

# Interregional labour force mobility in Norway

## Gross-stream analysis and supply-side adjustments

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*This article presents Norwegian results from a Nordic research project investigating the relationship between geographical mobility within each country and status in the labour market. The analysis shows considerably higher migration frequencies among unemployed compared with employed in nearly all population groups and regions. The results show that there has been higher transition from unemployment to employment among unemployed migrants than among their non-migrant counterparts, especially for unemployed with higher education. On the other hand, employed migrants showed higher transition from employment to unemployment and out of the labour force compared with employed non-migrants. The results also reveal the different position of the counties in terms of attractiveness for migrants. A general conclusion is that central counties are significantly more attractive than other counties, both for unemployed and employed. This is found both in a period of economic expansion and in a recession. The migration process has thus contributed to a certain displacement of both employed and unemployed between the counties. Especially in the boom period this indicated a decrease of imbalances between regional labour markets.*

### Introduction<sup>1</sup>

This article presents Norwegian results from a Nordic research project investigating regional migration patterns within Nordic countries. The main purpose is to compare regional migration processes with emphasis on the relationship between regional migration and changes in regional labour markets. The first stage has been to make comparative analyses of regional migration by using gross-stream-data, analysing the migration patterns broken down by the migrants' and the non-migrants' status in the labour market. The current stage is concentrated on supply-side adjustments in the regional labour markets. One main task has been to answer the question whether unemployed migrants do achieve a better labour market position, particularly compared with their non-migrant counterparts. Further, it has been important to measure the geographical mobility among employed persons, to investigate regional imbalances through employment turnover, and to determine to what extent employed migrants maintain their status in the labour market. Investigations measuring the relative migration frequencies among unemployed compared with employed have also been carried out. The results are mainly presented at a general regional level, aggregating all regional figures to represent national averages. The analysis includes, however, results showing how these processes

have taken place at a more detailed regional level. Two periods of investigation have been chosen to cover the migration processes during cyclical upturns and downturns.

In the next section these analyses are broadly set into a hypothetical and historical framework. This includes a brief discussion of approaches that will also be important to analyse in the further development of the project. Section three presents a short description of the various definitions and the use of data and methods in this study. The fourth section presents some Norwegian results from the first stage of this main project, primarily based on the above-mentioned issues.

### Labour market imbalances

Long-distance migration of labour is often considered a 'necessary evil' in all the Nordic countries. Labour market policies have for several years encouraged unemployed to search for jobs outside their local labour markets. Labour market policies have also to some extent emphasised the importance of intersectoral mobility, hence indirectly encouraging geographical mobility. Higher geographical mobility of the labour force is expected to increase the general level of employment. On the other hand, regional policies have given incentives to private firms to locate in regions with a shortage of jobs, as well as establishing mechanisms for regional equalisation of living standards through the taxation systems. The concepts of "regional balance" and

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<sup>1</sup> This article is an excerpt from a research co-operation project between Finland, Norway and Sweden, represented by researchers from the University of Oulu, The Royal Institute of Technology in Stockholm, The Swedish Institute for Regional Research in Östersund, and Statistics Norway in Oslo (see e.g. Stambøl, ed. 1996, 1997, Johansson et al., 1997, Stambøl, 1998a,b).

"consolidation of the settlement pattern" have been widely accepted statements by politicians. Full interregional balance in terms of migrant flows has, however, never been fully achieved. Population growth in a few metropolitan regions and a number of regional centres and a corresponding decline in peripheral regions have dominated for a long time.

In theory, most long-distance migration is considered to be associated with regional differences in labour supply and demand. Through rational decisions, labour is supposed to move from regions with a limited number of jobs, high unemployment and an overrepresentation of declining industries, to expansive regions with a surplus of jobs. There is no doubt that, in a historical perspective, the mobility patterns have largely reflected the course of structural change of the regional labour markets. However, it seems that adjustment through mobility due to different growth rates between regional labour markets was distorted by institutional features, especially in the 1970s and 1980s. For instance, unlike many other countries, the expansion of the service sector in Norway did not add to the increase of the rate of migration to larger cities. The main reason was the relatively strong influence of the public sector in service production, especially in health care and social services, but also the primary aim to improve accessibility to higher education in all regions might have limited long-distance migration. The equalisation of living standards through the taxation system and the welfare state led to an equalisation also between regions in terms of disposable income. Related to the expansion of public services, labour market participation among women increased to among the highest in Europe. Hence, for many families, migration leads to a necessary search for two jobs in the region of destination (e.g. Wheelock, 1994, Green, 1997). In addition, there has also been a tradition of strong labour unions demanding the same wage for the same job in each region. In spite of earlier findings in Norway, showing positive relationships between regional labour market change and gross and net in-migration (e.g. Stambøl, 1991, 1994 and Stambøl et al., 1998), it is likely that institutional features led to some reduction of the importance of the geographical distribution of jobs to migration.

In earlier times problems of accommodation were characterised by structural change in the economy at the industry or sector level. Some industries declined while others expanded, and this was seen as no great problem as it was a natural result of structural change. This process was usually associated with transfers of resources between different companies, industries, and sectors. The problem was merely to channel the newly unemployed to those industries and sectors that needed workers. Today's matching problem is of a different kind, with the existence of both shortages and surpluses of labour within the same companies, industries, and commuting regions. The reason for this is that the labour market has become more and more segmented in terms of competence levels. A segmented labour market consists of a number of sub-markets that are more or less separated from one another by various obstacles, resulting in a heterogeneous and unsubstitutable labour force. These sub-mar-

kets have their own supply and demand situations, their own wage structures and their own surpluses or shortages of labour. Mobility between segments is low, while it is high within individual segments. Segmentation of the labour force with respect to the supply side corresponds to its segmentation with respect to the demand side. The composition of the labour market differs in the various regions. The result of these processes has been a further regional segmentation of the labour force, a development which has hampered migration from rural and old industrial areas to more expansive and dynamic ones (e.g. Massey, 1995, Johansson, 1996, Johansson et al., 1997).

## Data and definitions

In this analysis Norway is basically divided into 19 regions, which correspond to the 19 counties. The results presented in this article are, however, aggregated to seven broader regions and to the national level. Earlier investigations of geographical mobility have shown that the labour market and education have a tendency to become increasingly important factors in explaining migration at a higher geographical level (see e.g. Stambøl, 1991, 1994, Stambøl et al. 1998). An important aspect in our migration analysis is the classification of individuals according to their labour market status; e.g. employed, unemployed and outside the labour force. In earlier migration analyses this division was used on cross-sectional data (see Stambøl 1995), but in this analysis we also take into consideration the change in the labour market status of each individual by using gross-flow data. The aim is primarily to analyse the change of labour market status connected to the migrants and the migration processes. In many cases, however, it has been important to compare changes in labour market statuses among migrants and non-migrants. Necessary data for all individuals of working age are therefore established. The data, which cover the whole population, are collected from register-based data sources at Statistics Norway.

The end of the 1980s and the first years of the 1990s represent a clear cyclical downturn in the Norwegian economy, while the nation experienced a recovery during 1993 followed by significant economic growth in 1994 and 1995. The comparison of the migration analyses are based on changes during two two-year periods, where 1988-89 is chosen to represent a recession period while 1994-95 represents a period with growth in the national economy.

Migrants are defined as individuals living in different counties in the first and second year of each period. Definitions of changes of labour market statuses follow similar patterns, where the Norwegian data show the labour market status of each individual in the first and second year of each period. A definition of socio-economic and socio-demographic groups includes the variables gender, age and education, and in some cases also the marital status. Individuals of working age are defined as persons 16-74 years. Education is divided into three categories: low, intermediate and higher education.

**Figur 1. Personal groups by different status in the labour market**

| The labour force                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                        |                               | Employed | Outside the labour force |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------|-------------------------------|----------|--------------------------|
| Unemployed                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                               |                                        |                               |          |                          |
| Unemployed who have been employed part of the year                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                        |                               |          |                          |
| Unemployment insurance contribution                                                                                                                                                                                                                                                                                                                                                                                                                              |                               | No unemployment insurance contribution |                               |          |                          |
| Unemployed 1-6 months                                                                                                                                                                                                                                                                                                                                                                                                                                            | Unemployed more than 6 months | Unemployed 1-6 months                  | Unemployed more than 6 months |          |                          |
| Further division by socio-economic and socio-demographic groups in the initial year of each period:<br><b>Gender:</b> Male, female.<br><b>Age:</b> 16-24 years, 25-44 years, and 45-74 years.<br><b>Education:</b> Unspecified education, lower education (primary school), intermediate education (secondary school), and higher education (university and high school). (1 October in 1987 and 1993).<br><b>Marital status:</b> Single, married or cohabitant. |                               |                                        |                               |          |                          |
| Periods of investigation: 1988-1989 Recession, 1994-1995 Cyclical upturn.<br>Norwegian regions: 19 counties. – Further aggregated to 7 regions.                                                                                                                                                                                                                                                                                                                  |                               |                                        |                               |          |                          |

The labour market status groups include, in addition to the three categories mentioned above, a fourth status group comprising both employed and unemployed. This is due to the definition of employed and unemployed, where the data cover employed and unemployed during the whole year, thus including individuals who were partly unemployed and partly employed during the same year. One consequence is that the data capture a large share of the unemployed, because the number of unemployed during a year is higher than the stock of unemployed at a certain point of time. In parts of the analysis, unemployed are further divided by length of their unemployment and by their unemployment insurance contribution status.

The variables used in the analysis are shown in figure 1.

## Empirical results

### Migration propensity among unemployed and employed

There are reasons to expect differences in migration rates between unemployed and employed. Unemployed are not tied up by employment and might be more motivated and flexible to search for a job outside their local labour market. There can, however, be factors that prevent the unemployed from moving, such as different types of social arrangements. On the other hand, there are also many types of reasons why employed move, as for example, better position (career migration), better wages or insecurity in the local labour market.

Analyses have been made showing migration rates among unemployed and employed. It has further been essential to study the differences in migration rates between different population groups. The results show a relatively high mobility between regions among unemployed in both periods of investigation. Total female unemployed showed somewhat

higher migration frequencies compared with unemployed men. Higher migration propensity by increasing educational level has been observed, and migration frequencies among unemployed with higher education were almost twice as high compared with unemployed with intermediate education and almost three times higher than among unemployed with lower education. Further, there was much higher geographical mobility among short-term unemployed compared with long-term unemployed, among unemployed living alone compared with married unemployed or unemployed cohabitants and finally among unemployed not receiving any unemployment insurance contribution compared with unemployed who received an insurance contribution. The geographical mobility among employed in these periods followed approximately the same patterns for gender and educational level.

The hypothesis entails the expectation of higher geographical mobility among unemployed and employed during an economic upswing than during a recession. During periods with employment growth, there are more jobs to move to, and the employed take a higher risk to change job. In this process the turnover in the labour market is expected to increase. The general optimism that spreads during economic upswings and, correspondingly, pessimism during recessions are expected to support the hypothesis of increased geographical mobility during a boom. A counter hypothesis has, however, been presented, i.e. that during a boom there is also an increase of jobs in each individual's local labour market, which might reduce the need to migrate in order to obtain a job.

In Norway the migration propensity has been somewhat higher during the recession 1988-89 compared with the boom 1994-95. There are no clear reasons that explain the generally higher geographical mobility during the years of economic recession at the end of the 1980s. Lower out-migration of unemployed from the capital region in the

**Table 1. Migration rates of unemployed in 1988-89 (recession) and 1994-95 (boom) compared with migration rates of employed. By gender, age and education. All counties. Index for employed migrants = 100**

| Age and education      | Men       |           | Women     |           |
|------------------------|-----------|-----------|-----------|-----------|
|                        | 1988-1989 | 1994-1995 | 1988-1989 | 1994-1995 |
| <b>All age groups</b>  |           |           |           |           |
| Unspecified education  | 306       | 240       | 188       | 211       |
| Lower education        | 379       | 383       | 465       | 525       |
| Intermediate education | 229       | 285       | 262       | 325       |
| Higher education       | 277       | 259       | 319       | 321       |
| Average                | 259       | 247       | 270       | 279       |
| <b>16-24 years</b>     |           |           |           |           |
| Unspecified education  | 292       | 633       | 189       | 274       |
| Lower education        | 184       | 302       | 198       | 313       |
| Intermediate education | 121       | 159       | 138       | 160       |
| Higher education       | 118       | 88        | 127       | 172       |
| Average                | 138       | 163       | 140       | 167       |
| <b>25-44 years</b>     |           |           |           |           |
| Unspecified education  | 314       | 182       | 169       | 141       |
| Lower education        | 361       | 284       | 343       | 375       |
| Intermediate education | 273       | 279       | 277       | 274       |
| Higher education       | 266       | 236       | 325       | 268       |
| Average                | 275       | 225       | 234       | 217       |
| <b>45-74 years</b>     |           |           |           |           |
| Unspecified education  | 209       | 213       | 175       | 407       |
| Lower education        | 243       | 320       | 354       | 299       |
| Intermediate education | 349       | 323       | 455       | 408       |
| Higher education       | 204       | 248       | 203       | 290       |
| Average                | 253       | 274       | 312       | 322       |

mid-1990s has, however, contributed substantially to the general lower migration rates in 1994-95. Another factor is that the chosen recession period follows just after a strong boom, and the boom period 1994-95 follows shortly after a recession. The pessimism which often follows from recession and optimism which follows from boom periods might have had too short a time to take root in these periods. Still another factor is that the level of unemployment in Norway, although decreasing, was in fact higher during the boom 1994-95 compared with the recession years at the end of the 1980s, while the level of employment in the boom was just on its way to recovering to the corresponding 1988-89 level.

Geographical mobility has been remarkably higher among unemployed compared with employed. Table 1 shows that unemployed migrants had higher migration frequencies in all population groups, with the exception of men with higher education in the youngest age group during the mid-1990s period. Among unemployed men the average migration frequency is approximately two and a half times higher compared with employed men, while the migration propensity among female unemployed was almost three times higher than among employed women. Most pronounced were the relatively higher migration frequencies among individuals with lower education, where the migration rates among female unemployed were more than five times

higher compared with female employed. Considering the investigation periods, there were relatively small differences in the total unemployed/employed migration indexes. Breaking down the results by age group, there were relatively higher migration frequencies among young unemployed during the boom period, while unemployed in the intermediate age group showed relatively higher migration rates during the economic recession.

### To what extent do unemployed migrants find employment?

The hypothesis has been that unemployed searching for a job outside their local labour market increase their possibility of obtaining a job. This hypothesis is logically due to an increase in the number of jobs available. Considering the migration process, the unemployed might either have received a job offer and then make the necessary move or they might migrate to another region and then search for a job. In the latter case the job possibility does not necessarily increase, but is dependent on the number of jobs available in the region of origin and destination. In both cases, however, unemployed show a will to migrate in order to obtain a job. In addition, there are several conditions concerning the type of demand and supply of labour that might affect the job possibility, hence expecting the characteristic of the unemployed to be of immense importance. In this analysis we have, however, examined and compared the unemployed broken down by broader population groups (see the section on data and definitions).

One of the main aims of this analysis has thus been to examine what status the unemployed obtain in the labour market after moving between regions. An important objective of geographically mobile unemployed is to obtain a job. To what extent they have succeeded in achieving this goal during periods of recession and economic upswing can be seen in table 2.

The figures show that approximately one fourth of the unemployed migrants in Norway did obtain a status as employed during the year after migration. The unemployed migrants had slightly higher transition to employment during the boom in 1994-95 compared with the economic recession in the late 1980s, which was due to somewhat higher transition to employment among unemployed men. Unemployed migrants with higher education reached the highest transition to employment, where both the male and female transition rates exceeded 40 per cent in both periods. Breaking down the figures by age group, unemployed migrants in the age group 25-44 generally showed the highest transition to employment. As in the other Nordic countries, the transition rate to employment increased by the educational level of the unemployed. If we include the status group employed/unemployed, the total employment transition rate among unemployed migrants increased to approximately 40 per cent.

Further investigations showed higher transition to employment among short-term unemployed migrants compared

**Table 2. Unemployed migrants in 1988 (recession) and 1994 (boom) according to their status in the labour market 1989 and 1995 respectively. By gender and age or gender and education. All counties. Per cent**

| Gender        | Age groups and educational level | Became employed |         | Became employed/unemployed |         | Still unemployed |         | Out of the labour force |         |
|---------------|----------------------------------|-----------------|---------|----------------------------|---------|------------------|---------|-------------------------|---------|
|               |                                  | 1988-89         | 1994-95 | 1988-89                    | 1994-95 | 1988-89          | 1994-95 | 1988-89                 | 1994-95 |
| <b>Men:</b>   |                                  |                 |         |                            |         |                  |         |                         |         |
|               | All age- and educational groups  | 22.5            | 26.3    | 15.1                       | 16.3    | 42.1             | 41.4    | 20.3                    | 16.0    |
|               | 16-24 years                      | 23.7            | 24.2    | 15.6                       | 16.0    | 39.6             | 41.7    | 21.1                    | 18.1    |
|               | 25-44 years                      | 22.0            | 28.9    | 14.6                       | 16.9    | 44.2             | 39.8    | 19.2                    | 14.5    |
|               | 45-74 years                      | 16.4            | 14.0    | 16.4                       | 12.8    | 43.1             | 53.6    | 24.1                    | 19.6    |
|               | Unspecified education            | 15.9            | 11.2    | 11.5                       | 13.5    | 40.4             | 56.6    | 32.2                    | 18.7    |
|               | Lower education                  | 16.0            | 12.9    | 14.4                       | 17.2    | 50.6             | 51.8    | 18.9                    | 18.1    |
|               | Intermediate education           | 25.0            | 25.5    | 17.2                       | 18.0    | 41.0             | 41.3    | 16.8                    | 15.3    |
|               | Higher education                 | 41.7            | 46.7    | 14.3                       | 12.0    | 31.8             | 25.9    | 12.1                    | 15.4    |
| <b>Women:</b> |                                  |                 |         |                            |         |                  |         |                         |         |
|               | All age- and educational groups  | 26.5            | 26.5    | 13.7                       | 14.3    | 35.9             | 37.6    | 23.9                    | 21.7    |
|               | 16-24 years                      | 26.0            | 25.3    | 14.4                       | 14.9    | 34.7             | 35.9    | 24.9                    | 23.8    |
|               | 25-44 years                      | 27.8            | 28.1    | 13.0                       | 14.2    | 36.2             | 37.4    | 23.0                    | 20.4    |
|               | 45-74 years                      | 20.5            | 20.6    | 9.6                        | 10.7    | 51.8             | 51.8    | 18.1                    | 16.9    |
|               | Unspecified education            | 17.9            | 13.9    | 9.7                        | 9.7     | 35.2             | 48.2    | 37.2                    | 28.2    |
|               | Lower education                  | 18.4            | 14.3    | 10.3                       | 10.5    | 42.6             | 50.1    | 28.7                    | 25.0    |
|               | Intermediate education           | 28.2            | 25.3    | 15.4                       | 15.5    | 34.5             | 37.6    | 21.9                    | 21.5    |
|               | Higher education                 | 44.8            | 42.6    | 14.1                       | 14.8    | 27.1             | 25.0    | 14.1                    | 17.6    |

with long-term unemployed migrants, among unemployed migrants living alone compared with married unemployed or unemployed cohabitants, and finally among unemployed migrants not receiving any unemployment insurance contribution compared with unemployed migrants who received an insurance contribution.

Unemployed migrants who remained unemployed, also in the region of destination, represented more than 40 per cent of total male unemployed migrants, and a little less of the female unemployed migrants. On the other hand, female unemployed had a somewhat stronger tendency than unemployed men to withdraw from the labour force after migration. Not surprisingly, unemployed with lower or unspecified education (the latter include many immigrants) and unemployed in the oldest age group showed the highest tendency to remain unemployed or to withdraw from the labour force after migration.

### Is it profitable for unemployed to migrate?

Does geographical mobility help the unemployed to get a job? To examine this further, we have analysed the transition to employment among unemployed migrants compared with their unemployed non-migrant counterparts. We have here assumed that migrants and non-migrants are mainly comparable within broader population groups. The results of this analysis can be seen from table 3. The table is in index form and shows the proportion of unemployed migrants in each status group after migration compared with corresponding calculations for the unemployed who have not moved. The distribution of unemployed non-migrants in each status group is set at 100, so the indexes

show over- and under-representation of unemployed migrants in each status group. All indexes above 100 entail over-representation of unemployed migrants, while indexes below 100 indicate under-representation of unemployed migrants.

The table shows that in general there has been higher transition to employment among unemployed who migrated. During the years of economic recession at the end of the 1980s there was 52 per cent higher transition to employment among unemployed men who migrated compared with their non-migrant counterparts, while female unemployed migrants showed 42 per cent higher transition to employment. These figures decreased to 33 per cent for unemployed men in the period of economic expansion in the mid-1990s, while the situation for female unemployed migrants remained almost unchanged. The relatively lower transition to employment through migration for unemployed men in the latter period was due to disadvantageous results achieved by unemployed migrants with lower, intermediate and unspecified education. The most beneficial effects from migration were observed among unemployed with higher education, where unemployed men nearly doubled their likelihood of obtaining a job through migration during the boom period in the mid-1990s.

The transition from unemployment to the status group employed/unemployed also represents a certain improvement in the labour market status of the unemployed, obtaining a job at least in some periods of the year. As table 3 shows, most of the indexes are above 100, indicating a higher transition rate for unemployed migrants compared with unemployed non-migrants.

**Table 3. The relationship between unemployed migrants and unemployed non-migrants in 1988 (recession) and 1994 (boom) according to their status in the labour market 1989 and 1995 respectively. By gender and age or gender and education. All counties. Index: Unemployed non-migrants = 100**

| Gender        | Age groups and educational level | Became employed |         | Both employed/unemployed |         | Still unemployed |         | Out of the labour force |         |
|---------------|----------------------------------|-----------------|---------|--------------------------|---------|------------------|---------|-------------------------|---------|
|               |                                  | 1988-89         | 1994-95 | 1988-89                  | 1994-95 | 1988-89          | 1994-95 | 1988-89                 | 1994-95 |
| <b>Men:</b>   |                                  |                 |         |                          |         |                  |         |                         |         |
|               | All age- and educational groups  | 152             | 133     | 103                      | 103     | 89               | 93      | 87                      | 82      |
|               | 16-24 years                      | 154             | 116     | 108                      | 109     | 89               | 107     | 82                      | 71      |
|               | 25-44 years                      | 136             | 133     | 87                       | 94      | 90               | 90      | 107                     | 91      |
|               | 45-74 years                      | 168             | 105     | 155                      | 98      | 83               | 96      | 87                      | 111     |
|               | Unspecified education            | 141             | 95      | 118                      | 102     | 88               | 101     | 97                      | 99      |
|               | Lower education                  | 145             | 90      | 105                      | 118     | 101              | 101     | 76                      | 92      |
|               | Intermediate education           | 146             | 117     | 105                      | 106     | 89               | 98      | 82                      | 80      |
|               | Higher education                 | 172             | 195     | 106                      | 89      | 78               | 66      | 56                      | 66      |
| <b>Women:</b> |                                  |                 |         |                          |         |                  |         |                         |         |
|               | All age- and educational groups  | 142             | 143     | 114                      | 108     | 87               | 85      | 85                      | 90      |
|               | 16-24 years                      | 137             | 131     | 121                      | 120     | 91               | 91      | 80                      | 83      |
|               | 25-44 years                      | 139             | 141     | 102                      | 100     | 84               | 85      | 95                      | 93      |
|               | 45-74 years                      | 156             | 160     | 93                       | 86      | 109              | 96      | 62                      | 81      |
|               | Unspecified education            | 144             | 123     | 119                      | 108     | 89               | 94      | 93                      | 99      |
|               | Lower education                  | 119             | 103     | 94                       | 93      | 99               | 103     | 94                      | 95      |
|               | Intermediate education           | 135             | 130     | 117                      | 109     | 85               | 87      | 87                      | 94      |
|               | Higher education                 | 145             | 160     | 108                      | 110     | 83               | 69      | 60                      | 73      |

Logically, most indexes in the status groups "still unemployed" and "out of the labour force" are mostly below 100, indicating that unemployed non-migrants are clearly over-represented among unemployed who have not succeeded in finding a job.

### Net effects of migration among unemployed

In this section gross-stream analyses of migration among unemployed are combined and presented as net results between an aggregation to seven regions. In table 4 net migration of unemployed in 1994 is broken down by their labour market status achieved during 1995. The total net migration shows a surplus or deficit of unemployed migrants in each region from 1994 to 1995, while all decomposed figures show net effects for each region of which labour market status the unemployed migrants achieved during 1995.

The capital region of Oslo/Akershus differed from other regions with a relatively high net in-migration of unemployed, which was a result of positive net in-migration from all other regions. The total net effect was about three times higher than observed during the economic recession at the end of the 1980s. Considering the unemployment situation in the capital region, the migration effect became somewhat reduced, because the transition rate from unemployment to employment was nearly 50 per cent for the total surplus of unemployed "net in-migrants". The total effect of net in-migration of unemployed must, however, not be underestimated, because it is likely that not every unemployed who change their labour market status to employed

obtain a job immediately after migration. The other decomposed figures show that the capital region also received a surplus of more permanent unemployed through the migration process, as well as unemployed who withdrew from the labour force.

In this period it was only South Eastern Norway, besides Oslo/Akershus, that experienced net in-migration of unemployed. As the table shows, the net in-migration contributed to a rise in the number of unemployed who were still unemployed or withdrew from the labour force.

Northern Norway and Western Norway were the regions with highest net out-migration of unemployed, but also Hedmark/Oppland and Trøndelag showed considerable net out-migration. Except for Northern Norway, the major part of the net out-migration comprised unemployed migrants who obtained a job the year after migration.

### To what extent do employed migrants maintain their status as employed?

The results have shown that the migration rates of employed have been remarkably lower compared with unemployed. On the other hand, the employed represent a clear majority of the labour force, so although their migration rate is low their actual number of migrants is higher than the corresponding number of unemployed migrants. The migration of this group is thus important in order to illuminate the changes both in employment and unemployment in the regional labour markets.

**Table 4. Net migration of unemployed persons in 1994 according to the status obtained in the labour market in 1995. By region of origin and destination**

| Region of destination         | Region of origin |                      |                 |                |                |           |                 | Total |
|-------------------------------|------------------|----------------------|-----------------|----------------|----------------|-----------|-----------------|-------|
|                               | Oslo/Akershus    | South Eastern Norway | Hedmark/Oppland | Agder/Rogaland | Western Norway | Trøndelag | Northern Norway |       |
| <b>Oslo/Akershus</b>          |                  |                      |                 |                |                |           |                 |       |
| Became employed               | .                | 143                  | 141             | 86             | 112            | 74        | 80              | 636   |
| Employed/unemployed           | .                | 18                   | 41              | 20             | 48             | 41        | 51              | 219   |
| Still unemployed              | .                | -26                  | 7               | 29             | 55             | 68        | 82              | 215   |
| Out of the labour force       | .                | -26                  | 7               | 29             | 55             | 68        | 82              | 215   |
| Total                         | .                | 109                  | 196             | 164            | 270            | 251       | 295             | 1 285 |
| <b>South Eastern Norway 1</b> |                  |                      |                 |                |                |           |                 |       |
| Became employed               | -143             | .                    | 26              | -1             | 18             | 14        | 2               | -84   |
| Employed/unemployed           | -18              | .                    | 6               | -11            | 1              | 7         | -4              | -19   |
| Still unemployed              | 26               | .                    | 5               | -10            | 9              | 5         | 36              | 71    |
| Out of the labour force       | 26               | .                    | 5               | -10            | 9              | 5         | 36              | 71    |
| Total                         | -109             | .                    | 42              | -32            | 37             | 31        | 70              | 39    |
| <b>Hedmark/Oppland</b>        |                  |                      |                 |                |                |           |                 |       |
| Became employed               | -141             | -26                  | .               | -7             | 0              | -1        | -2              | -177  |
| Employed/unemployed           | -41              | -6                   | .               | 4              | 3              | 4         | 0               | -36   |
| Still unemployed              | -7               | -5                   | .               | -1             | -10            | 7         | -14             | -30   |
| Out of the labour force       | -7               | -5                   | .               | -1             | -10            | 7         | -14             | -30   |
| Total                         | -196             | -42                  | .               | -5             | -17            | 17        | -30             | -273  |
| <b>Agder/Rogaland</b>         |                  |                      |                 |                |                |           |                 |       |
| Became employed               | -86              | 1                    | 7               | .              | 31             | 25        | 3               | -19   |
| Employed/unemployed           | -20              | 11                   | -4              | .              | 11             | 7         | -1              | 4     |
| Still unemployed              | -29              | 10                   | 1               | .              | 3              | -10       | 18              | -7    |
| Out of the labour force       | -29              | 10                   | 1               | .              | 3              | -10       | 18              | -7    |
| Total                         | -164             | 32                   | 5               | .              | 48             | 12        | 38              | -29   |
| <b>Western Norway</b>         |                  |                      |                 |                |                |           |                 |       |
| Became employed               | -112             | -18                  | 0               | -31            | .              | 19        | -15             | -157  |
| Employed/unemployed           | -48              | -1                   | -3              | -11            | .              | -3        | 9               | -57   |
| Still unemployed              | -55              | -9                   | 10              | -3             | .              | -20       | 5               | -72   |
| Out of the labour force       | -55              | -9                   | 10              | -3             | .              | -20       | 5               | -72   |
| Total                         | -270             | -37                  | 17              | -48            | .              | -24       | 4               | -358  |
| <b>Trøndelag</b>              |                  |                      |                 |                |                |           |                 |       |
| Became employed               | -74              | -14                  | 1               | -25            | -19            | .         | -35             | -166  |
| Employed/unemployed           | -41              | -7                   | -4              | -7             | 3              | .         | 8               | -48   |
| Still unemployed              | -68              | -5                   | -7              | 10             | 20             | .         | 4               | -46   |
| Out of the labour force       | -68              | -5                   | -7              | 10             | 20             | .         | 4               | -46   |
| Total                         | -251             | -31                  | -17             | -12            | 24             | .         | -19             | -306  |
| <b>Northern Norway</b>        |                  |                      |                 |                |                |           |                 |       |
| Became employed               | -80              | -2                   | 2               | -3             | 15             | 35        | .               | -33   |
| Employed/unemployed           | -51              | 4                    | 0               | 1              | -9             | -8        | .               | -63   |
| Still unemployed              | -82              | -36                  | 14              | -18            | -5             | -4        | .               | -131  |
| Out of the labour force       | -82              | -36                  | 14              | -18            | -5             | -4        | .               | -131  |
| Total                         | -295             | -70                  | 30              | -38            | -4             | 19        | .               | -358  |

<sup>1</sup>The region includes the counties of Østfold, Buskerud, Vestfold and Telemark.

There are several reasons why individuals who already have a job choose to move. A common hypothesis is that employed choose to migrate to improve their position in the labour market. The reasons might be expectations of a better salary or a better return on own know-how. The change of both work and employer has been dominating in the geographical mobility of employed. Nowadays geographical mobility is increasingly connected to advancement in different enterprises. When enterprises grow and become more and more interregional and even international in their locations, many career orientated employed will migrate in

order to obtain a better position within the same company. Other reasons for migration can be to accompany a family member, where married partners or cohabitants already have a job, or the background for moving can be a marriage or divorce. Some reasons can be related to the regional push factors; uncertainty in the local labour market can induce employed to move to regions where they obtain more secure employment. In all those examples we might assume that employed intend to be employed also after migration.

**Table 5. Employed migrants in 1988 (recession) and 1994 (boom) according to their status in the labour market in 1989 and 1995 respectively. By gender and age or gender and education. All counties. Per cent**

| Gender<br>Age groups and<br>educational level | Still<br>employed |         | Both employed/<br>unemployed |         | Became<br>unemployed |         | Out of the<br>labour force |         |
|-----------------------------------------------|-------------------|---------|------------------------------|---------|----------------------|---------|----------------------------|---------|
|                                               | 1988-89           | 1994-95 | 1988-89                      | 1994-95 | 1988-89              | 1994-95 | 1988-89                    | 1994-95 |
| <b>Men:</b>                                   |                   |         |                              |         |                      |         |                            |         |
| All age- and educational groups               | 78.5              | 84.4    | 5.7                          | 4.3     | 4.3                  | 2.8     | 11.5                       | 8.6     |
| 16-24 years                                   | 68.4              | 73.8    | 8.4                          | 7.6     | 7.0                  | 5.5     | 16.1                       | 13.1    |
| 25-44 years                                   | 82.0              | 86.5    | 5.4                          | 3.9     | 3.7                  | 2.5     | 9.0                        | 7.1     |
| 45-74 years                                   | 77.5              | 82.1    | 2.6                          | 3.2     | 2.5                  | 1.8     | 17.3                       | 12.8    |
| Unspecified education                         | 66.2              | 76.1    | 6.7                          | 6.2     | 7.9                  | 4.9     | 19.2                       | 12.8    |
| Lower education                               | 70.0              | 76.1    | 9.3                          | 6.2     | 7.0                  | 5.7     | 13.7                       | 12.0    |
| Intermediate education                        | 76.1              | 81.6    | 7.0                          | 5.8     | 5.1                  | 3.4     | 11.9                       | 9.2     |
| Higher education                              | 87.9              | 89.0    | 2.2                          | 2.3     | 1.3                  | 1.5     | 8.7                        | 7.2     |
| <b>Women:</b>                                 |                   |         |                              |         |                      |         |                            |         |
| All age- and educational groups               | 71.5              | 75.2    | 5.3                          | 5.3     | 5.3                  | 5.0     | 17.8                       | 14.5    |
| 16-24 years                                   | 66.8              | 68.0    | 7.6                          | 8.8     | 6.9                  | 6.7     | 18.6                       | 16.6    |
| 25-44 years                                   | 74.4              | 77.2    | 4.3                          | 4.5     | 4.6                  | 4.9     | 16.8                       | 13.4    |
| 45-74 years                                   | 72.5              | 77.1    | 2.7                          | 3.4     | 3.8                  | 3.0     | 21.0                       | 16.6    |
| Unspecified education                         | 65.6              | 68.0    | 5.5                          | 5.8     | 6.0                  | 6.9     | 23.0                       | 19.3    |
| Lower education                               | 60.5              | 62.3    | 7.4                          | 9.8     | 8.8                  | 8.0     | 23.3                       | 19.9    |
| Intermediate education                        | 69.5              | 71.3    | 6.4                          | 7.4     | 6.3                  | 6.9     | 17.7                       | 14.4    |
| Higher education                              | 80.8              | 80.9    | 2.5                          | 2.8     | 2.1                  | 2.8     | 14.7                       | 13.5    |

**Table 6. The relationship between employed migrants and employed non-migrants in 1988 (recession) and 1994 (boom) according to their status in the labour market in 1989 and 1995 respectively. By gender and age or gender and education. All counties. Index: Employed non-migrants = 100**

| Gender<br>Age groups and<br>educational level | Still<br>employed |         | Both employed/<br>unemployed |         | Became<br>unemployed |         | Out of the<br>labour force |         |
|-----------------------------------------------|-------------------|---------|------------------------------|---------|----------------------|---------|----------------------------|---------|
|                                               | 1988-89           | 1994-95 | 1988-89                      | 1994-95 | 1988-89              | 1994-95 | 1988-89                    | 1994-95 |
| <b>Men:</b>                                   |                   |         |                              |         |                      |         |                            |         |
| All age- and educational groups               | 91                | 93      | 116                          | 156     | 218                  | 274     | 161                        | 164     |
| 16-24 years                                   | 102               | 99      | 78                           | 100     | 108                  | 142     | 104                        | 93      |
| 25-44 years                                   | 92                | 93      | 108                          | 137     | 224                  | 265     | 227                        | 227     |
| 45-74 years                                   | 89                | 89      | 93                           | 206     | 296                  | 373     | 197                        | 211     |
| Unspecified education                         | 85                | 92      | 115                          | 148     | 223                  | 242     | 147                        | 117     |
| Lower education                               | 83                | 86      | 168                          | 198     | 363                  | 504     | 157                        | 157     |
| Intermediate education                        | 90                | 90      | 117                          | 180     | 207                  | 296     | 176                        | 187     |
| Higher education                              | 94                | 94      | 147                          | 193     | 207                  | 281     | 192                        | 187     |
| <b>Women:</b>                                 |                   |         |                              |         |                      |         |                            |         |
| All age- and educational groups               | 84                | 84      | 157                          | 206     | 306                  | 408     | 178                        | 200     |
| 16-24 years                                   | 95                | 94      | 106                          | 123     | 140                  | 163     | 107                        | 102     |
| 25-44 years                                   | 86                | 86      | 129                          | 171     | 295                  | 379     | 206                        | 217     |
| 45-74 years                                   | 82                | 84      | 144                          | 243     | 574                  | 635     | 222                        | 264     |
| Unspecified education                         | 84                | 82      | 141                          | 159     | 239                  | 321     | 150                        | 166     |
| Lower education                               | 72                | 72      | 199                          | 331     | 555                  | 617     | 219                        | 223     |
| Intermediate education                        | 83                | 80      | 162                          | 240     | 276                  | 475     | 181                        | 210     |
| Higher education                              | 90                | 88      | 221                          | 236     | 338                  | 424     | 181                        | 210     |

**Table 7. Net migration of employed persons in 1994 according to their status in the labour market in 1995. By region of origin and destination**

| Region of destination         | Region of origin |                      |                 |                |                |           |                 | Total |
|-------------------------------|------------------|----------------------|-----------------|----------------|----------------|-----------|-----------------|-------|
|                               | Oslo/Akershus    | South Eastern Norway | Hedmark/Oppland | Agder/Rogaland | Western Norway | Trøndelag | Northern Norway |       |
| <b>Oslo/Akershus</b>          |                  |                      |                 |                |                |           |                 |       |
| Still employed                | .                | -60                  | 300             | 47             | 341            | 240       | 357             | 1225  |
| Employed/unemployed           | .                | -31                  | 6               | 1              | 1              | 0         | 8               | -15   |
| Became unemployed             | .                | -56                  | -16             | -9             | -1             | -17       | -12             | -111  |
| Out of the labour force       | .                | -80                  | -38             | -6             | 16             | -3        | -7              | -118  |
| Total                         | .                | -227                 | 252             | 33             | 357            | 220       | 346             | 981   |
| <b>South Eastern Norway 1</b> |                  |                      |                 |                |                |           |                 |       |
| Still employed                | 60               | .                    | 15              | -25            | 38             | 65        | 88              | 241   |
| Employed/unemployed           | 31               | .                    | -3              | -6             | -3             | 6         | 6               | 31    |
| Became unemployed             | 56               | .                    | -1              | -2             | 2              | 9         | 27              | 91    |
| Out of the labour force       | 80               | .                    | 1               | -20            | 3              | 1         | 31              | 96    |
| Total                         | 227              | .                    | 12              | -53            | 40             | 81        | 152             | 459   |
| <b>Hedmark/Oppland</b>        |                  |                      |                 |                |                |           |                 |       |
| Still employed                | -300             | -15                  | .               | -10            | -26            | 0         | 15              | -336  |
| Employed/unemployed           | -6               | 3                    | .               | -6             | 3              | -8        | 9               | -5    |
| Became unemployed             | 16               | 1                    | .               | 8              | -4             | 3         | -5              | 19    |
| Out of the labour force       | 38               | -1                   | .               | -3             | -9             | -10       | 7               | 22    |
| Total                         | -252             | -12                  | .               | -11            | -36            | -15       | 26              | -300  |
| <b>Agder/Rogaland</b>         |                  |                      |                 |                |                |           |                 |       |
| Still employed                | -47              | 25                   | 10              | .              | 113            | 28        | 145             | 274   |
| Employed/unemployed           | -1               | 6                    | 6               | .              | 14             | 5         | 9               | 39    |
| Became unemployed             | 9                | 2                    | -8              | .              | -16            | -7        | 7               | -13   |
| Out of the labour force       | 6                | 20                   | 3               | .              | -22            | -5        | 18              | 20    |
| Total                         | -33              | 53                   | 11              | .              | 89             | 21        | 179             | 320   |
| <b>Western Norway</b>         |                  |                      |                 |                |                |           |                 |       |
| Still employed                | -341             | -38                  | 26              | -113           | .              | 42        | 30              | -394  |
| Employed/unemployed           | -1               | 3                    | -3              | -14            | .              | 4         | -2              | -13   |
| Became unemployed             | 1                | -2                   | 4               | 16             | .              | -4        | 6               | 21    |
| Out of the labour force       | -16              | -3                   | 9               | 22             | .              | -4        | 28              | 36    |
| Total                         | -357             | -40                  | 36              | -89            | .              | 38        | 62              | -350  |
| <b>Trøndelag</b>              |                  |                      |                 |                |                |           |                 |       |
| Still employed                | -240             | -65                  | 0               | -28            | -42            | .         | 33              | -342  |
| Employed/unemployed           | 0                | -6                   | 8               | -5             | -4             | .         | 4               | -3    |
| Became unemployed             | 17               | -9                   | -3              | 7              | 4              | .         | 9               | 25    |
| Out of the labour force       | 3                | -1                   | 10              | 5              | 4              | .         | 20              | 41    |
| Total                         | -220             | -81                  | 15              | -21            | -38            | .         | 66              | -279  |
| <b>Northern-Norway</b>        |                  |                      |                 |                |                |           |                 |       |
| Still employed                | -357             | -88                  | -15             | -145           | -30            | -33       | .               | -668  |
| Employed/unemployed           | -8               | -6                   | -9              | -9             | 2              | -4        | .               | -34   |
| Became unemployed             | 12               | -27                  | 5               | -7             | -6             | -9        | .               | -32   |
| Out of the labour force       | 7                | -31                  | -7              | -18            | -28            | -20       | .               | -97   |
| Total                         | -346             | -152                 | -26             | -179           | -62            | -66       | .               | -831  |

<sup>1</sup>The region includes the counties of Østfold, Buskerud, Vestfold and Telemark

Other reasons for withdrawing from employment and voluntarily changing labour market status for a shorter or a longer period may also exist. This might happen, for example, when individuals already employed decide to continue their education. There can be changes in the status when employed women bear children and when this is closely connected to migration. On the other hand, the change of status can be involuntary when the employed do not find a job in another region after moving. It might also be possible that employed choose to move, although there is unemployment ahead or they withdraw from the labour force.

An essential question to answer is thus which status employed maintain in the labour market after migration. To what extent they have managed to keep their status as employed during the boom and recession periods is seen in table 5.

No population groups succeeded in full in maintaining their status as employed after migration. During the period of economic recession at the end of the 1980s, only 79 per cent of employed men and 72 per cent of employed women kept their status as employed after migration. The corre-

sponding figures during the boom period in the mid-1990s increased to 84 and 75 per cent for employed men and women respectively. Breaking down the results by education, higher educational level increases the chance of keeping the status as employed after migration. Employed with lower education showed a relatively strong tendency to change their status after moving. Employed migrants in the age group 25-44 years showed in general a higher tendency to keep their position as employed compared with younger and older employed migrants.

Considering the transition to the status group unemployed/employed, there were small differences between employed males and females and between the periods. Employed female migrants showed, however, in both periods a stronger tendency than employed men to change their status to unemployment or to withdraw from the labour force. In this respect, the figures both for men and women were somewhat higher during the economic recession compared with the boom period. The latter was especially due to higher transition rates among employed with unspecified, lower and intermediate education, while there were small differences in the transition rates between the periods among employed migrants with higher education.

Another question which has been posed, is to what extent employed migrants maintain their status as employed compared with employed who choose to stay in their own region. In table 6, the results show the relative transition in each group. The interpretation of the indexes is the same as in table 3.

The indexes show clearly that there has been a lower proportion of employed migrants who have managed to maintain their labour market status after moving compared with employed non-migrants. This was most pronounced among female employed migrants in both investigation periods. Broken down by age, it was generally employed migrants in the oldest age group who had highest transition from employment compared with their non-migrant counterparts. The greatest similarity between employed migrants and employed non-migrants has in this respect been found among men in the youngest age group and among men with higher education.

On the other hand, there has been a clear over-representation of employed migrants among those who changed their status to unemployed or withdrew from the labour force. This was most pronounced among female employed migrants in the oldest age group, and among employed migrants with lower education. In Norway there were, however, small differences between boom and recession with regard to employed migrants' and non-migrants' relative ability to keep their status in the labour market.

### Net effects of migration among employed

Finally, gross-stream analyses of migration among employed are combined and presented as net results between an aggregation of seven regions. In table 7 net migration of

employed in 1994 is broken down by their labour market status maintained during 1995. The total net migration shows a surplus or deficit of employed migrants in each region from 1994 to 1995, while all decomposed figures show net effects for each region of the labour market status the employed migrants maintained during 1995.

The capital region of Oslo/Akershus differed from other regions with a relatively high net in-migration of employed, which was a result of positive net in-migration from all other regions except for South Eastern Norway. The total net effect was, however, lower than observed during the economic recession at the end of the 1980s, when the capital region had a considerable net in-migration of employed in spite of a general employment decrease. The migration effect on employment in the capital region in the mid-1990s was somewhat higher than the total net in-migration of employed suggested. This was due to positive net in-migration of employed who remained employed after migration and negative net in-migration of employed who became unemployed or withdrew from the labour force after migration. South Eastern Norway and Agder/Rogaland also experienced net in-migration of employed during this period, especially among those who remained employed after migration. All other regions experienced net out-migration of employed, mostly comprising those who stayed employed after moving.

### Summary

The results show considerably higher migration frequencies among unemployed compared with employed in nearly all population groups and regions. The results show that transition from unemployment to employment among unemployed migrants has been higher than among their non-migrant counterparts, especially for unemployed with higher education. On the other hand, it has, at least partially, been less profitable for employed to move than not to move. It might, however, be unwise to draw hasty conclusions, because there are both voluntary and involuntary changes from the status employed. Detailed figures from the analyses show, however, that the transition to unemployment has been higher among employed migrants than among employed non-migrants.

The results also reveal the different positions of the regions (i.e. counties) in terms of attractiveness for migrants. A general conclusion is that major regional centres and city regions are significantly more attractive than other regions, both for unemployed and employed. This is found both in a period of economic boom and in a recession.

The migration process has thus contributed to a certain displacement of both employed and unemployed between the regions. The highest contribution to imbalances was observed among unemployed migrants who obtained a job, and among employed migrants who remained employed, thus either occupying vacancies in the regions of destination or establishing vacancies in the regions of origin. Reduced pressure in the local labour market might be the consequen-

ce in regions experiencing a surplus through the migration process, depending on to what extent the labour market is able to absorb the increased labour force. Regions with net out-migration might experience higher pressure in the local labour market either through decreased unemployment or increased vacancies through geographical employment turnover.

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