployment benefits, parental leave, sickness benefits and so on) affect labour force participation as well, since extensive social welfare provides the labour force with opportunity to stay outside the labour market for some time (Edvardsson, 2003). In this paper we have chosen to analyse national policies on welfare and labour markets.

Emerging Challenges to Labour Market Efficiency

There are currently a number of serious challenges to the efficient functioning of local labour markets in the Nordic countries:

- Demographic change, with low fertility rates and ageing of the population eventually reduces the labour supply in most regions, and this is particularly the case in regions that have experienced a continuous negative net migration over a number of decades. In several of these labour market areas, the majority of the local labour force works in public health care and social services, leaving other private industries with a decreasing pool of skilled labour to recruit from.
- The wide diversity in size and demographic trends between local labour markets in the Nordic countries – as displayed by the typology based on migration and natural population change developed in Figure 1 – is a major challenge to policy-making at the national level, since it is evident that “One size – Fits all” is not applicable.
- The propensity to temporarily or permanently leave working life due to sickness has increased in some countries in the Nordic countries. National numbers vary considerably – from 4-4.5 percent of the workforce on sickness leave in Sweden and Norway, via 2.2 percent in Finland to only 1.5 percent in Denmark (Dagens Industri 2002-09-09). Regional variation within countries are still larger. Moreover, a full explanation of this phenomenon remains elusive. No doubt, the overall ageing of the labour force contributes to the increased incidence of illness.
- Rapid structural change is taking place in a wide variety of labour markets, due to decisions concerning relocation within multinational firms, as well as in, until recently the highly competitive new industries. An example: In 2001 only one percent of system engineers in Sweden were registered unemployed, one year later the figure was nine percent.
- Exclusion from working-life is relatively frequent in most countries among those who were born abroad, in particular those born outside Europe. There is a general concentration of those with loose links to the formal labour market to the metropolitan regions, in spite of the fact that overall labour demand is higher in these regions than elsewhere.
- There remains a division of the labour market according to gender, where attitudes among employers and employees changes slowly, and at different rates in different regions. An example: In most of the small municipalities

in northern parts of the Nordic countries there is an increasing demand for labour in the social care sector, while at the same time high unemployment is still reported among males. The dual labour market by gender is reinforced already by young people's choices in secondary school. Gender roles also contribute to different behaviour vis-à-vis family life. As an example, according to a recent survey among young people in Sweden, 21 percent of male academics plan to take more than one year of parental leave, while 40 percent of female academics intend to do so.

Purpose of the Paper

The purpose of this paper¹ is twofold, namely to:

- (1) Describe the current spatial pattern of demographic change in Nordic countries. The rationale for this typology is to display where, and at which dimensions, problems caused by different types of demographic change appear in different countries. The underlying question concerns where and to what extent policy intervention should be prioritized to meet threats to the goal sustainable labour markets.
- (2) Having done so, we proceed to a comparative analysis of matching processes driven by demographic change and related transitions at local labour markets in Nordic countries. There are several ways to describe renewal or modernization of local economies and labour markets. In this empirical analysis we concentrate on the following, all based on gross-stream data:
 - the changing *age structure* of the labour force
 - the rate of inflow of labour with *modern education* at any level, and particularly
 - the inflow of labour with *higher education* contributing to modernization of all sectors of the economy

The underlying questions here concerns where rates of renewal are hampered by structural features of the LLMs, and where policy intervention contributes to a more balanced transition.

¹ This paper has been presented at the 44th Congress of the European Regional Science Association in Porto, Portugal, August 2004.

Northern Landscapes of Demographic Change

In drawing a Nordic demographic landscape it is necessary to start with population change and characterise these with regard to natural population development and net migration. Figure 1 shows the areas of demographic growth and decline. The growth zones around the metropolitan areas as well as areas of declining population, especially in the peripheral areas, are well documented. This pattern is the consequence of low and decreased fertility rates and migratory movements. From a Nordic point of view there seems to be indications of population concentration and monocentric development rather than a polycentric development. Other studies have shown that there appear to be signs of polycentric development in central Europe, but outside there are instead indications of monocentric development with regard to the demographic development (ESPON 1.1.1, TIR; ESPON 1.1.2, TIR; ESPON 1.1.4, SIR, TIR). This phenomenon is especially strong in the northern countries. From a functional urban areas' point of view there are, however, some signs of periurbanisation as well as signs of a more polycentric urban. This periurbanisation process can, however, also be seen as a monocentric development as it is dependent on the economic and social development in the centre.

The Nordic growth zones – as well as the European ones – are affected by a surplus of migration. Population growth can in most cases only be explained by migration surplus as the balance of birth and death often is negative. In these areas population dynamics is more and more driven by migration and less by a surplus of birth (see Figure 1). The opposite is in general also valid – population decrease is more dependent on out-migration than on natural population decrease even if they often reinforce each other. These peripheral LLMs are not attractive enough for migrants and the age structure is lopsided with a lot of elderly people. One result of the skewed age structure is natural population decrease, and the total population decline is often dramatic in these parts. It is, thus, not only the TFR that is of importance for the natural population development. Even age and gender structure influence this development. A lopsided age structure and a skewed gender structure with a small share of women in fertile ages may result in a natural population decrease even if TFR is high. The same is of course valid in the opposite direction – even if TFR is low the age and gender structure can have a positive impact on natural population development and consequently on total population change. This phenomenon is often a fact in metropolitan areas and university towns (for a more thorough discussion, see e.g. ESPON 1.1.4 TIR; for Sweden, Johansson, 2000)

The response to economic fluctuations in the Nordic labour markets is not straightforward with respect to migratory movements and natural population development. Concerning long-distance migration, there are many signs that the labour market conditions have lost a lot in explanatory power. At least for Sweden the connection to labour market conditions is today almost absent for some labour force categories – especially low educated ones. Instead, most of the migrants are youngsters that are moving as a consequence of studies and/or the metropolitan lifestyle (for Sweden, see Johansson & Persson, 1999).

Considering natural population development, “crisis regions” appear to be more sensitive to changing labour market conditions than the metro areas. In the first

mentioned regions, the image of apathy and resignation is often a central ingredient. As a consequence of this reasoning, higher unemployment results in higher fertility as one solution for many younger women seems to be marriage or non-marital cohabitation as well as motherhood. This phenomenon can, however, be hampered by the “income effect” – a reduction in incomes and wages and subsequently the standard of living may result in more hesitation to childbearing and more children (for a more thorough discussion of things, see e.g. Becker, 1993).

It can also be assumed that short-term unemployed persons have another approach to parenthood than long-term unemployed. If childbearing and children are hampering factors with regard to a ‘come-back’ on the labour market it can be presumed that women in this category are more hesitant to childbearing than others. For many of the short-term unemployed it is very important to get a foothold on the labour market as soon as possible in order to avoid stigmatisation and the problems of returning to work that often are the consequences of long-term unemployment. This also means that long-term unemployed are not very sensitive to changing labour market conditions, since in many cases these potential parents have already given up re-entering the labour market and – as a result – also are more disposed to childbirth (for Sweden, see Johansson, 2000).

A Typology with Regard to Natural Population Change and Migration

In order to classify the Nordic LLMs with respect to total population change, natural population change and migration, six different combinations are formed. In one of the columns an attempt to characterise the different cases has also been carried out. The six cases are illustrated in Table 1 and Figure 1.

Table 1. A typology, including six types, with regard to total population change, natural population and net migration 1992-2002 Source: Typology developed in ESPON 1.1.4, estimates based on data from Nordregio.

1	PT>0	PN>0	PM>0	In-migration and young population/"high" TFR	12.8%
2	PT>0	PN>0	PM<0	Out-migration but young population/"high" TFR	5.9%
3	PT>0	PN<0	PM>0	In-migration but low fertility rate	5.5%
4	PT<0	PN<0	PM>0	In-migration and old population/"low" TFR	5.7%
5	PT<0	PN>0	PM<0	Out-migration but still young population/"high" TFR	17.4%
6	PT<0	PN<0	PM<0	Out-migration and old population/"low" TFR, depopulation	52.7%
PT=Total population development PM=Net migration PN=Natural population development					100.0%

The first three categories have experienced a positive population development in the sense that the population has increased between 1992 and 2002. The most favourable case is the first one where both the natural population change and the net-migration were positive and reinforced each other with the result that

population increased. This does not, however, automatically lead to the conclusion that the regions in type 1 have the sharpest population increase – instead this is naturally a function of the relation between natural population change and net-migration. In the second type the positive effect of natural population change neutralised the negative in-migration effect and in the third type the opposite was true. In all three cases there has thus been population growth, even if the combinations of the “driving forces” differ.

The same reasoning is valid with respect to the next three types – any conclusions about the strongest population decline cannot be drawn. Instead, only the preconditions about population development differ. The least favourable case with regard to development and dynamics is type 6 where the natural population decrease is reinforced by out-migration, which can result in a vicious circle and a negative spiral process. The regions in type 6 can be characterised as depopulation areas as both natural population change and net-migration are negative. Even type 4 and type 5 can perhaps be seen as depopulation areas, but here the preconditions are different to some degree as type 4 is an in-migration area despite that the natural population change is negative and type 5 has a positive natural population change that is neutralised by a negative net migration. In the latter case there is, however, an obvious risk that this phenomenon will change in the future as a consequence of out-migration of young people and the preconditions for a future natural population increase will then be eroded.

The majority – 75 percent – of the 493 Nordic LLMs experienced a population decrease between 1992 and 2002. Most of the retarding regions can be placed in type 6, where both the natural population change and net-migration were negative (53 percent). This is the most unfavourable case and can be characterised as a depopulation case. Type 5 involves 17 percent of the regions and 6 percent are placed in type 4.

Among the growing regions, most regions are classified in type 1, where both the natural population change and net-migration were positive. These LLMs are in a favourable position and often localised in or around the metropolitan or big city areas - 13 percent of the labour markets are classified in this category. Almost 6 percent are in type 2 and the rest – also approximately 6 percent – in type 3.

Almost two thirds of the LLMs – 64 percent – had a natural population decrease during the period 1992-2002. Only 9 percent of these LLMs were expansive in the sense that they experienced a population increase as a consequence of net in-migration. This means that more than 90 percent of the Nordic LLMs with natural population decrease also experienced net out-migration that accentuated the population decrease. These areas have a difficult situation and can in many cases also be characterised as depopulation areas.

Country Differences

When discussing country differences of the development of LLMs, it must be kept in mind that the numbers and size – both with respect to inhabitants and area - of the commuter catchment’s areas in the Nordic countries varies a lot. Densely

populated – but small - Denmark has only 34 LLMs while sparsely populated Finland has 198. Norway has 161 and Sweden 100. This has consequences for preconditions with respect to commuting and migration – in the northern parts of the Nordic countries many sparsely populated municipalities consist of one LLM as a consequence of the delimitation. Instead, a municipality should in many cases be divided in several LLMs as commuting between the different built-up areas is almost absent. The opposite is applicable to Denmark or the southern part of Sweden where a LLM consists of many municipalities as an effect of accessibility and population density. The same phenomenon is apparent in the metropolitan areas where population density, periurbanisation and good infrastructure are preconditions for the continuing regional enlargement process.

This means that the comparisons between various LLMs in different parts of a country must be interpreted with some care. Despite these hesitations the demographic development on LLM-level in the various Nordic countries has been estimated with respect to total population change, natural population change and net migration and according to the typology presented above. When considering country distribution of these types, it is apparent from Figure 1 that type 6 – both natural population decrease and net out-migration - is overrepresented in Sweden and Finland compared to Denmark and Norway. In Finland as well as in Sweden, two thirds of the LLMs are found in type 6. Another difference is the more positive population development in Denmark and Norway – in Denmark 56 percent of the LLMs had a positive population development and in Norway the corresponding figure was 35 percent. Particularly type 2 – that has a natural population increase but net out-migration – was much more frequent in Norway and especially in Denmark. In Finland - on the other hand - the population development was much more polarised from a regional point of view during the period 1992-2002 – only 10 percent had a positive population development and was concentrated to metropolitan and big city areas and university towns and their surroundings. These findings are also obvious from the calculations in Table 2.

Table 2. A typology, including six types, with regard to total population change, natural population and net migration 1992-2002 in the Nordic countries. Source: Typology developed in ESPON 1.1.4, estimates based on data from Nordregio.

				DK (N=34)	FI (N=198)	NO (N=161)	SE (N=100)
1	PT>0	PN>0	PM>0	17.6	7.0	10.6	11.0
2	PT>0	PN>0	PM<0	29.4	2.5	16.8	1.0
3	PT>0	PN<0	PM>0	8.8	1.0	7.5	10.0
4	PT<0	PN<0	PM>0	23.5	3.0	3.1	9.0
5	PT<0	PN>0	PM<0	2.9	18.7	28.6	2.0
6	PT<0	PN<0	PM<0	14.7	67.7	36.6	66.0
PT=Total population development PM=Net migration PN=Natural population development							

Explanatory Components

In order to get a hint of the “explanatory power” of migration and natural population development, some straightforward regressions have been made including only two factors and based on cross-section data at LLM-level. These correlations are presented in Figures 2a-2c - and in Appendix - between total population change, migratory movements and natural population development. As it can be seen, the strongest correlation is between net migration and total population change. This is not especially surprising as in-migration areas are supposed to be dynamic and expansive while out-migration areas stagnating and retarding. It must, however, be kept in mind that these estimations are no indications of the income level or standard of living in the different regions, as most of the migratory movements are domestic and not international. Instead the correlation between net migration and total population change is rather an illustration of differences in living conditions – including e.g. employment opportunities, study possibilities, lifestyle factors, quality of life and amenities - within the countries than between them. Anyhow, it is obvious that regions that have experienced a population increase are also in-migration areas and vice versa, even if there are differences in income and standard of living. Migratory movements seem, thus, to be of greater importance as explanatory factor concerning total population change than natural population change. This seems to be the fact with regard to the development for the Nordic LLMs in total as well as for the Nordic countries separately. The exception is Denmark, where the opposite seems to be true and where natural population change has great influence on the total population change (see Appendix).

Even the correlation between total population and natural population development must, however, be handled with utmost care. As mentioned before it is not only the TFR that is of importance for the natural population development. Instead, age and gender structure seem to influence the natural population development more and more as a consequence of the decreasing fertility gap between different regions. With exception of Denmark, where the correlation between natural population development and total population development is relatively strong the R^2 -values for the other Nordic countries are much lower.

The correlation between natural population change and migration seems to be negligible. It is only in the Swedish case that there seems to be any positive connection at all ($R^2=0.311$) – Denmark’s R^2 is in fact negative even if it is not significant. The absence of connections between migratory movements and natural population change is, however, not as surprising as in-migration areas consist of both ageing areas and more dynamic and expansive ones with low TFR but with a positive age structure from a reproduction point of view. From other studies it is shown that many expansive in-migration areas in Europe are also characterised by very low reproduction potential (ESPON 1.1.4, SIR, TIR). This is one of the consequences of earlier in-migration as many of the in-movers had very small families and the regions then became more and more characterised as regions with low TFRs.

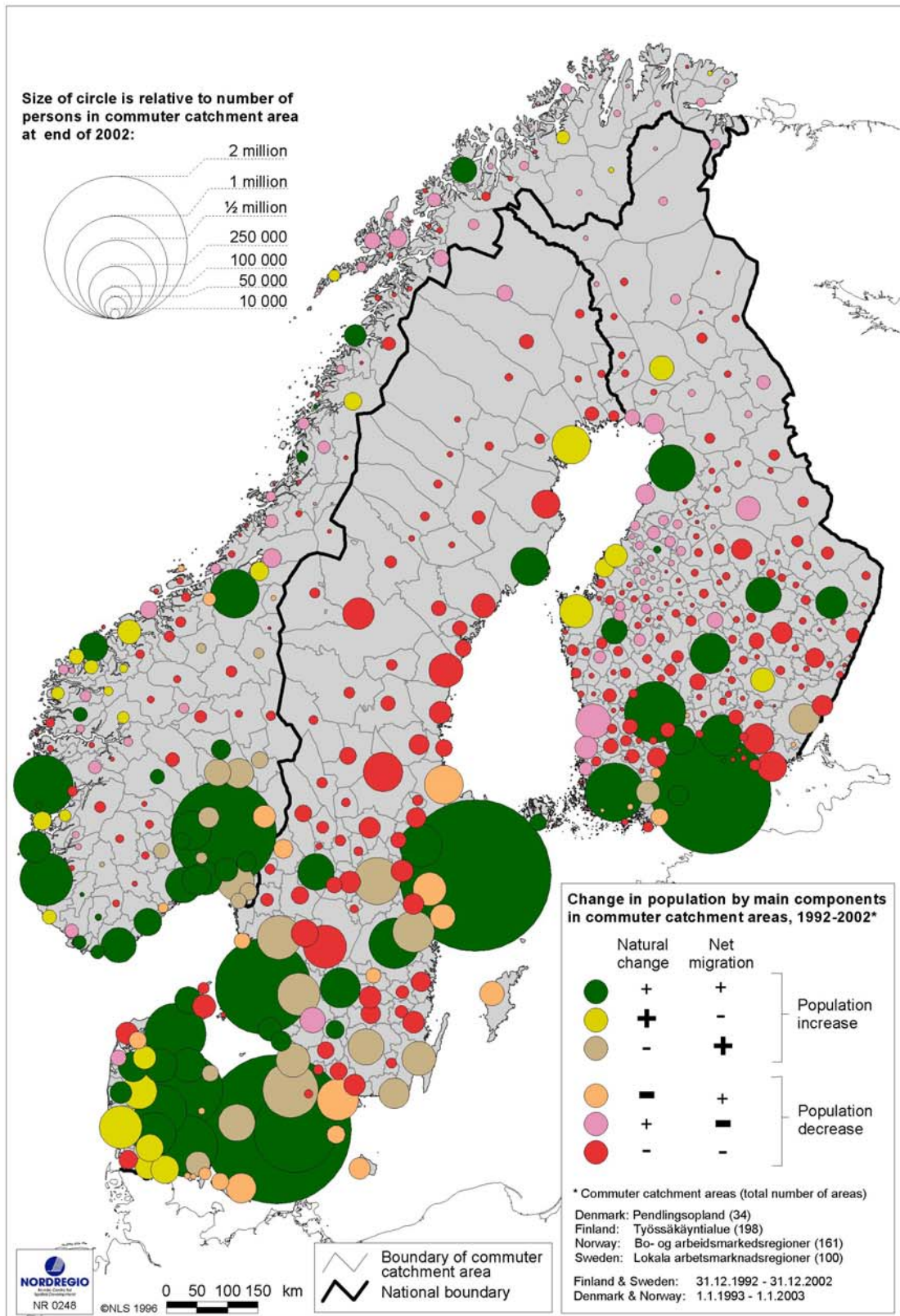
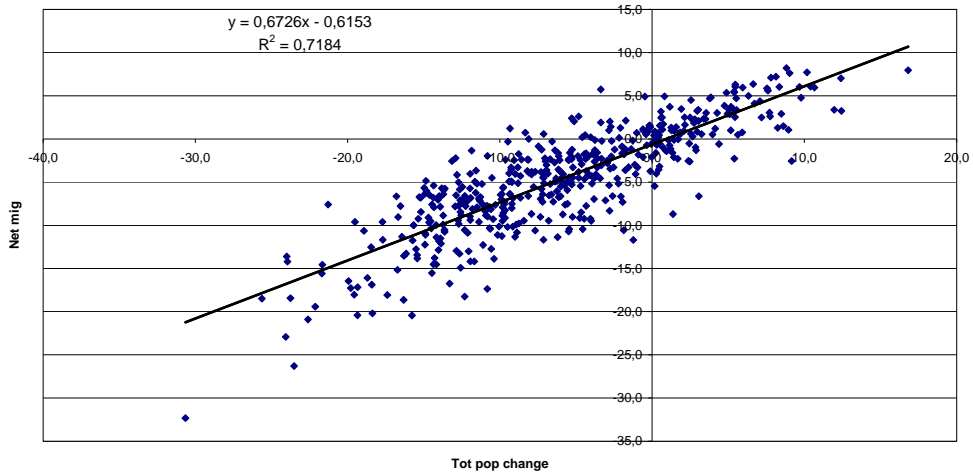
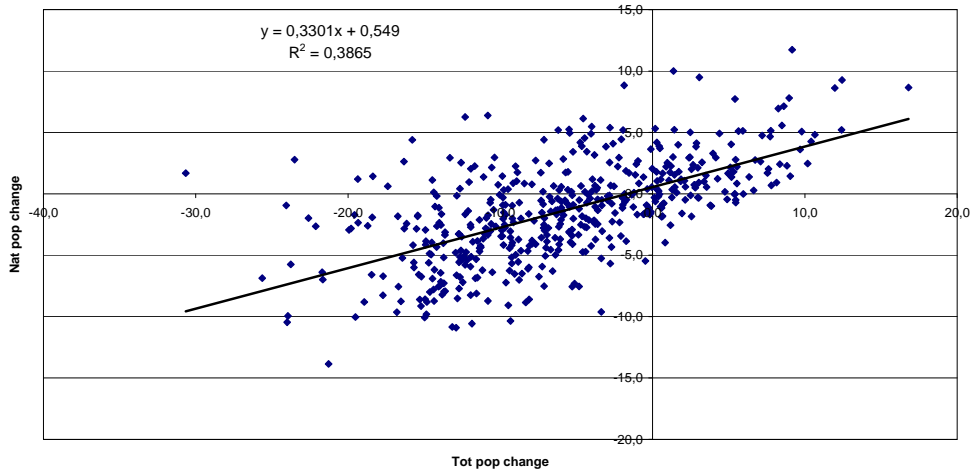


Figure 1. A typology, including six types, with regard to total population change, natural population and net migration 1992-2002. Source: Nordregio.

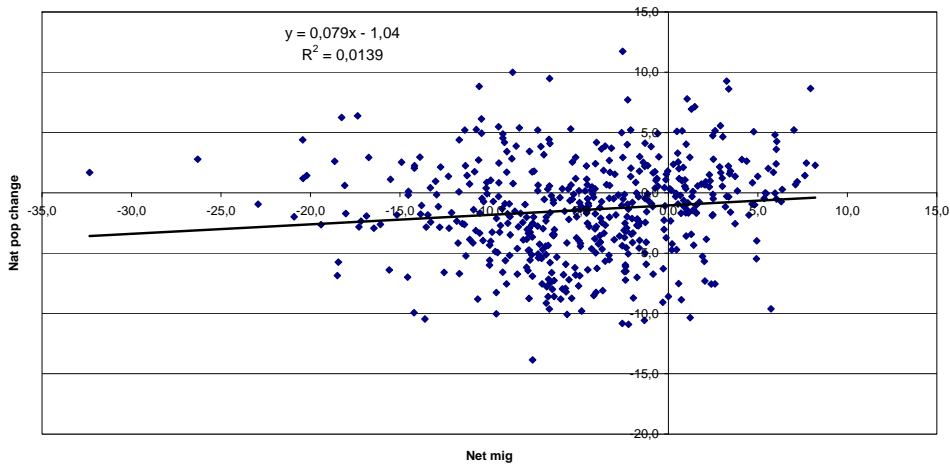
Correlation between total population change and net-migration in the Nordic countries 1992-2002. 493 LLMs



Correlation between total population change and natural population change in the Nordic countries 1992-2002. 493 LLMs



Correlation between net migration and natural population change in the Nordic countries 1992-2002. 493 LLMs



Figures 2 a-c. Correlations between total population change, natural population change and net migration in the Nordic countries 1992-2002. Per mille. Source: Estimates based on data from Nordregio.

What does this typology of regions exposed to different demographic processes tell us? They suggest a set of differentiated policy orientation:

- (1) Almost all LLMs in Nordic countries which are suffering from depopulation trends are small in size and geographically dispersed within vast sparsely populated regions. The prospects for turn around of these demographic trends are gloomy. Policy intervention has to prioritize support of basic welfare to the ageing population. Fortunately, the total population in areas of this type is quite small, which makes welfare budgets less strained.
- (2) There are, however, regions which in spite of natural decrease of population have positive or balanced migration. These regions prove that they are attractive as place of residence, and local and regional policy should focus on further improvement of the built and natural environment.
- (3) Net migration is shown to be the most important factor behind total population change. Since we know that net numbers are only a small fraction of the gross migration, and that gross migration is quite similar in frequency in different regions, more effort should be put on searching for policy instruments which stimulate in migration. E g, decentralized higher education system has shown to be an important attraction for in-migrants.

Modes of Renewal of Local Economies and Labour Markets

The purpose of this section is to analyse cohesion regarding Local Labour Market (LLM) performance in Denmark, Sweden, Iceland, Norway and Finland. This is done, first, by looking the best and worst performing labour markets regarding activation of the labour force and transitions in respective countries. Second, employment policy implications for different types of LLMs are considered.

The following hypotheses are put forward and discussed in this section:

H1: Given the extensive welfare and labour market policies the employment rates in the Nordic counties are relatively high on an European level.

H2: Given the extensive welfare and labour market policies there is a relatively small difference in the performance of LLMs in the Nordic countries.

H3: Given past research the greatest differences in the performance of LLMs will be found in the capital areas/metropolises on the one hand, and small labour markets on the other hand.

H3-1: Economic renewal – operationalized as rate of introduction of labour with higher education – is more frequent in metro and university based LLMs than in small LLMs.

H3-2: Democratic change – operationalized as substitution of elderly retiring labour with young labour with recent education – is more efficient in metro and university based LLMs than in other LLMs.

A Career Approach

This paper is based on a research project where labour markets in the Nordic countries have been analysed. In each country the most significant two year economic upswing period were chosen for analysis in the period 1995-2000. The chosen period differs therefore between countries depending on national economic development.

In this project, labour market performance is defined as a *dynamic* concept: the ability of the LLM:

- to adapt to, and facilitate, structural change in the local economy by activating all educational segments of labour,
- to increase the input of human capital investments, and
- to reduce sick leave and increase reactivation rates.

The segmented structure of the labour markets according to formal qualification will be inherent in the analysis. By means of this *career approach* we are able to describe to what extent, and where, labour in different pools or status groups, and at different levels of education, is *activated or deactivated*. Activation rate is measured as a change in status to employment from year t to year $t+1$. Correspondingly, deactivation means changes in status from employment year t to year $t+1$.

Given that we have an empirical approach to describing and analysing the impact of knowledge and human capital input on a regional economy, we need an *operational definition of the knowledge* embodied in labour. Thus in the empirical analysis based on official register data we are left with a definition based on the level of formal education of each individual.

The following major *statuses* (year t and year $t+1$) are defined and dealt with in this analysis: Employed (wage labour or self employed), Pension/not employed, Studies, Unemployed and Sick leave. In this paper we limit the empirical analysis to the following statuses: Employed, unemployed and educational levels.

Nordic Employment Policy

From a larger international perspective, there is a “Nordic model” as regards labour market policy, social policy and educational policy. A distinctive character of the Nordic model is the high public spending and strong public sector. There are, however, small but decisive differences between the Nordic countries. The purpose of the following sections is to analyse these similarities and differences.

The systems for *parental leave* are somewhat different in the Nordic countries. Thus, the longest parental leave is in Sweden where it is one year and four months, while it is shortest in Iceland and Finland, nine to ten months. There is also a

difference between the countries in the possibility of mothers and fathers to share the leave. The Icelandic system was recently appointed the first gender equal system, with three months each for the mother and the father, and three months that can be allocated freely. In all countries a large part of the leave time can be allocated freely between mother and father, but the tendency is still that the mother takes the main part of the leave. The reasons for this are based in the system of gender relations as a whole and outside the scope of this study. A summary of the parental leave systems in the Nordic countries is given in Table 3.

In the field of *sickness benefit* we find the greatest differences between the Nordic countries in labour market policy. First, the length of the sickness leave is one year in every country except Sweden, where there is no limit. This difference demands two comments. There might be that the fact that there is no limit in the Swedish system only is a statistical matter, and that the sick after one year are transferred to another category – the early retired for example. Another aspect is that a limited period for sick leave is an important push factor, pushing people back into employment, and that the Swedish system lacks this kind of push factor. Second, the amount of the benefit varies between the countries. Only in Norway is the benefit 100% of the salary up to a year, but the same is also the case for many groups on the Danish labour market. In Sweden the compensation is about 80% of previous salary. In Finland and Iceland, the amount varies dependent on collective bargained contracts. Third, only in Sweden there is a one day qualifying period fore sickness benefits. Finally, the responsibility of the employers varies. In Sweden employers have the responsibility to initiate activities for a healthy working life, rehabilitation etc. and pay sick pay for the first 21 days of sickness (apart from the 1 day without payment). In Iceland the employers pay sick pay for one to three months. The public sickness benefits are extremely low, resulting in private solutions to a high degree. In Denmark the employers pay for a longer period, but they get this reimbursed from the state/municipality. In Finland the employer pay until the 9th day of sickness. For a longer period the employer can pay salary or the employee gets allowance. If the allowance is not paid to the employee it is paid to the employer, as a reimbursement for the paid salary. A summary of the sickness benefit system in the Nordic countries is given in Table 3.

Table 3. The main characteristics of employment policy in the Nordic countries.

	Denmark	Finland	Iceland	Norway	Sweden
Parental leave - length	52 weeks. Possible to prolong with lower compensation	Parents are entitled to parental allowance either to the father or the mother for 158 weekdays (plus additionally 60 days for additional child)	3 months for each parent, not transferable, plus 3 months with transferable leave	42/52 weeks	Maximum 480 days
Parental leave – payment level	A public compensation paid to parents if they are not entitled to full wages from their employer. This differs from employers/sectors	Based on previous income. Basic subsidy common to all is 11.45 € per day	80% of salary in the previous 12 months. A child birth grant for students and those outside the labour market	Full pay, that is the same level as sick pay for 42 weeks or 80% of sick pay for 52 weeks	150 SEK a day is the guarantee level. Otherwise 80% of the income from the previous year/365, apart from 90 days when payment is 60/SEK per day
Sickness benefit - length	52 weeks within 18 months	52 weeks within two years	52 weeks within two years	52 weeks within three years	No time limit
Sickness payment level	Minimum for the employer to pay sickness benefit for 2-5 weeks. If the employer does not pay for the whole period, the municipality and the state pay	The employer pays full pay for the first 9 days for those who have worked longer than 1 month, otherwise 50% of the full pay. Thereafter the benefit is paid by the National Social Insurance	Employers pay full pay up to 1-3 months (up to a year for state employees). Thereafter the public social system pay sickness benefit which is a flat rate	The employers pay 100% of pension basing income for the first 16 days. Thereafter the benefit is paid by the National Social Insurance	Ca. 80% of full pay.
Unemployment benefit - length	4 years	500 days	5 years	1-2 years (earning related)	300-450 days
Unemployment payment level	90% of full pay with a comparably low upper bound	23.16 € a day. Earning-related daily allowance: 45% until 2.084,40 € and 20% of the remainder. Increased earnings-related component: 55% until 2.084,40 € and 32.5% of the remainder.	29 € a day	Earning-related daily allowance: The minimum benefit basis is 1.25 times the annual basic amount of 54 170 NOK and maximal benefit basis is 6 times the basic amount. The benefit rate per day is 0.24 per cent of the calculation basis and is paid five days a week. This will normally give an annual compensation of 62.4 per cent of the calculation basis.	?
Pension age	60-67 years	65 years (62-68 from 2005)	65-67 years	67 years (flexible from 62)	From 61 years. The guarantee pension is from 65 years

Pension system	<p><i>Basic pension:</i> For Danish citizens 67 years and older (65 from July 1st 2004). <i>Early retirement:</i> for those 60-65 years, members of unemployment insurance scheme and paid a pension scheme contribution for 25 years of the last 30 year of working life. <i>Condition early retirement:</i> for those with reduced ability to work (requirements: Danish citizenship, 18 years or older, resident in Denmark for minimum 3 years between 15-67).</p>	<p><i>Employment pension:</i> Depends on the amount of earnings and length of employment after the age of 23. Earnings are determined on the basis of the pay during the last 10 years in each employment. For self-employed or temporary employed the overall career earning are the basis. The total sum of pension is 60/66% of the highest previous earnings.</p>	<p><i>Public basic pension with two components:</i> basic pension and income supplement. The supplement is income-tested and the basic amount is partly income-tested. The public pension is a modest sum but universal in nature. <i>Mandatory and fully funded occupational pension system</i> (60-80% of former salary). <i>Voluntary individual pension accounts.</i></p>	<p><i>Basic pension:</i> the maximum level is 54,170 NOK, 80% if a married couple are both retired. <i>Additional pension:</i> The amount is based on working years, the maximum reach after 40 years of working. This pension is for those with a yearly income above the basic income. <i>Special addition:</i> For those with only a small additional pension. The maximum amount reached after 40 years of membership in the National Social Insurance. The amount is ca. 80% of the basic amount.</p>	<p>The pension is based on income (work, higher education, unemployment benefit, parental/ sick benefits) from 16 years of age. <i>Income based pension:</i> the main part. <i>Premium pension:</i> 2.5% of the pension based income is placed in stocks and bonds. <i>Basic pension (guarantee pension):</i> for those with low or now income, immigrants etc. Different rules depending on years in Sweden, other social insurance etc.</p>
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Formally, the Nordic systems regarding *unemployment support* are similar in structure, but different in detail. Unemployment benefits are given to unemployed individuals, who are registered as unemployed, of working age and that have been employed for a certain period prior to unemployment. There are also in most cases unemployment benefits for those with no prior employment. In all Nordic countries apart from Iceland, the unemployment allowance is based on previous income, the highest percentage in Denmark (70-80) and the lowest in Finland (minimum level around 50). The maximum period is different between the countries ranging from 300 days to five years.

The pension systems in the Nordic countries are rather similar in structure. There is a guarantee pension for those with no or low income and there is an income based pension which is the biggest part of the paid amount. In Denmark, Sweden, Iceland and Finland there are also pension savings in funds and incentives for private pension savings. The retirement age is different in the countries, between 61 and 68 (from 2005). However, the tendency is towards more flexibility in the system, so that longer working period equals higher pension. In Sweden it is possible to retire from 61 years of age, in Finland 62 (from 2005), Denmark 65 (if entitled to early retirement then as of 60) and Norway and Iceland 67 (in Norway, however, flexible from 62).

The public sector in all Nordic countries except Iceland takes more responsibility for increasing competencies especially among the elderly on the labour market. There is also a tendency towards changing the pension system in order to increase the incentives for the elderly to stay longer on the labour market. In Norway there is a lower employer fee for older employees and in Sweden employers receive subsidies for hiring older employees. The Swedish pension system is the one

among the Nordic systems with the strongest incentives for employees to stay on the labour market in spite of that they have reached retirement age.

To summarize: the Nordic employment policy system is quite extensive on an international standard, and covers most aspects of the adult life, such as sickness, unemployment, childbirth, and retirement. Consequently, it encourages transition from sickness, unemployment and childbirth to work and vice versa. Also, the system supports senior workers to retire from work.

In this short paper we will not do any extensive analysis of the effects of different welfare and employment policies in the Nordic countries. This is an explorative study which will be followed up by a systematic comparative analysis of the impact of differing policy regimes on labour market performance.

Performance of Nordic Labour Markets

In this paper we focus on labour market performance, as access to employment is of key significance for social cohesion since employment determinates in most cases whether people are able to enjoy a decent standard of living and contribute fully to the society in which they live (European Commission, 2004). In this section we will examine the employment rate, and the unemployment rate, and transition in Europe in general, and in the Nordic countries in particular.

According to Figure 3 the employment rate in the Nordic countries is quite high, and around or above the Lisbon target of 70% in 2010. In 2002, Denmark had an employment rate of 75.9%, Finland 68.1% and Sweden 73.6% (European Commission, 2004), while the non-EU member countries Norway and Iceland had even higher employment rates. The employment rate in Iceland in 2001 was 84.6%², the highest in Europe, and the rate for Norway was 80.3% (Statistics Iceland, 2004a).

² Age 16–74.

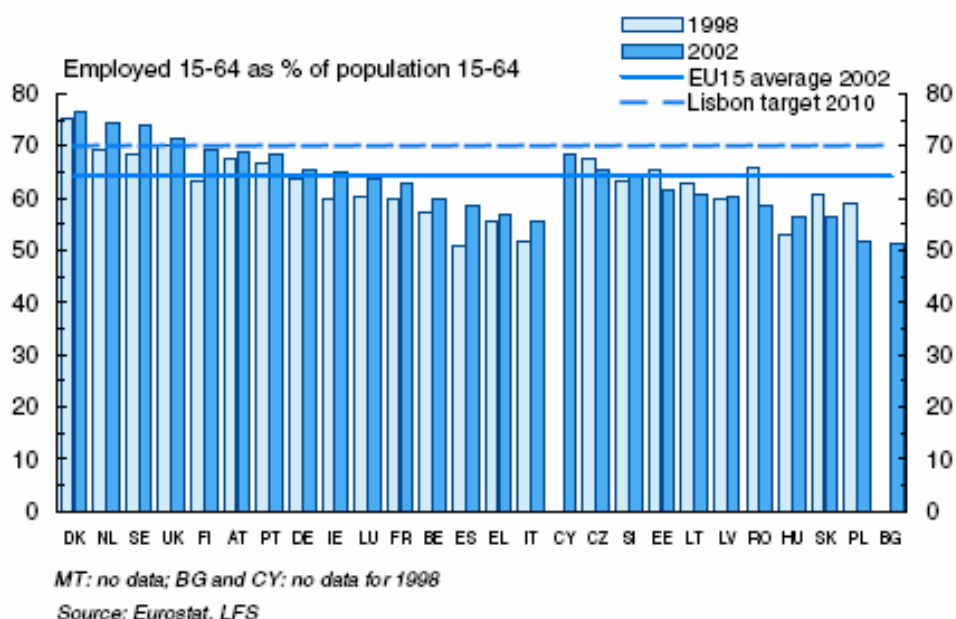


Figure 3. Employment rate in EU, 1998 and 2002.

Similarly, the unemployment rate is relatively low in the Nordic countries with the exception of Finland. Thus, the unemployment rates range between 2.3-5.1% (Finland excluded), while the average for the current 25 EU member states was 9.0% in 2002.

Table 4. Unemployment rates in the Nordic countries in 2002.

Denmark	4.6
Finland	9.1
Iceland	2.3*
Norway	3.9
Sweden	5.1
EU25	9.0

Notes: * 2001.

Sources: European Commission (2004) and Statistics Iceland (2004b)

Another indicator of the performance of the labour market, besides employment and unemployment rates, is the manner in which labour markets can activate students, sick people and parents to employment (transition rates). Given that the employment rate is quite high in Iceland, and most transitions are from job-to-job, we will below focus upon Denmark, Finland, Norway and Sweden.

Figures 4-7 show gross mobility rates by mobility types for Denmark, Finland, Norway and Sweden. All mobility rates are measured in per cent of the stock of employed in the first year of the period, which varies between the countries. By standardizing the rates it is possible to measure how much each type of mobility contributes to the total gross and net mobility in the nation as a whole and in each typology of regions.

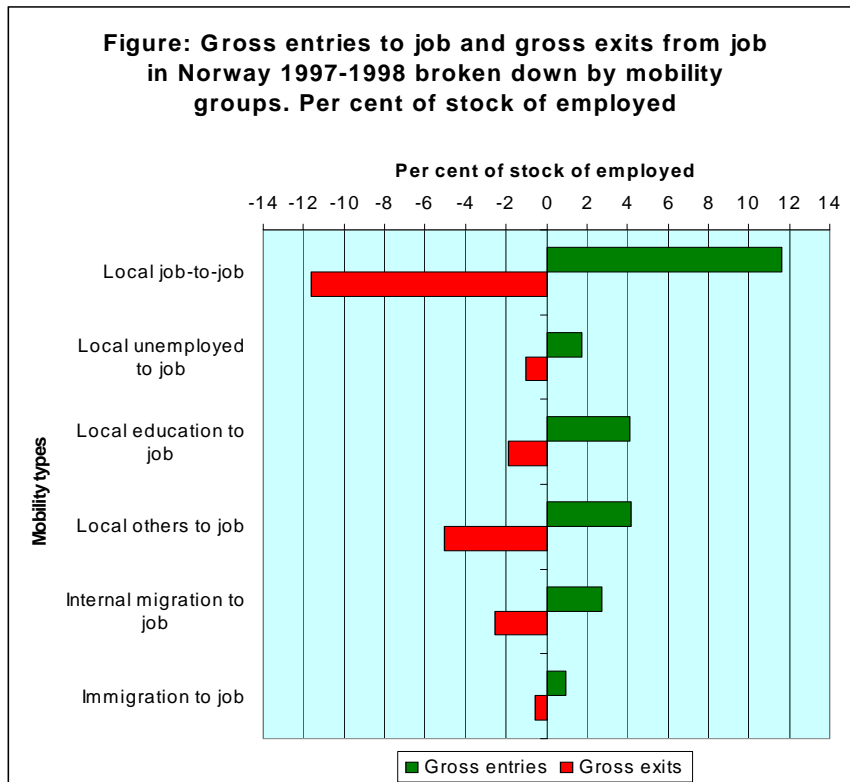


Figure 4. Gross entries to and from job, Norway 1997-1998

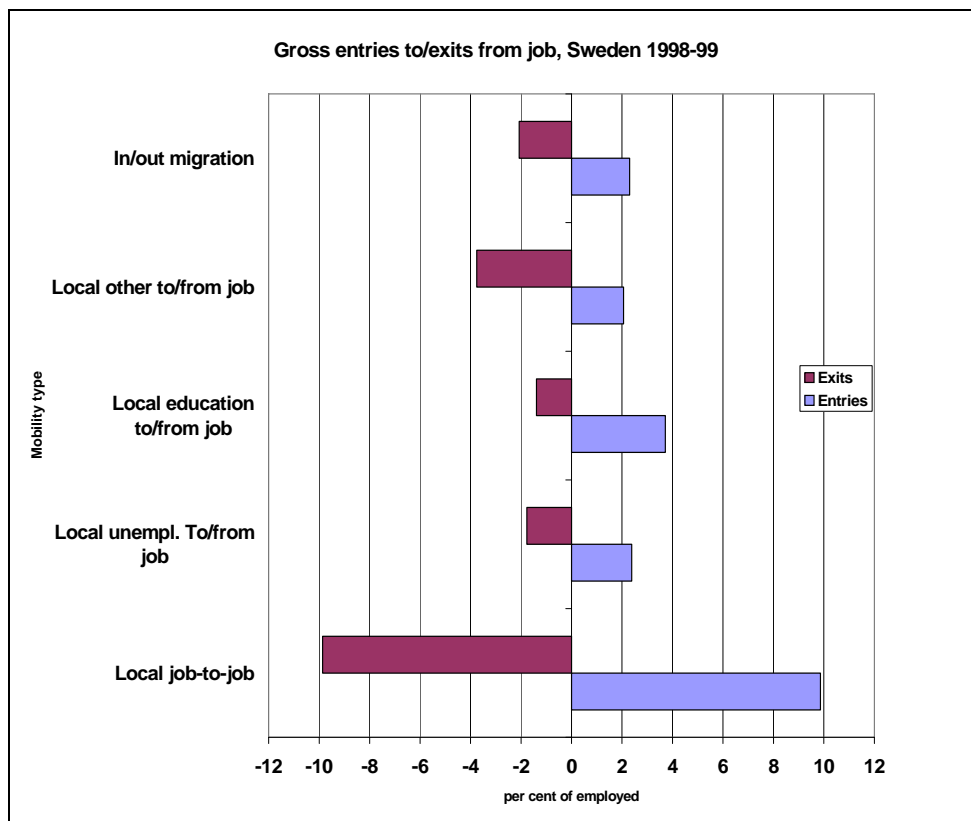


Figure 5. Gross entries to a job, Sweden 1998-1999

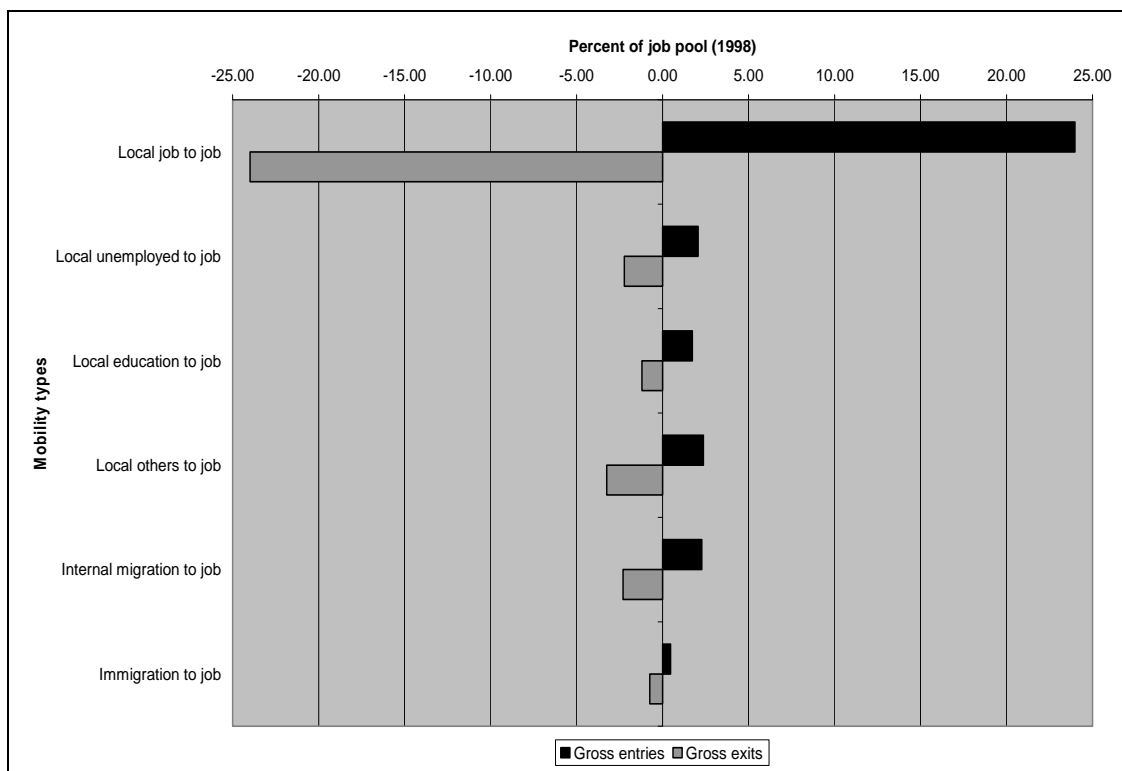


Figure 6. Gross entries to and from job, Denmark 1998-1999

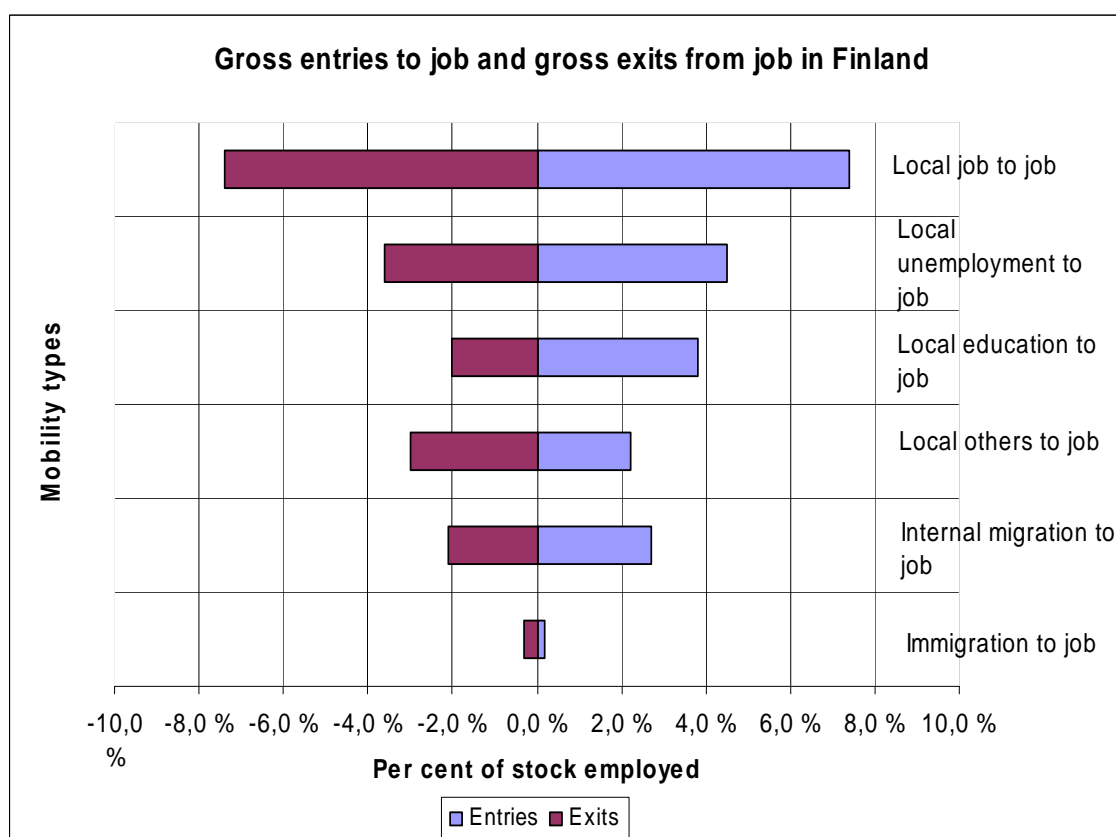


Figure 7. Gross entries to job, Finland 1999-2000.

Figures 4-7 clearly show that the most important type of mobility is the change of jobs within the local labour markets. In the local job-to-job mobility each individual transition necessarily contributes to one exit and one entry within each local labour market, thus making a balance between the exits and entries. In Norway as a whole the gross job-to-job mobility in 1997-1998 were almost 12% of the stock of employed and contributed to almost half of all gross mobility in the regional labour markets. In Sweden the job-to-job mobility was 10% in 1998-1999, and about 8% in Finland. The job-to-job mobility is exceptionally high in Denmark, 24% in 1998-1999. Due to very strong economic growth in this period, an important part of the gross entries also derives from persons outside the labour force. However, the mobility from job to out of the labour force is even higher, mostly due to the age structure of employed in most of the countries. The mobility from local education to job is also important, albeit of minor importance compared to the effect of local job shifts. When experiencing low unemployment rates in most of the countries, the entries from unemployed to job represents a rather small part of the total gross entries to job, but as expected in an upswing period the entries from unemployment are significantly higher than the exits from job to unemployment. The gross effects of immigration to and emigration from job are also relatively small.

From the above we can conclude that the performance of the Nordic labour markets is relatively good in an European perspective. The employment rate is high, and the labour markets manage to activate the labour force to a great extent. Hence, the employment policy seems to support high employment rates, and transition.

Local Labour Market Performance

EU countries differ considerably in terms of their internal labour market structures and economic performance as already noted. That is also the case in the Nordic countries.

From Table 5 we can see that the employment rate varies a lot between the best and worst performing LLMs in the Nordic countries, except in Iceland, where both employment and unemployment is similar independent of location.³ In Finland the difference between the highest and lowest employment rates is 28.4 percentage points, 20.1 percentage points in Denmark, 12.6 percentage points in Norway, and 28.4 percentage points in Sweden. This is despite the advance employment policies in these countries. Similarly, the unemployment rates vary greatly between LLMs in the Nordic countries.

³ One reason for the low variance in Iceland is due to that the labour market statistics only permits an analysis between the capital area and other areas.

Table 5. The highest and lowest employment and unemployment rates in Nordic LLMs. Age groups 16-64 years.

	Finland	Denmark	Iceland	Norway	Sweden
Highest employment rate	77.6	79.9	86.4	81.9	79.9
Lowest unemployment rate	1.9	2.4	1.2	1.3	1.3
Lowest employment rate	49.2	59.8	86.1	69.3	51.5
Highest unemployment rate	18.9	6.2	1.4	6.4	6.6

Another indication of the LLMs performance is how well they activate different age groups, as well as people with different educational levels.

The capital regions/metropolises in Denmark, Finland, Norway and Sweden shows the strongest positive net flows of labour in the youngest age group while the micro labour areas shows the lowest positive net growth (see Fig. 8-10). There are some notable national differences. Accordingly, the inflow of young labour (16-34 years) was 10% in the capital area in Norway, 6% in Denmark and Sweden, but only 3.5% in Finland (the low net flows of employment in Finland can probably be explained by high unemployment and low employment rates). In Norway and Finland, the net figures for the age group 35-54 years are rather small but positive, except from regional centres with university in Norway. In Denmark, on the other hand the net figures are negative in all regions. The net figures for the two oldest age groups are generally negative and most negative in medium sized towns and regions in Norway for the age group 55-64 years, and in the capital region for the oldest age group. Similar pattern is found in Denmark and Finland. The net negative flows of labour in the age groups 35-65 in all regions is of special concern for Danish policy makers.

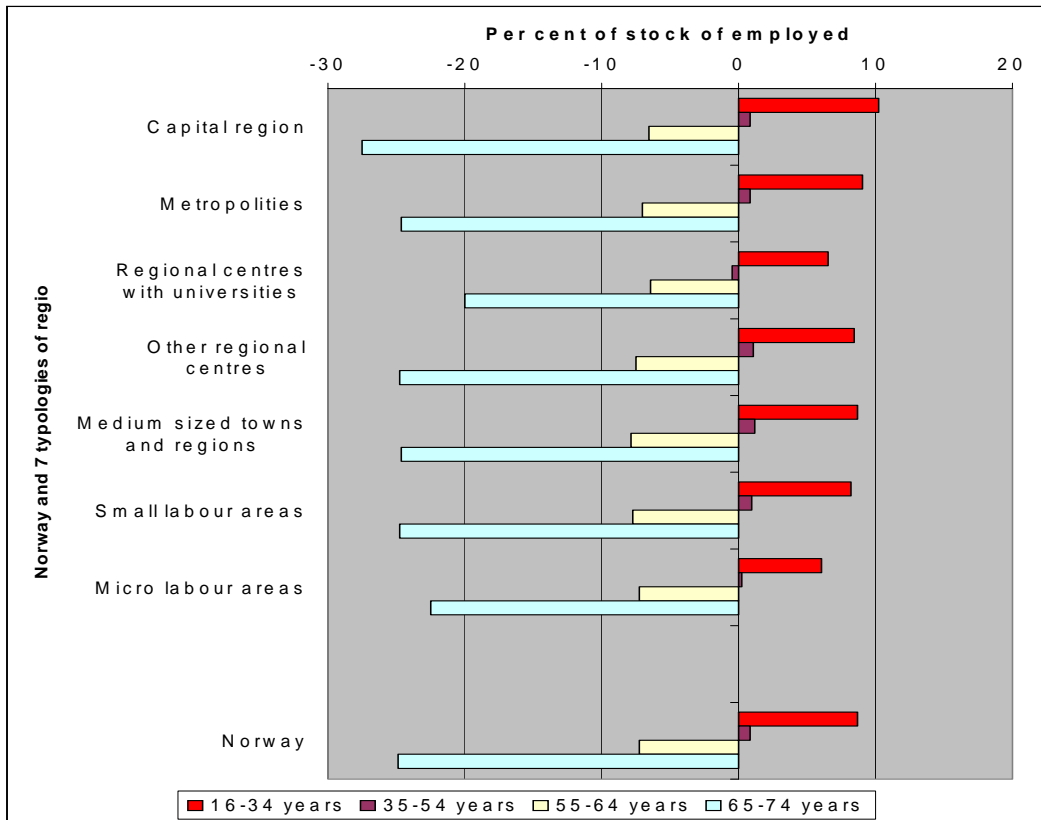


Figure 8. Net flows of labour by age 1997-1998 in Norway, and 7 typologies of regions.

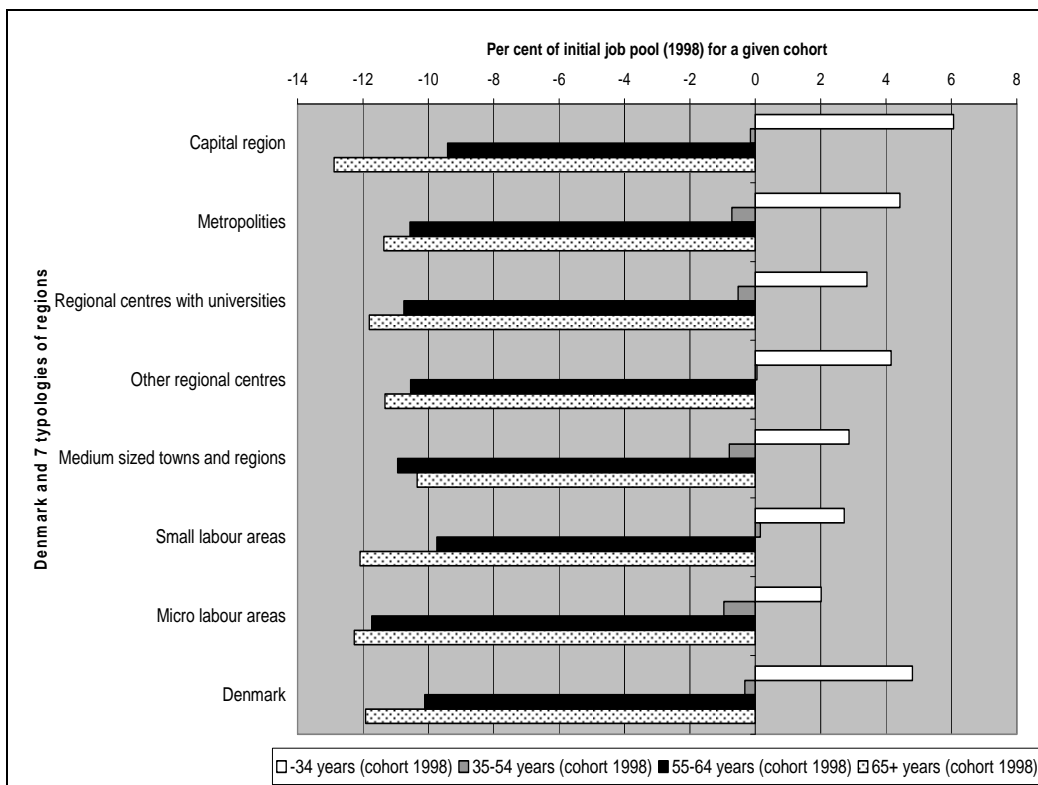


Figure 9. Net flows of labour by age groups 1998-1999 in Denmark, and 7 typologies of regions.

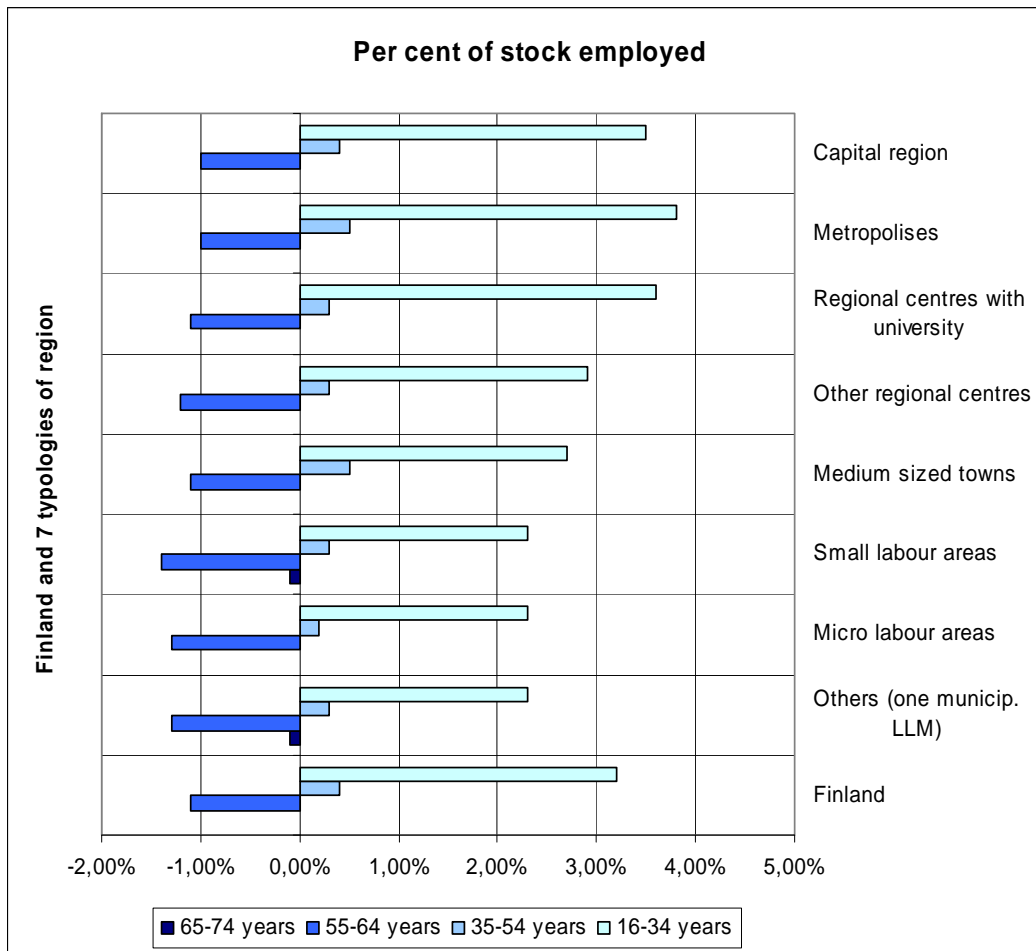


Figure 10. Net flows of labour by age groups 1999-2000 in Finland, and 7 typologies of regions.

The positive effects of net flows of employed with higher education is definitely strongest in the capital region and metropolises in all the Nordic countries, followed by regional centres, while micro labour areas show negative net effects of labour flows of higher educated employed (see Figures 11-14). Some national differences are present here. In Denmark, Norway and Sweden the net flows of higher educated labour is between 1.5-3.5% in the capital areas, whereas it is only about 0.5% in Finland.⁴ Also, the highest net growth rates in Norway and Finland are for middle educated labour in most regions, while it is highest for higher educated labour in Denmark and Sweden. The net flows of lower educated labour are mostly negative except from the capital regions in most of the countries. In Denmark flows of lower educated labour is even negative in the capital area, while it is exceptionally positive in the Stockholm area in Sweden counting for nearly 4% of net flows.

⁴ The special situation in Finland can be explained by a rapid growth of service industries which require primarily middle educated workers.

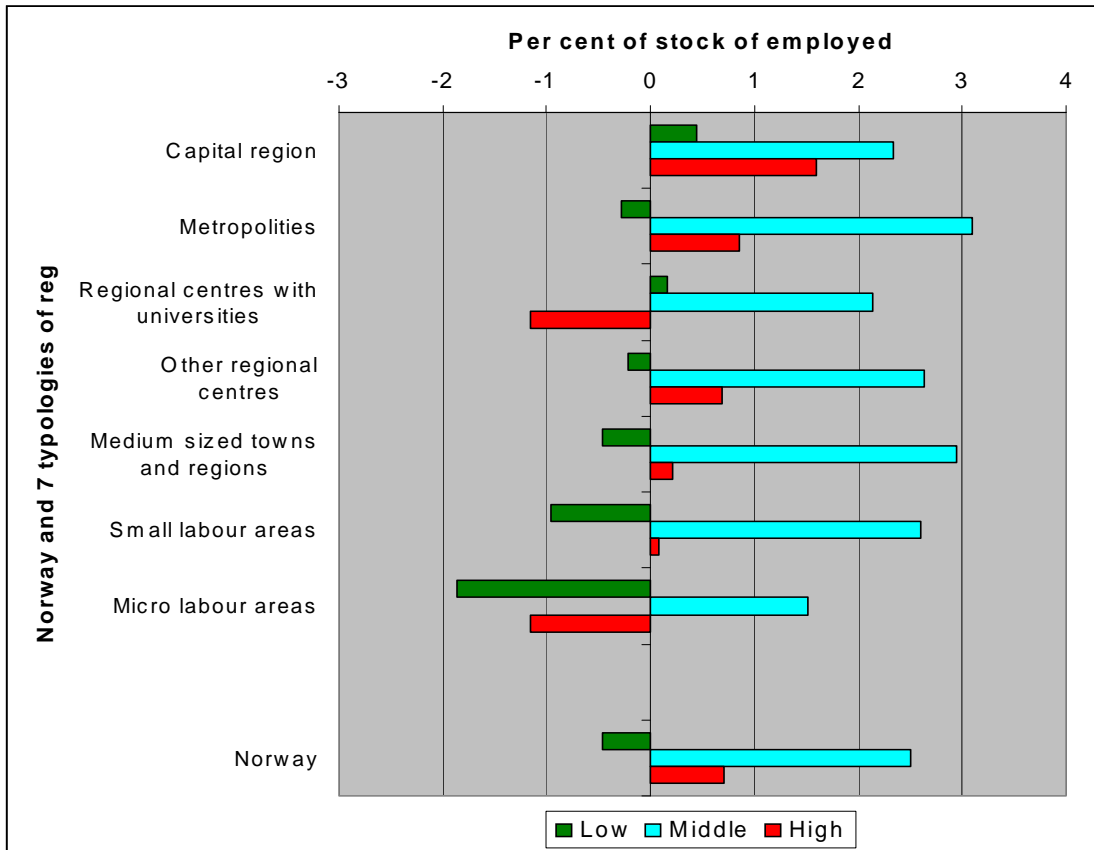


Figure 11. Net flows of labour by educational levels 1997-1998 in Norway, and 7 typologies of regions.

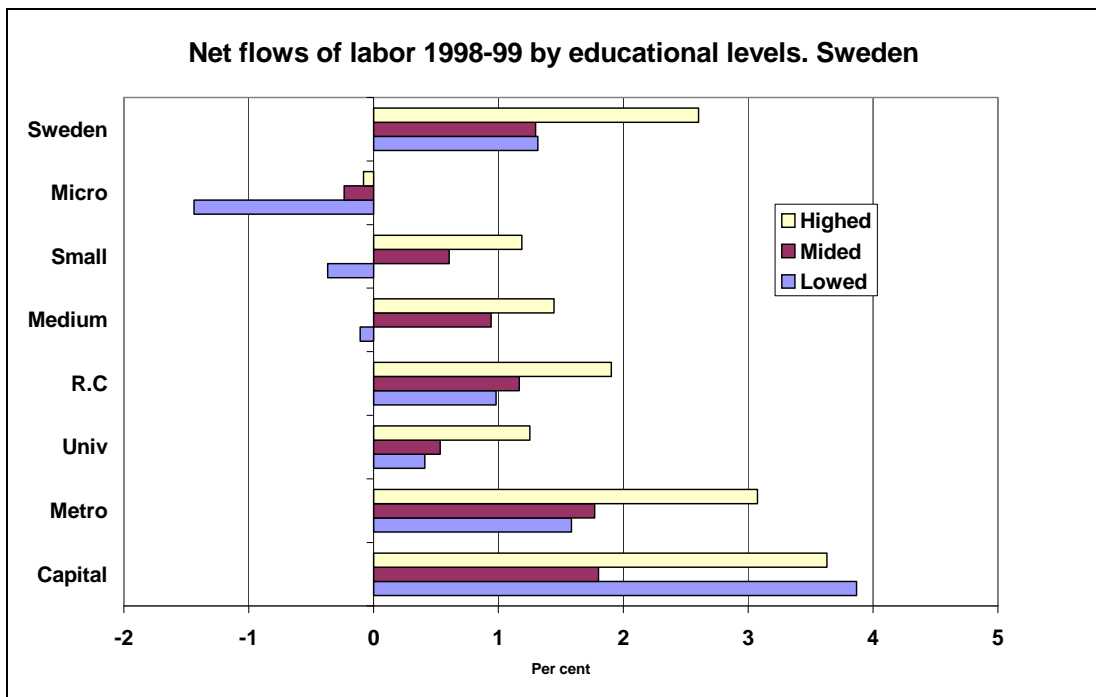


Figure 12. Net flows of labour by educational levels 1998-1999, Sweden, and 7 typologies of regions.

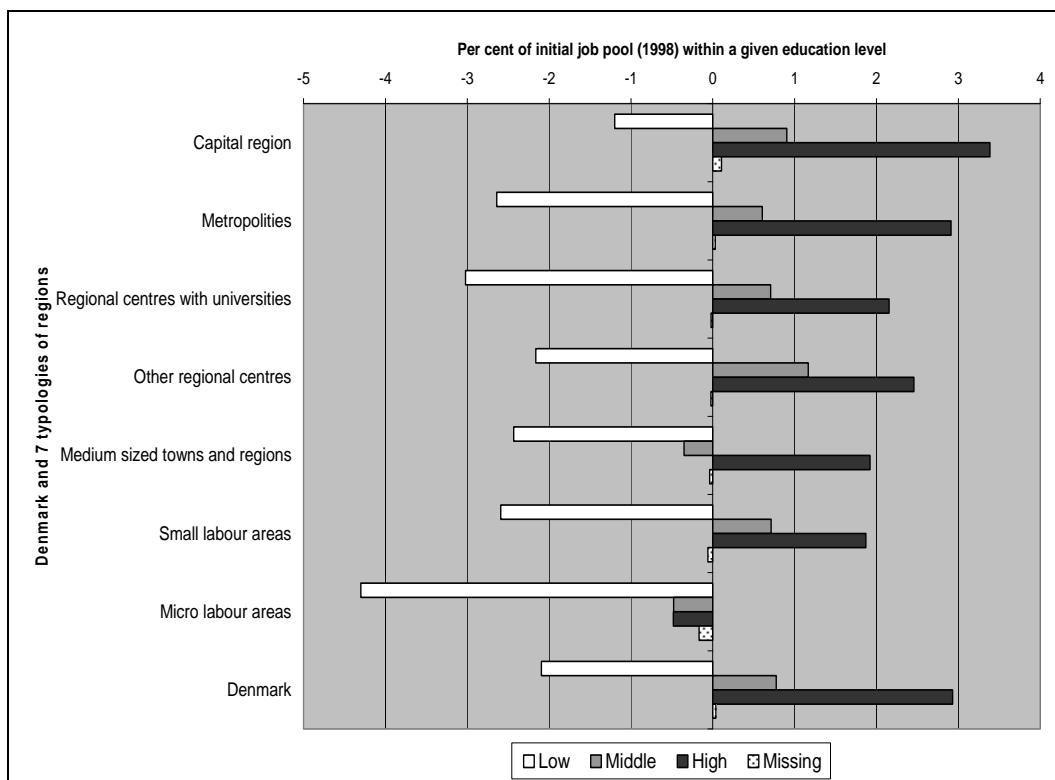


Figure 13. Net flows of labour by educational levels 1998-1999 in Denmark, and 7 typologies of regions.

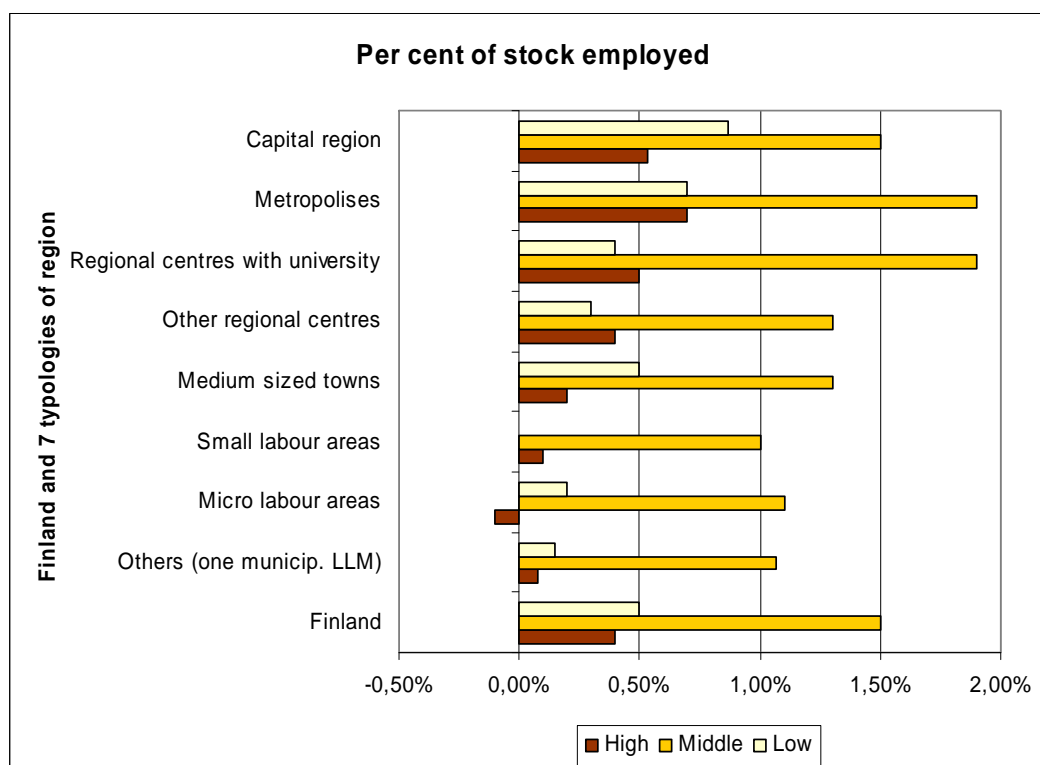


Figure 14. Net flows of labour by educational levels 1999-2000, Finland, and 7 typologies of regions.

In this section, we have seen that the LLMs in the capital regions, metropolises, as well as regional centres with universities seem to perform best in the Nordic countries regarding activating the labour force while micro labour markets have serious problems.

Policy Implication

So far we have seen that the general performance of the labour markets in the Nordic countries is relatively high on an European standard. We have also seen that even within in the Nordic countries with high employment rates, and relatively low unemployment levels, a noticeable difference is observed in the performance of LLM. From this we can conclude that the national employment policy is able to activate the larger LLM, while a more precise policy is needed for the small labour markets.

This paper has shown that the many small labour markets in depopulating regions in the Nordic countries are in particular need for notification. The options for good transitions in these regions are extremely limited and probably decreasing over time, in spite of large input of labour market, social and structural policies. That is particularly the case in attracting young, well educated, workers. This calls for a Northern dimension of the European policy for full employment and for extraordinary attention. For the large parts of the territories in Sweden, Finland, Iceland and Norway that are sparsely populated, it is questionable whether these regions will ever provide a functional market for labour as their size is below the “critical mass”. They are dominated by a secondary labour market, based on publicly subsidized employment. The aging population in these regions demands services from the shrinking - and also ageing - local labour force. A future challenge for policy is how it could ever be possible for “making transitions pay” in these parts of the European space?

Conclusion

The purpose of this paper is twofold. First, the focus has been on the current spatial pattern of demographic change in Nordic countries. The rationale for this typology was to display where, and at which dimensions, problems caused by different types of demographic change appear in different countries. The underlying question concerns where and to what extent policy intervention should be prioritized to meet threats to the goal sustainable labour markets. Second, a comparative analysis was undertaken of matching processes driven by demographic change and related transitions at local labour markets in Nordic countries. The underlying questions here concerns where rates of renewal are hampered by structural features of the LLMs, and where policy intervention contributes to a more balanced transition.

In order to classify the 493 Nordic LLMs with respect to total population change, natural population change and migration, six different combinations were formed. The majority – 75 percent – of the Nordic LLMs experienced a population decrease between 1992 and 2002. Most of the retarding regions can be placed in type 6, where both the natural population change and net-migration were negative (53

percent). This is the most unfavourable case and can be characterised as a depopulation case. Type 5 involves 17 percent of the regions and 6 percent are placed in type 4.

Among the growing regions, most regions are classified in type 1, where both the natural population change and net-migration were positive. These LLMs are in a favourable position and often localised in or around the metropolitan or big city areas - 13 percent of the labour markets are classified in this category. Almost 6 percent are in type 2 and the rest – also approximately 6 percent – in type 3.

Almost two thirds of the LLMs – 64 percent – had a natural population decrease during the period 1992-2002. Only 9 percent of these LLMs were expansive in the sense that they experienced a population increase as a consequence of net in-migration. This means that more than 90 percent of the Nordic LLMs with natural population decrease also experienced net out-migration that accentuated the population decrease. These areas have a difficult situation and can in many cases also be characterised as depopulation areas.

Three hypotheses were presented in the paper regarding local labour market performance and employment policy. These are:

H1: Given the extensive welfare and labour market policies the employment rates in the Nordic counties are relatively high on an European level.

H2: Given the extensive welfare and labour market policies there is a relatively small difference in the performance of LLMs in the Nordic countries.

H3: Given past research the greatest differences in the performance of LLMs will be found in the capital areas/metropolises on the one hand, and small labour markets on the other hand.

H3-1: Economic renewal – operationalized as rate of introduction of labour with higher education – is more frequent in metro and university based LLMs than in small LLMs.

H3-2: Demographic change – operationalized as substitution of elderly retiring labour with young labour with recent education – is more efficient in metro and university based LLMs than in other LLMs.

In this paper we have shown that the employment rate was quite high in the Nordic countries. It was highest in Iceland, 84.6% (2001) and lowest in Finland, 68.1% (2002). That can be compared to the average 63.9% for the European Union in 2001. This gives some support to Hypothesis I.

Another conclusion is that the employment rate varies a lot between the best and worst performing LLM in the Nordic countries, except in Iceland, where both employment and unemployment is similar independent of location. In Finland the difference between the highest and lowest employment rates is 28.4 percentage points, 20.1 percentage points in Denmark, 12.6 percentage points in Norway, and

28.4 percentage points in Sweden. This is despite the advance employment policies in these countries. Similarly, the unemployment rates vary greatly between LLM in the Nordic countries. This means that Hypothesis 2 is rejected.

Still another conclusions of this paper is that the positive effects of net flows of employed with higher education is definitely strongest in the capital region and metropolises in all the Nordic countries, followed by regional centres, while micro labour areas show negative net effects of labour flows of higher educated employed. This gives some support to Hypothesis 3 and 3-1. Moreover, the capital regions/metropolises in Denmark, Finland, Norway and Sweden shows the strongest positive net flows of labour in the youngest age group while the micro labour areas shows the lowest positive net growth. Also, the capital regions/metropolises in Denmark, Norway and Sweden showed the strongest negative flows of elderly labour. Hence, the Hypothesis 3-2 is partly supported.

The findings of this paper strongly indicate that general national employment policy is not sufficient tool for activating LLMs. Although, such policy seems to activate larger LLMs, a more refined policy measure is needed for the small labour markets in sparsely populated areas of the Nordic countries.

The purpose of this explorative paper has been to evaluate how longitudinal data described the transitional characteristics of contemporary labour market can be used to compare labour market – as well as labour market policy – performance in similar regions in different countries in Europe. The experiences reported in this paper are promising.

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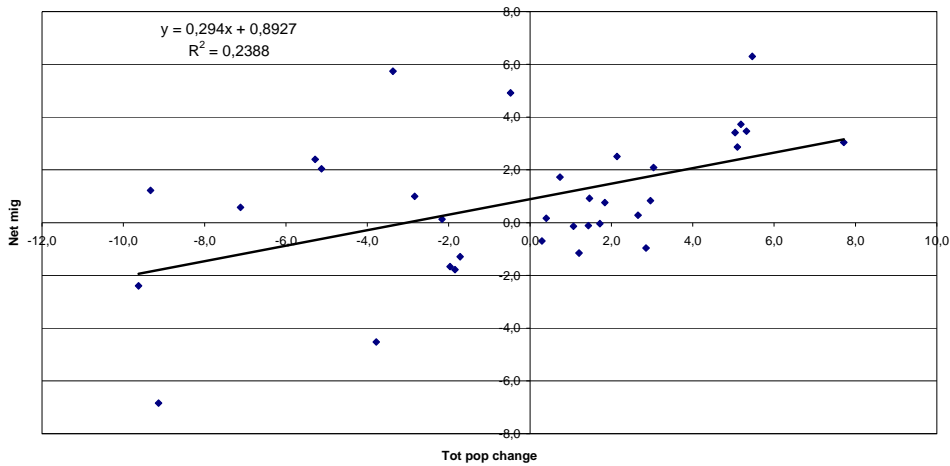
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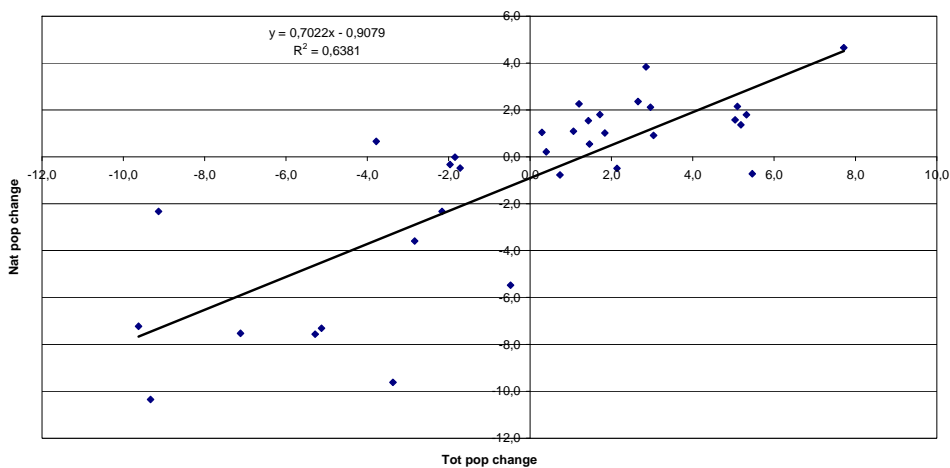
Appendix

Correlations between total population change, natural population change and net migration within the Nordic countries 1992-2002. Per mille. Source: Estimates based on data from Nordregio.

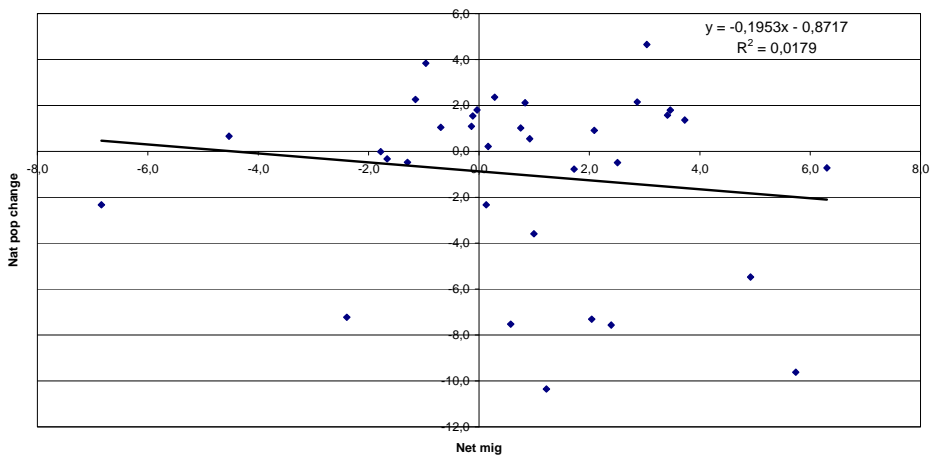
Correlation between total population change and net migration in Denmark 1992-2002.
34 LLMs



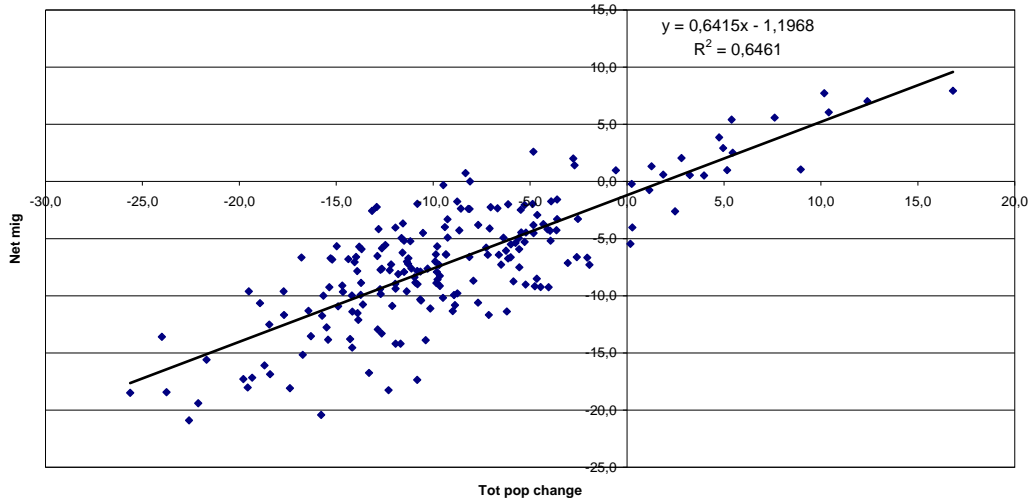
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34 LLMs



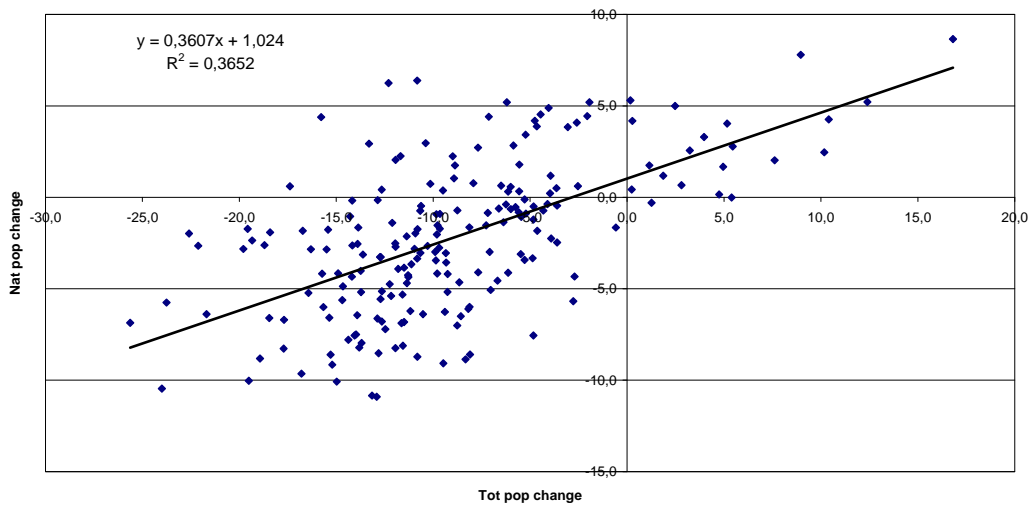
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34 LLMs



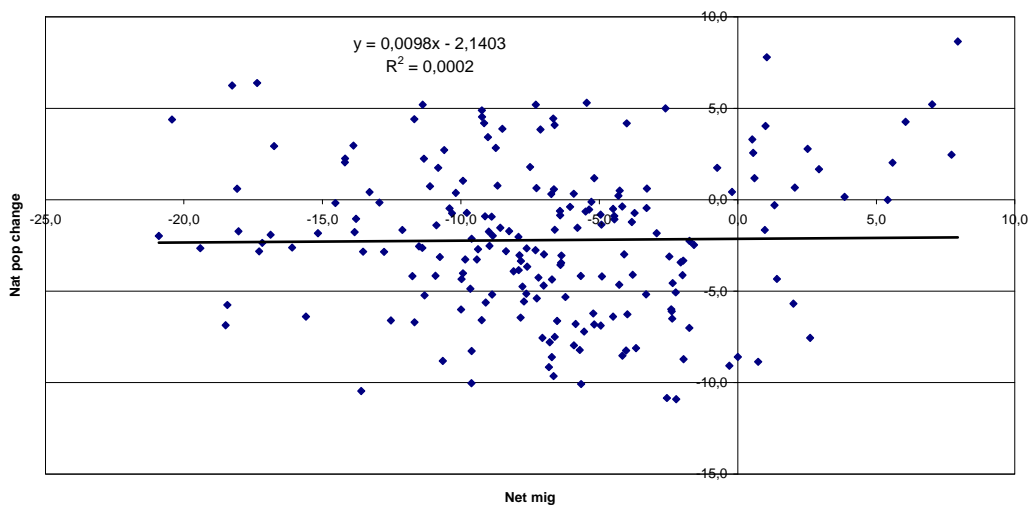
Correlation between total population change and net migration in Finland 1992-2002.
198 LLMs



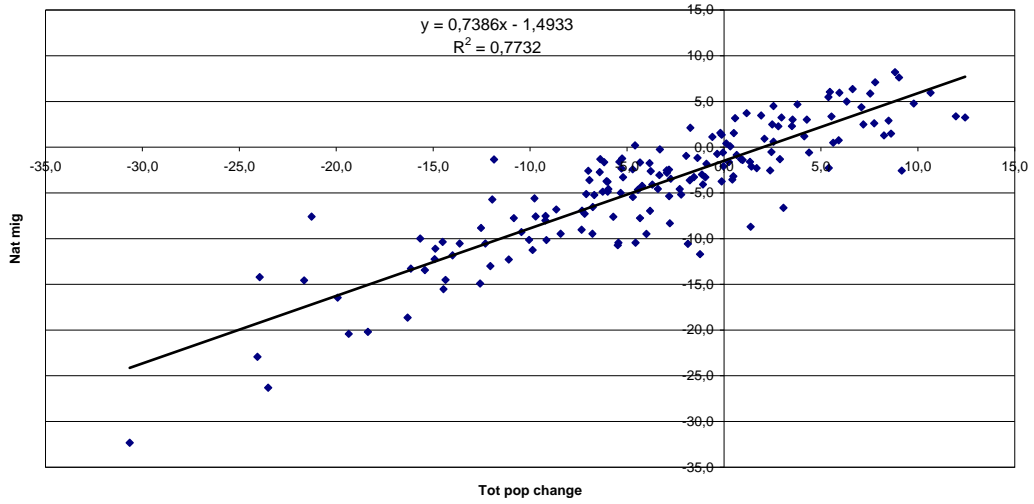
Correlation between total population change and natural population change in Finland 1992-2002.
198 LLMs



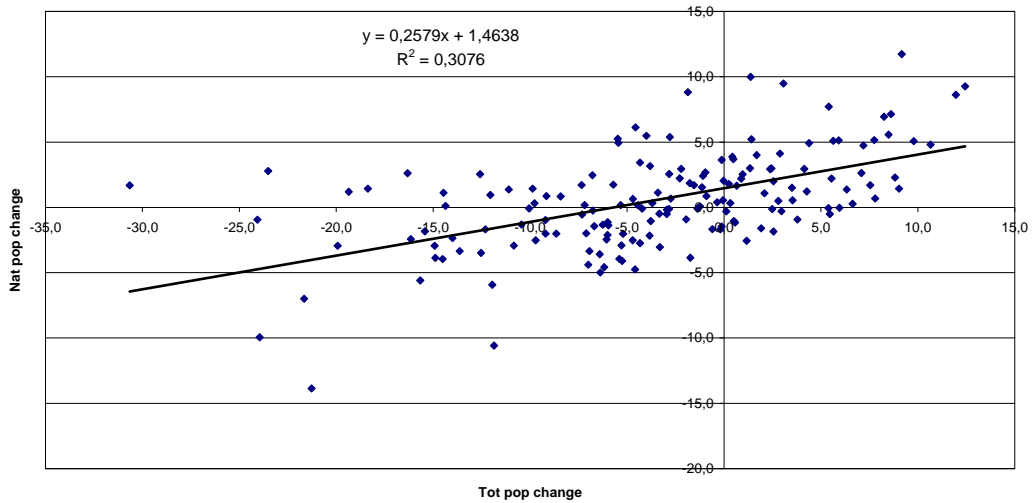
Correlation between net migration and natural population change in Finland 1992-2002.
198 LLMs



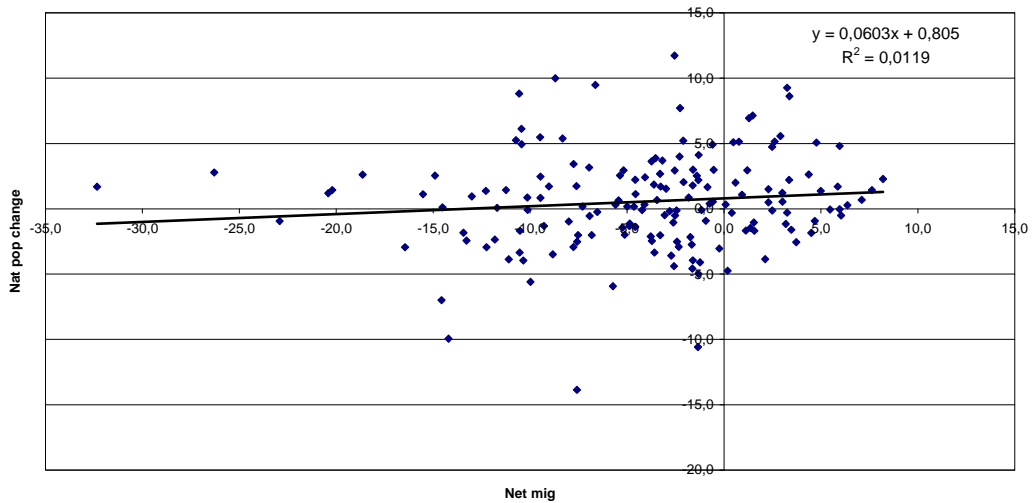
Correlation between total population change and net migration in Norway 1992-2002.
198 LLMs



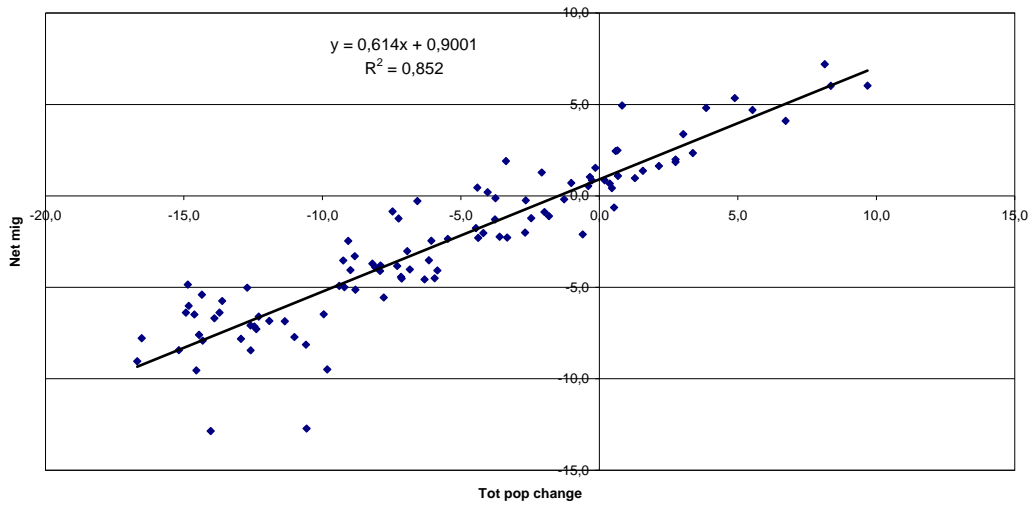
Correlation between total population change and natural population change in Norway 1992-2002.
161 LLMs



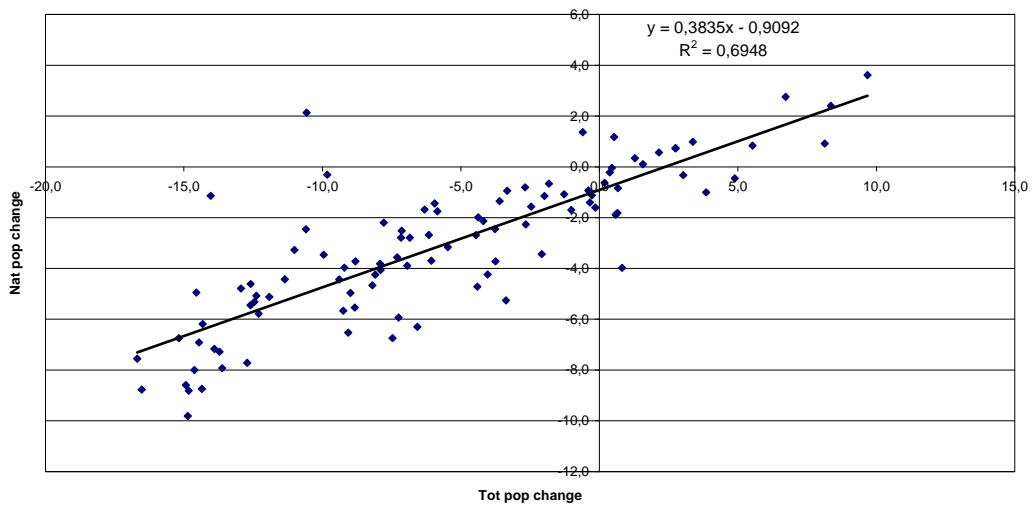
Correlation between net migration and natural population change in Norway 1992-2002.
161 LLMs



Correlation between total population change and net migration in Sweden 1992-2002.
100 LLMs



Correlation between total population change and natural population change in Sweden 1992-2002.
100 LLMs



Correlation between net migration and natural population change in Sweden 1992-2002.
100 LLMs

