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## Migration and employment status during the turbulent nineties in Sweden

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## **MIGRATION AND EMPLOYMENT STATUS DURING THE TURBULENT 90s IN SWEDEN**

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**Abstract.** The 1990s was a turbulent decade in the Swedish economy with the deepest crisis since the great depression of the 30s. It seems also to differ a lot from earlier decades with respect to migration patterns – a post-industrial one has substituted the industrial migration pattern. The segmentation of the labour market has been accentuated and a welfare state equilibrium with an increased mismatch on the labour market as one ingredient. One consequence of this transformation process is that the connection to the labour market situation has diminished as an explaining factor with respect to migratory movements. Only one tenth of the job recruitment on a local labour market is external and this is valid for in-migrating as well as out-migrating areas.

This paper analyses the migration between 109 local labour markets in Sweden during the turbulent 1990s. In this paper a lot of regressions are done with respect to the movers' employment status before and after migration. Four years – 1991, 1993, 1996 and 1997 – are analysed including differing categories as employed, unemployed, students and people outside these groups. Net-migration between local labour markets is also investigated for employed and students and the same 'explaining' variables are used. From these cross-section analyses it seems obvious that the motives are different for various categories and that they also differ with respect to the economic situation.

## THE TURBULENT 90s AND NEW MOBILITY PATTERNS

During the 90s, Sweden was hit by the deepest labour market crisis since the great depression of the 30s. There are, however, differences between these two crises. Even if the crisis of the 30s was a structural break in the Swedish economy the consequences were not the same with respect to the long-term labour market development as the crisis of the 90s. Instead, the first crisis can in this sense be seen as an ordinary business cycle – but deeper – and the unemployed returned usually to their jobs afterwards. The crisis of the 90s seems, however, to have changed the functioning of labour market with increased segmentation and mismatch on the labour market and then also increased long-term unemployment as one result. The labour market has, thus, become more and more segmented regarding competence levels - the labour force is not homogenous but rather heterogeneous. The maladjustment or the mismatch on the labour market seems also to have been accentuated during the structural transformation during the past decades and – at least in Sweden – especially then during the 90s. This segmentation process has also regional dimensions that hamper the regional matching process (Bengtsson & Johansson, 1994; Johansson & Persson, 1999, 2000).

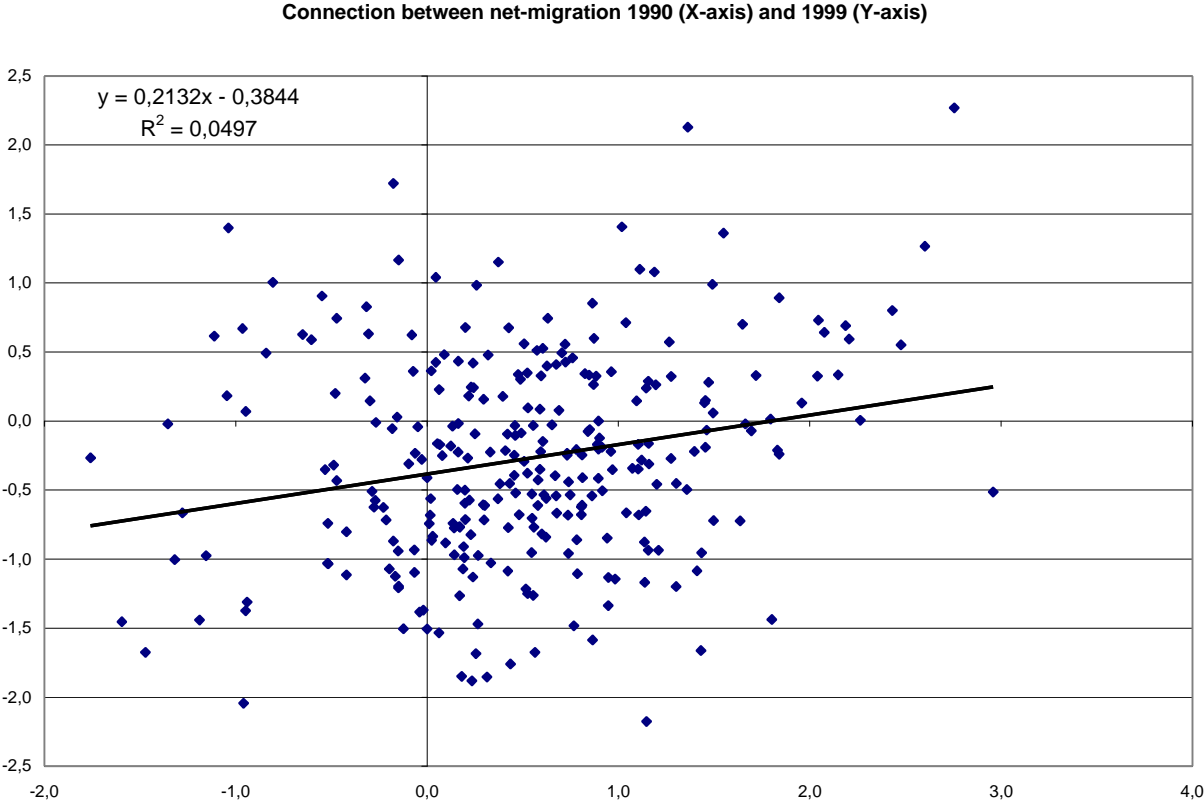
Long-distance migration has traditionally been associated with the migration pattern of the industrial society. People moved from farming and forestry area to industrial ones, and from towns and regions with unemployment to places where labour was in demand. It was relatively easy to get a job if you chose the migration alternative, and there was a strong connection between economic fluctuations and long-distance migration. The difference between various generations' migration patterns was more in terms of quantity than of different types (see e.g. Johansson & Persson, 1991).

The industrial migration pattern was thus sensitive to business cycles, with relatively short-term variations in labour market conditions resulting in changes in migration figures. Good times resulted in higher migration intensities and bad times lower. One indicator of this is the high correlation between long-distance migration and unemployment during the 60s and 70s (Johansson & Persson, 1999) The same is valid with regard to changes in the economic situation in different regions - accentuated regional imbalances stimulated interregional migration and diminished imbalances hampered it. Migration was equilibrating between labour supply and demand in various regions.

The migration patterns of today seem to be of different character. The division of labour has more and more had a regional nature, with an accentuated regional polarisation as one result (with regard to the Swedish case, see e.g. Bengtsson & Johansson, 1994; Johansson & Persson, 1999, 2000). The result of these processes was a further regional segmentation and polarisation of the labour force, a development that hampered labour migration from rural and old industrial areas to regions dominated by more dynamic and knowledge-based activities. The share of job seekers among the movers has also decreased and the connection to economic fluctuations has thus in large ceased to exist. This process began already during the 80s but disappeared completely during the 90s (Johansson & Persson, 1999). One indication of this can be seen in Figure 1 where the connection between net-migration 1990 and 1999 with respect to 284 municipalities is estimated and where it is evident that the connection between the two years totally has disappeared. This is an indicator that new out-migration areas and local labour markets has disturbed and changed the traditional map of “black Sweden”. This may also be a manifestation of the crisis of the small and medium-sized towns and municipalities during the 90s (see e.g. Johansson, 2000b, 2001).

The rise in the migration intensities during the 1990s compared to the 1970s and 1980s is - at least partly - a consequence of the crisis in the sense that many more young people have started to study. During the 1990s, the number of persons in study programmes has increased compared both to the situation during the 1970s and 1980s. During the 1990s the obligation to be registered at the study place has also speeded up the migration intensities at least in the official figures. The sharp rise in the migration intensities for young people who began to study is a more important factor for the rise in the internal migration during the 1990s. Compared to previous decades it is in the ages 19-26 that the migration intensities are higher during the 90s - for all other cohorts, they are lower (Johansson & Persson, 1999; Statistics Sweden). This fact is also an indication that the importance of labour force migration has decreased during the past decade. Migration has instead become more study-related and many young people move “ad hoc” more or less “going with the tide” – the majority if the moves in Sweden today are not primarily job related. This general trend has affected the majority of Sweden’s municipalities; the increase in migration can be entirely explained in the movements of young people (Johansson & Persson, 1999; Johansson & Person, 2000; Garvill, Malmberg & Westin, 2000).

This general trend has hit most of the Swedish municipalities or local labour markets in form of net out-migration. In 1990, 62 out of 284 municipalities showed net out-migration – the corresponding figure for 1999 were 189. As elderly people have low migration intensities the result will be an accentuated lop-sided age structure. This is a well-known experience for many Swedish municipalities and local labour markets but it has now been even more accentuated according to the low birth rates all through the country.



**Figure 1.** Connection between net-migration 1990 (X-axis) and 1999 (Y-axis) with regard to 284 Swedish municipalities.

### CREATING LOCAL LABOUR MARKETS

The municipality level is not the best division when migratory movements with relevance to labour market conditions. Instead 109 functional local labour markets (LLMs) have been created. The point of departure in the creation of LLMs is the 284 municipalities that existed in the beginning of the 90s. This means also that changes in the number of municipalities have been standardised according to the municipality structure and the commuting conditions of 1988 - the year when the first division in LLMs were done (Carlsson et.al., 1993).

The making of a local labour market is done in three steps. The first two steps are to define criteria of self-sufficiency. In this procedure two criteria must be fulfilled – one general and one specific. The *general condition* is defined as 80 percent self-sufficiency:

$$\frac{\sum_{j \neq i} C_{ij}}{E_i} \geq 0.2$$

where  $C_{ij}$  is the number of commuters from municipality  $i$  to municipality  $j$ .  $E_i$  is the number of employed persons living in municipality  $i$ .

Out-commuting to any other municipality has to be less than 7.5 percent and the *special condition* is then defined as:

$$\frac{(C_{ij})_{\max}}{E_i} \leq 0.075$$

where  $(C_{ij})_{\max}$  is the most intensive flow of commuters from  $i$  to any other municipality ( $j$ ).  $E_i$  is even here the number of employed persons living in municipality  $i$ .

The third step is to integrate the dependent municipalities to the ones characterised as self-sufficient and then in an LLM. This is done by chosen the self-sufficient municipality that receives most of its out-commuters from dependent municipalities. Sometimes, however, the municipality that receives most commuters is not defined as self-sufficient – instead this is also defined as dependent and dependency chains will then occur. To get rid of this problem, the municipalities that are united with a self-sufficient municipality in a chain consisting of more than three links the chain will be broken at its weakest part – the smallest share of out-commuters - and two different LLMs will then occur (for a more systematically discussion of this process, see Carlsson et.al., 1993).

## GROSS IN- AND OUT-MIGRATION FOR 109 LOCAL LABOUR MARKETS

Out-migration from most of Sweden's municipalities results, together with a low birth rate, in a reduction of the local population and is perceived as one of today's major regional policy problems (Johansson, 2000a, 2000b, 2001). A small number of municipalities are "winners" in this redistribution process, at least in the sense that they have positive net migration. It is

not, however, the net migration in itself, which makes the decisive difference for a region's development, but rather what, the gross streams look like. For this reason a number of regressions have been performed, where the gross streams in and out of local labour markets, based on commuting data, are analysed. The years, which were investigated, are 1991, 1993, 1996 and 1997 – years that are highly unlike one another with regard to economic upswings and downturns. The analysis in this chapter is based on Johansson & Persson (2000).

The database consists of data on each individual and their status in the beginning and end of the above mentioned four years. The “labour market “careers” are recorded as:

1. Employed (persons with incomes and officially registered as employed)
2. Unemployed (persons receiving unemployment benefits)
3. Student (persons receiving study grants)
4. Other (persons with no personal incomes except social security)

In Tables 1-4, a comparison has been made of the determining factors for in- and out-migration in relation to the various migration classes in the age interval from 16 to 64 years. The migration variables are expressed as ratios, i.e. the number of in- or out-migrants in relation to the population size of the in- or out-migration region.

In interpreting the results it should be kept in mind that certain migration streams between local labour markets can be small and sometimes almost non-existent. This means, for example, that interpretation of migration to and from unemployment must be made with a degree of caution. This applies especially for the year 1991, when the crisis of the 1990s still had not struck with full force and unemployment was still relatively low. The form of the model is as follows:

$$\ln Y = ? + ?_1 \ln X_1 + ?_2 \ln X_2 + \dots + ?_n \ln X_n$$

The dependent variables (Y) are:

In-migration from work, unemployment, studies and “other” activities

In-migration to work, unemployment, studies and “other” activities

Out-migration from work, unemployment, studies and “other” activities

Out-migration to work, unemployment, studies and “other” activities

Total in- and out-migration

Excluding total in- and out-migration, this results in 16 different “careers” that are more or less labour market related.

The “explanatory” variables (X) in the in-migration and out-migration regions respectively are:

*POP*: size of the population

*EDHIGH*: the portion with at least 3 years of university-level education

*EDLOW*: the portion with at most two-years of post-compulsory education

*LOCTURN*: local turnover, the portion that moves between 21 different sectors in a local labour market during the year

*EMP*: the relative change in employment

*AGE*: the portion of the population aged 20-29 years

*BRW*: branch width, the number of different branches on ISIC 5-digit level that are represented on the local labour market

*INC*: per capita income from gainful employment, sickness insurance, etc. (not unemployment insurance)

*KNOWINT*: the portion of employed in “knowledge-intensive” industries

*OUTMIG*: out-migration intensity, total for ages 16-64 years (used as a measure of turnover in connection with in-migration)

*INMIG*: in-migration intensity, total for ages 16-64 years (used as a measure of turnover in connection with out-migration)

### **In-migrants from various labour market “careers”**

***In-migration from work***: The region’s education level is of great significance – the higher the education levels (*EDHIGH*) the greater the in-migration. An expected correlation is found even with regard to employment development (*EMP*) – i.e. the better the employment situation the greater is the in-migration of persons who already have a job. The age structure (*AGE*) is also of high importance: the younger the population, the stronger the in-migration. The branch width (*BRW*) has no significance with the exception of 1991, when in fact a negative relationship was found. The income level (*INC*) reveals an unexpected negative relationship for the years 1991 and 1993. However, this is not as paradoxical as it may seem – many of the regions, which have proportionally high in-migration, have relatively low per capita incomes. An effect of the same phenomenon is that for certain years – 1993 and 1996 –



there is a negative correlation between the proportion that migrates in from a job and the economy's "knowledge intensity" (*KNOWINT*). It also turns out that high out-migration (*OUTMIG*) relatively speaking results in high in-migration.

***In-migration from unemployment:*** The explanatory value overall is lower as compared with in-migration from work. Furthermore, this is less reliable because the number of migrants to and from certain small local labour markets can be relatively low and sometimes even almost non-existent. The significant relationships are also in most cases striking by their absence. The exception is the portion of persons with high education (*EDHIGH*) in the work force in 1993 and 1996 – that indicates that they migrated from unemployment to studying or to unemployment in regions which are characterised by a high education level and where the future prospects are viewed as positive (see Table 2).

***In-migration from studies:*** Here an ever greater explanatory value arises as time progresses. Here there is a clear connection with education level – people move to regions with high education levels (*EDHIGH*). The age structure (*AGE*) is also significant (with the exception of 1991) – people move to regions with a young population. This is not exactly surprising – newly graduated young people migrate preferably to locations which have a young population. These also have a relatively low per capita income, in part because of the young population, which appears as a negative correlation between in-migration from studying and income level (*INC*) – only during the upswing year 1997 does this negative correlation disappear. During 1996 and 1997 out-migration (*OUTMIG*) as well is significant.

***In-migration from "other":*** Here as well there is an overall negative correlation with the income level (*INC*) of the in-migration region. Persons who do not belong to the work force or are not studying preferably look to regions with low-income levels. Nor do they head for regions that are characterised as knowledge-intensive (*KNOWINT*), with the exception of 1997 when no correlation in this respect can be detected.

#### ***In-migration to various labour market "careers"***

***In-migration to work:*** People preferably move to regions with both a high (*EDHIGH*) and a low education level (*EDLOW*) which apart from that are regarded as having – and also have – a relatively positive employment development. It is thus locations with a large portion of

“middle-educated” which are not regarded as attracting work force in-migrants. Migrating to a job is, at least as far as the years 1993 and 1996 are concerned, linked to migrating to a region with a young population (*AGE*). Out-migration (*OUTMIG*) appears also to have a positive effect on in-migration; the higher the out-migration the higher is the in-migration of people to work. This is explained by the fact that small regions with a high out-migration are more dependent upon in-migration of work force than large regions, which are more self-sufficient for work force and where local recruitment is more important.

***In-migration to unemployment:*** Here the explanatory values appear to be more dependable than for migration from unemployment, or at least they appear less shaky. Here a significant correlation can also be seen with the portion of persons with high education (*EDHIGH*) in the in-migration region, which indicates, as previously mentioned, that many unemployed headed for university and college locations. The exception here is 1997, when the economy had taken an upswing. Employment situation (*EMP*) does not, on the other hand, appear to have had any great pull-effect on in-migration; during 1993 the relationship is rather the opposite. This can also be said on per capita income level (*INC*) – higher income does not lead to an increased in-migration of unemployed. The same seems to be valid for knowledge-intensive regions (*KNOWINT*) – i.e. the higher the knowledge intensity in the economy, the lower is in-migration to unemployment in 1991 and 1993. For those people who migrate to unemployment, however, out-migration (*OUTMIG*) does not appear to have had any major significance.

***In-migration to studies:*** That there is a positive correlation between a region’s education level (*EDHIGH*) and in-migration to studies is scarcely surprising. As one might also expect, people move to locations and regions with a young population (*AGE*) – study locations do, of course, generally have a relatively young population. These regions, however, have a low-income level (*INC*).

***In-migration to “other”:*** The only explanatory factor with which a significant correlation is found in all four years is income level (*INC*). Once more, this is a negative correlation, i.e. people outside the labour market and not studying move to regions with low incomes. This is, however, more in accordance with the expected pattern, since many of those persons who migrate to “other” can be assumed to be older persons whose future income is of less

significance. The regions that attract the category “other” are also characterised by having a relatively high portion of persons with high education in their work force.

**Total in-migration:** For all the years, with one exception, there is a positive correlation between education level (*EDHIGH*) and in-migration as well as young population (*AGE*) and in-migration. As far as income level (*EDHIGH*) and branch width (*BRW*) are concerned, the opposite is true: people migrate relatively more to regions with low income levels and low branch width. The large, diversified regions have a higher local recruitment, both of work force and students. In this regard, it should be recalled that those regions with high out-migration (*OUTMIG*) also have high in-migration; the population circulation is itself an explanatory factor for high in-migration. This says, however, nothing about net migration (see a subsequent section).

#### **Out-migration from various labour market “careers”**

**Out-migration from work:** Here there is a negative correlation with population size (*POP*) in the various regions; the larger the population, the lower is the tendency to move from a job. This is also an expected correlation – the larger a region is the more self-sufficient it is with regard to its work force. In addition, the age structure (*AGE*) of the population affects migration from work (1996 is the exception); a young population is naturally linked to high migration figures. Income level (*INC*) has a positive effect on migration from work: people move from regions with relative high incomes to regions with lower incomes, something which presumably is connected to the population structure. In this case as well a high turnover of people appears to generate migration – high out-migration is correlated with high in-migration (*INMIG*).

**Out-migration from unemployment:** The explanatory value increases over time, which indicates that the portion of unemployed that migrates is growing steadily, and also increases the reliability of the interpretation. The size of the population (*POP*) reduces out-migration of unemployed, which can result from the fact that the possibility of getting a job should be greater in a larger labour market. As expected, a relatively good employment situation (*EMP*) reduces out-migration of unemployed, while a less positive one has a stimulating effect. Here it should be kept in mind that the unemployed would presumably comprise a larger portion of the potential migrants in local labour markets that have a poor employment situation as

compared with local labour markets, which have a better employment situation. In 1996 a negative correlation with sector change (*LOCTURN*) was also discovered, i.e. the higher the turnover in the local labour market is, the less is the out-migration of unemployed persons. Out-migration of unemployed is also affected by in-migration (*INMIG*): regions with high intensity of in-migration also have high out-migration of unemployed. Many of these would, furthermore, be return migrants.

***Out-migration from studies:*** In this case as well the size of the local labour market makes a difference. A large labour market has a large local recruitment of labour force, which should reduce out-migration after studying or by those studying. This applies as well to work force turnover, with the exception of 1991. On the other hand, diversification of the economy – the branch width (*BRW*) – has no significance when consideration is had been done for the size of the population comprising the local labour market. Instead, this appears to have a stimulating effect on out-migration.

***In-migration from “other”:*** As far as this category is concerned, there do not appear to be any more systematic correlation with regard to the explanatory factors over time. This is in itself not surprising since most of the variables included in the analyses are labour-market-related.

#### **Out-migration to various labour market “careers”**

***Out-migration to work:*** In this case as well, the population size (*POP*) reduces out-migration, which would be due to the fact that a large labour market has a larger local recruitment than does a smaller one, i.e. it is more self-sufficient. The employment situation (*EMP*) also affects out-migration – only during the economic downturn of 1993 is there any significant negative correlation between the employment situation and out-migration to work. A high portion of young people (*AGE*) in a local labour market means as a rule a large out-migration to work. Branch width (*BRW*) counteracts, in such a case as well, the effect of population size and a high turnover (*INMIG*) of people results in high out-migration.

***Out-migration to unemployment:*** Population size (*POP*) counteracts out-migration of unemployed. A small labour market means high out-migration to unemployment and vice versa. This is an expected pattern, since many of these people were probably unemployed

even when they migrated. As far as the employment situation (*EMP*) is concerned, a good employment situation as a rule reduces the out-migration of unemployed. The income indicator (*INC*) is, as usual, peculiar: people move from regions with a high-income level to regions with a lower one. A high in-migration (*INMIG*) affects out-migration to unemployment in 1993 and 1996: the higher the in-migration, the higher is the out-migration to unemployment.

***Out-migration to studies:*** In this case as well population size (*POP*) reduces out-migration, which would be due to the fact that the larger the local labour market is, the larger is the possibility to pursue various types of studies there. The local work force turnover (*LOCTURN*) also means that out-migration to studies is reduced and branch width (*BRW*) works in the opposite direction to population size. As far as in-migration (*INMIG*) is concerned, this has a significant effect for the years 1996 and 1997.

***Out-migration to “other”:*** The only explanatory factor which appears to affect out-migration for this category fairly continuously is *in-migration*. It should in this case be kept in mind that small local labour markets have relatively high in-migration intensities.

***Total out-migration:*** As expected, population size (*POP*) reduces out-migration. On the other hand, branch width (*BRW*) has an opposite effect: only in 1993 does branch width lack a significant effect on out-migration. A good employment situation as a rule counteracts it, as expected, while a poor one stimulates it. Age structure (*AGE*) shows a significant correlation only for two years, 1991 and 1993. This may appear surprising, since a young population is often linked to high mobility. This does not, however, apply with regard to the out-migration regions of the country, which to a large degree have a skewed age distribution with a high proportion of older people. Furthermore, mobility creates mobility – a high in-migration (*INMIG*) results as a rule in high out-migration and vice versa.

NET MIGRATION FOR 109 LOCAL LABOUR MARKETS

Out-migration from most of Sweden’s municipalities that, together with a low birth rate, results in a reduction of the local population is perceived as one of today’s major regional policy problems. A small number of municipalities are “winners” in this redistribution process, at least in the sense that they have positive net migration. As indicated elsewhere, it is not, however, the net migration in itself that makes the decisive difference for a region’s development, but rather what the gross streams look like. Nonetheless it can be worthwhile to investigate which factors appear to lie behind them.

The years, which were investigated, are in this case as well 1991, 1993, 1996 and 1997. As is widely known, these years are highly unlike one another with regard to economic upswings and downturns and the intensity of regional migration, especially with regard to the concentration of in-migration to a very few regions. Table 5 gives a summary of the determining factors for net migration in relation to the various migration categories. The “explanatory” variables are the same ones used in the earlier estimates, with regard to gross migration despite to the in-migration/out-migration variables.

Here as well the form of the model is as follows:

$$\ln Y = ? + ?_1 \ln X_1 + ?_2 \ln X_2 + \dots + ?_n \ln X_n$$

The net migration investigated and reported is as follows:

- In to work/out from work
- In to studies/out from studies
- Total in-migration/total out-migration

These limitations mean that we do not know, for example, in which cases a person migrating in to work is coming from work, unemployment, studies or “other”. The same applies to those out-migrating; we do not know whether a person migrating from a job is migrating to another job or to another category. In the regressions, in to unemployment, out from unemployment, in to “other” and out to “other” have been excluded due to the fact that far too many small local labour markets have relatively few migrations between these categories, which makes

interpretation of the results difficult. They are, however, shown in Table 5, but without any comments in the text.

As far as total migration is concerned, the explanatory value has increased throughout the entire period and the variables included in the regressions encompass the causes for “job migration” relatively well. The net migration, with regard to studying, is also encompassed relatively well by the “explanatory” variables. The labour market and work force related variables appear to also influence net migration to and from studying; study migration can naturally be regarded as a work-force related migration since it is an investment in human capital. Furthermore, the labour market in the college and university towns, for example, is characterised by the very fact that they are study locations.

As far as the input variables are concerned, we see that population size (*POP*) as a rule has a positive effect on net migration. The larger the local labour market is, the greater is the net in-migration, relatively speaking. This also means that small local labour markets as a rule have a net out-migration, at least when viewed overall. For the various categories we also find the same pattern concerning migration to and from work in 1991 and 1997. Both of these years can be seen as relatively good years from a labour market point of view. This should, however, not be interpreted as implying that good years mean that external recruitment increases with an economic upturn. Instead the opposite appears to be the case. On the other hand, the excess in-migration to regions with a large population and good employment situation increases.

The employment situation (*EMP*) also has the greatest impact on those who migrate to and from work. The better the employment situation, the greater the excess in-migration of work-related migrants and vice versa. This applies to all the years, i.e. the economic situation does not appear to alter this pattern. As far as the unemployed are concerned, we find the same correlation in 1996 and 1997, while this does not hold for the years 1991 and 1993, when the economy took a downturn. It should, however, be kept in mind that we do not know the destination, and that a person may well have had a job when he or she moves in or out but then lost it during the year when the economic situation worsened. The local turnover (*LOCTURN*) of the work force has, however, not had any influence on the net migration, either overall or with regard to “job migration”.

The share of persons with low education (*EDLOW*) appears, however, to have had no significance for excess in- or out-migration, any more than for the categories to and from work. This may seem surprising, since we often connect regions with a large proportion of persons with low education in the work force with stagnation and decline. The paradox can, however, be explained by the local labour markets characterised by a large share of persons with low education also having a small out-migration of people in work – people do not move from the jobs they have – while those who moves in to a job fill vacant jobs which cannot be filled by the work force in the local labour market. In both cases it is thus the “pull” factors that dominate.

Those regions that have a high proportion of persons with high education (*EDHIGH*) have an excess in-migration overall and with regard to those who migrate to and from studies, with the exception of 1997, when no significant relationship can be detected. This in itself is not surprising, since study migrations can in many cases be viewed as a chain of migrations: people move to college towns only to move away again a few years later. Furthermore, the number of students increased during the entire period investigated, and the fact that they were attracted to study locations is therefore hardly surprising. These locations are also characterised by having a high proportion of persons with high education in their work force.

With regard to age structure (*AGE*), this has no significant correlation with net migration overall except for the year 1991, when a significant negative correlation is found. Only for one category, students, do we find a persistent positive connection. Persons who migrate to study do so to regions with a young population or vice versa: in-migration of students creates a young population. In connection with emphasis of the 1990s on education, the study locations’ excess in-migration should have been accentuated, at least as far as the students’ category is concerned. Age structure has, however, no fairly obvious influence on net migration for the other categories.

As far as the other explanatory factors are concerned, we see that branch width (*BRW*) does not strengthen the size effect either, quite the opposite in fact. This applies to total net migration for all the years investigated, as well as for 1991 and 1997, with regard to migrations to and from work.



## CONCLUDING REMARKS

There is a clear positive connection between out-migration and in-migration in the sense that places with high out-migration intensities also often have relatively high in-migration ones. In the everyday debate, it is easy to get the impression that urban regions have a substantial inflow while the rural areas and small and medium-sized town are rapidly losing their population. The first of these statements is correct, if you are calculating in absolute figures. The fallacy, however, lies in the fact that the figures are wrong in terms of relativity. For a big city to be able to swallow a large number of new residents and that it often does is not in itself extraordinary – the reverse would be more surprising. However, the evidence is that the inflow intensities of these cities are very low. Of the 109 local labour markets in Sweden is Stockholm ranked as number 107, Gothenburg as number 104 and Malmö as number 103 estimated as the average between 1985 and 1999. On the contrary, the small labour markets of Åre, Gnosjö and Munkfors – the latter a typical old factory town in the Swedish ‘rust belt’ – is placed as number one, two and four with respect to in-migration intensities. All of these small local labour markets are, however, also characterised by high out-migration intensities that also – at least in the latter cases - have resulted in a net out-migration. (Nygren & Persson, 2000).

The ”explaining” variable population size (*POP*) shows also a negative sign for every “career” where it is significant. Paradoxically, population changes at local and regional level are, however, historically much a consequence of migratory movements and redistribution of people in the industrial era (see e.g. Johansson & Persson, 1991; Håkansson, 2000). Today, this is still valid with respect to the numbers of movers but not valid regarding the relative importance of the gross streams. Instead, it seems obvious that a high out-migration intensities (*OUTMIG*) result in high in-migration intensities. It is thus the small local labour markets that are dependent of a high external turnover of people and this is especially obvious regarding in to and out from employment and with respect to total migration. In this sense the migration pattern of the 1990s can be seen as a reminiscence of the migration pattern in the industrial society.

Population size is, however, positively significant for total net migration and studies. In the former case it must kept in mind that the out- and in-migration intensities are negatively

correlated with size and that the big urban areas have low intensities but net in-migration. This result in high net in-migration intensities as a consequence of the small figures in the ratios. The contrary is, of course, valid with respect to small local labour markets with both high in- and out-migration intensities.

This observation is reinforced if we take a look at the employment situation (*EMP*) regarding in to and out from employment. Even in these cases it is obvious that the labour market development has a significant positive impact on the migratory movements. People with jobs are moving to local labour markets where the labour market situation is good. This is also clearly shown with respect to net migration where a good labour market situation is a pull factor and a bad one a push-factor for people with jobs and this is also applicable with respect to total net migration. The share of highly educated people (*EDHIGH*) is also positively correlated with in- and out-migration from and to employment.

The “unemployment career” shows the same signs as the “employment career” with respect to population size (*POP*). A large population is a restriction on out-migration of both unemployed persons and such that are going to be unemployed – they can of course have been unemployed already when they were moving out. This can be seen as a rational choice as a large local labour market also is a more diversified one and the chance to get a job is better. The opposite is, however, not valid – unemployed persons have no tendency to move in to large local labour markets as well as there are no signs that in-migrants to large local labour markets are subjected to unemployment more than others.

The same can be said about out-migration to or from unemployment with regard to the employment development (*EMP*). A good employment development hamper out-migration of unemployed persons as well as it hamper out-migration to unemployment. A good employment development does not, however, stimulate in-migration of unemployed persons. It is, thus, more the pull factors (*POP* and *EMP*) that hamper out-migration of unemployed and people that run the risk of being unemployed as a consequence of out-migration even if the same push-factors stimulate out-migration from stagnating or retarding local labour markets. This is also in line with the human capital theory and can be seen as a rational choice. That a positive employment development does not stimulate in-migration of unemployed persons is, however, not in accordance with the traditional push-pull theory

regarding migration. This seems also to be opposing to the industrial migration pattern where people moved from places with retarding labour markets to places with increasing ones.

Even with regard to the career “studies” population size (*POP*) has the same impact as for employment and und unemployment. A large local labour market hamper out-migration to and from studies and small ones stimulate out-migration. This is not surprising as college and university towns in general are localized in large local labour markets and people often settle down in the university towns after finished studies.

On the other hand, the branch width (*BRW*) stimulates out-migration both to and from studies. The explanation is probably that university towns have a diversified labour market and students have high migration intensities. That the share of highly educated people (*EDHIGH*) is positively significant with regard to in-migration to and from studies is not surprising – university towns have a high share of highly educated people in the labour force. Even after finished studies many people move to areas with a high share of highly educated people. Regarding industrial or post-industrial migration pattern migratory movements with respect to studies are neither nor. Students have naturally moved to places where the study possibilities exist and this is still valid even if distance education has increased during the past decades.

The income level (*INC*) has – when it shows any significant signs – a negative impact on in-migration and a positive on out-migration. Regarding net-migration, the same phenomena can be observed in the sense that the income variable shows negative signs. This can perhaps be explained by the fact that high-income areas also are high-cost areas. Another explanation to this – according to the theory deviating result – is that there is something wrong with the income per capita is a measure of the income level in the region. That people who are unemployed or outside the labour force react in that way is, however, not surprising and is also in accordance with the theory pauperisation and marginalizing of people. This phenomenon has also been observed in the big city areas in Sweden during the 90s (Amcoff, 2000, Johansson, 2000b, 2001).

Even if the impact of economic fluctuations on migration has been reduced - or even disappeared - there are still some reminiscences of the industrial migration pattern. This is even more obvious when we take a look at differing categories of movers or different

migration “careers”. Employment development is still a central factor for job movers even if this is not valid for other groups. The impact of the high turnover rate with respect to both in- and out-migration is perhaps a new phenomenon and a consequence of the reduced importance of labour market related migratory movements that is – among other things – a result of higher migration intensities of young people compared to the 60s and 70s.

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**Table 1.** In-migrants from various labour market “careers”. \* = t-values significant at 5%-level.

	1991		1993		1996		1997	
<b>Employment</b>	<b>R<sup>2</sup>:</b>	<b>.72</b>	<b>R<sup>2</sup>:</b>	<b>.73</b>	<b>R<sup>2</sup>:</b>	<b>.75</b>	<b>R<sup>2</sup>:</b>	<b>.59</b>
POP		.32	*	-2.45		-1.29		-1.34
EDHIGH	*	7.72	*	7.02	*	6.06	*	2.84
EDLOW	*	3.11		1.90	*	3.82		.84
LOCTURN		.28		1.20		1.52		1.40
EMP	*	6.06	*	3.24	*	7.40	*	4.50
AGE		1.34	*	3.27	*	3.15	*	2.15
BRW	*	-3.54		-.75		-1.60		-.62
INC	*	-3.62	*	-3.92		-1.23		-1.22
KNOWINT		-1.71	*	-2.53	*	-2.94		-1.24
OUTMIG	*	3.58	*	3.14	*	4.23	*	3.67
<b>Unemployment</b>	<b>R<sup>2</sup>:</b>	<b>.21</b>	<b>R<sup>2</sup>:</b>	<b>.57</b>	<b>R<sup>2</sup>:</b>	<b>.39</b>	<b>R<sup>2</sup>:</b>	<b>.52</b>
POP		.31		-.77		-1.56		.33
EDHIGH		.35	*	2.89	*	2.05		-.18
EDLOW		.65		-.49		.74		1.07
LOCTURN		.74		1.45		-1.00		.59
EMP		-1.17		-1.89		1.35		1.27
AGE		-1.02		.57		1.17		1.69
BRW		-.30		-1.60		-.24	*	-2.12
INC		-.76	*	-2.39		-1.10		.27
KNOWINT		-.33	*	-2.25		-1.29		-.16
OUTMIG		.84		.49		.76	*	3.12
<b>Studies</b>	<b>R<sup>2</sup>:</b>	<b>.48</b>	<b>R<sup>2</sup>:</b>	<b>.57</b>	<b>R<sup>2</sup>:</b>	<b>.72</b>	<b>R<sup>2</sup>:</b>	<b>.74</b>
POP		.41		-.57		1.01		.56
EDHIGH	*	5.91	*	6.01	*	6.90	*	3.94
EDLOW		-1.36		-1.32		-.26	*	-2.57
LOCTURN		.69		-.97		.46		-.16
EMP		.85		.76		1.85		1.04
AGE		1.82	*	3.97	*	4.32	*	6.20
BRW		-1.12		-.39		-1.54		-1.53
INC	*	-2.47	*	-2.31	*	-3.40		-1.70
KNOWINT		-3.05		-1.78		-1.19		-.80
OUTMIG		1.74		.94	*	4.30	*	4.44
<b>“Other”</b>	<b>R<sup>2</sup>:</b>	<b>.49</b>	<b>R<sup>2</sup>:</b>	<b>.66</b>	<b>R<sup>2</sup>:</b>	<b>.44</b>	<b>R<sup>2</sup>:</b>	<b>.42</b>
POP		.63		.87		-.45		-.48
EDHIGH	*	3.46	*	4.11		1.95		1.69
EDLOW	*	3.06		1.64		1.75		.32
LOCTURN		.06		.37		-.96		-.38
EMP		.85	*	-2.06		.29	*	2.67
AGE		-.03		.06		-.02		.29
BRW		-1.62		-1.34		-.18		-1.20
INC	*	-3.90	*	-6.87	*	-3.72	*	-3.43
KNOWINT		-.81	*	-3.80	*	-2.09		-1.54
OUTMIG		.99	*	3.37		1.23		.48
<b>Total</b>	<b>R<sup>2</sup>:</b>	<b>.71</b>	<b>R<sup>2</sup>:</b>	<b>.73</b>	<b>R<sup>2</sup>:</b>	<b>.72</b>	<b>R<sup>2</sup>:</b>	<b>.68</b>
POP		.69		-1.19		-.62		-.29
EDHIGH	*	8.13	*	8.69	*	7.25	*	3.86
EDLOW	*	2.96		.59	*	2.62		-.17
LOCTURN		.42		.58		.60		1.00
EMP	*	4.67		1.21	*	4.47	*	3.76
AGE		1.33	*	3.90	*	4.06	*	4.63
BRW	*	-3.70	*	-2.02	*	-2.07	*	-2.46
INC	*	-4.59	*	-6.26	*	-3.94	*	2.43
KNOWINT	*	-2.05	*	-3.60	*	-3.14		-1.18
OUTMIG	*	3.23	*	3.32	*	4.48	*	4.89

**Table 2.** In-migrants to various labour market “careers”. \* = t-values significant at 5%-level.

	1991		1993		1996		1997	
<b>Employment</b>	<b>R<sup>2</sup>:</b>	<b>.72</b>	<b>R<sup>2</sup>:</b>	<b>.67</b>	<b>R<sup>2</sup>:</b>	<b>.69</b>	<b>R<sup>2</sup>:</b>	<b>.60</b>
POP		.13	*	-2.31		-1.73		-1.19
EDHIGH	*	7.44	*	4.47	*	4.74		1.07
EDLOW	*	3.66	*	3.06	*	3.11		1.01
LOCTURN		1.05		1.83		1.17		1.94
EMP	*	6.69	*	4.48	*	7.60	*	6.09
AGE		1.41	*	2.37	*	2.52		1.89
BRW	*	-2.94		.20		-.96		-.68
INC	*	-2.30		-1.18		1.24		1.71
KNOWINT		-1.49		-1.42	*	-2.96		-.38
OUTMIG	*	4.34	*	3.46	*	2.76	*	3.71
<b>Unemployment</b>	<b>R<sup>2</sup>:</b>	<b>.61</b>	<b>R<sup>2</sup>:</b>	<b>.63</b>	<b>R<sup>2</sup>:</b>	<b>.65</b>	<b>R<sup>2</sup>:</b>	<b>.57</b>
POP		-.92		-.85		-1.95		-.40
EDHIGH	*	3.81	*	3.17	*	2.27		-.38
EDLOW		1.53		-.33		1.01		.50
LOCTURN		-.70		1.20		.72		-.08
EMP		-1.67	*	-2.48		1.54		1.05
AGE		-1.6		-.25		-1.28		-.42
BRW		-1.02		-1.18		-.24		-.57
INC		-1.89	*	-3.34	*	-2.74	*	-2.08
KNOWINT	*	-2.21	*	-2.71		-1.60		-1.69
OUTMIG		-.40		1.06		.13	*	2.52
<b>Studies</b>	<b>R<sup>2</sup>:</b>	<b>.53</b>	<b>R<sup>2</sup>:</b>	<b>.63</b>	<b>R<sup>2</sup>:</b>	<b>.70</b>	<b>R<sup>2</sup>:</b>	<b>.64</b>
POP		1.79		.23		1.64		1.42
EDHIGH	*	5.03	*	5.53	*	4.38	*	3.72
EDLOW		-.57		-1.71		.61		-1.17
LOCTURN		-.01	*	-2.24		-.10		-.15
EMP		1.00		-1.41		-.52		-1.53
AGE	*	3.44	*	5.30	*	5.04	*	4.94
BRW		-1.71		-.69		-.86		-1.54
INC	*	-3.13	*	-3.36	*	-3.23	*	-3.23
KNOWINT		-1.02		-1.79		.16		-.87
OUTMIG	*	3.13		1.42	*	4.82	*	3.51
<b>“Other”</b>	<b>R<sup>2</sup>:</b>	<b>.56</b>	<b>R<sup>2</sup>:</b>	<b>.71</b>	<b>R<sup>2</sup>:</b>	<b>.58</b>	<b>R<sup>2</sup>:</b>	<b>.50</b>
POP		1.11		-.58		-.61		-.88
EDHIGH	*	2.41	*	4.52	*	2.71		1.67
EDLOW	*	2.90		1.30	*	2.05		.05
LOCTURN		-.31		.85		-1.45		-.94
EMP		1.72		-1.92		1.20		1.81
AGE		-.83		-.78		-.95		-.40
BRW		-1.92		-.50		-.34		-.86
INC	*	-4.53	*	-6.71	*	-4.99	*	-4.05
KNOWINT		-.91	*	-4.09	*	-2.31		-1.11
OUTMIG		1.09		1.94		1.28		.15
<b>Total</b>	<b>R<sup>2</sup>:</b>	<b>.71</b>	<b>R<sup>2</sup>:</b>	<b>.73</b>	<b>R<sup>2</sup>:</b>	<b>.72</b>	<b>R<sup>2</sup>:</b>	<b>.68</b>
POP		.68		-1.19		-.62		-.29
EDHIGH	*	8.13	*	8.69	*	7.25	*	3.86
EDLOW	*	2.96		.59	*	2.62		-.17
LOCTURN		.42		.58		.60		1.00
EMP	*	4.67		1.21	*	4.47	*	3.76
AGE		1.33	*	3.90	*	4.06	*	4.63
BRW	*	-3.69	*	-2.02	*	-2.07	*	-2.46
INC	*	-4.58	*	-6.26	*	-3.94	*	2.43
KNOWINT	*	-2.05	*	-3.60	*	-3.14		-1.18
OUTMIG	*	3.23	*	3.32	*	4.48	*	4.89

**Table 3.** Out-migrants from various labour market “careers”. \* = t-values significant at 5%-level.

	1991		1993		1996		1997	
<b>Employment</b>	<b>R<sup>2</sup>:</b>	<b>.74</b>	<b>R<sup>2</sup>:</b>	<b>.62</b>	<b>R<sup>2</sup>:</b>	<b>.67</b>	<b>R<sup>2</sup>:</b>	<b>.63</b>
POP	*	-5.45	*	-3.48	*	-4.34	*	-4.66
EDHIGH		-.80		.23		-.62		-.53
EDLOW		.36		.49		-.33		.38
LOCTURN		.41		-.07		.12		-.15
EMP	*	-3.84		-.58		.33		-1.33
AGE	*	5.73	*	2.82		.95	*	2.10
BRW	*	2.33		.48		1.51	*	2.60
INC		2.83	*	2.09	*	4.63	*	3.14
KNOWINT		-.73		.82		-.51		-.39
INMIG	*	4.07	*	2.81	*	3.09	*	3.74
<b>Unemployment</b>	<b>R<sup>2</sup>:</b>	<b>.59</b>	<b>R<sup>2</sup>:</b>	<b>.67</b>	<b>R<sup>2</sup>:</b>	<b>.74</b>	<b>R<sup>2</sup>:</b>	<b>.77</b>
POP	*	-2.33	*	-2.88	*	-3.59	*	-2.77
EDHIGH		-.84		-1.84		-.65		-.31
EDLOW		-.80		.48		-1.66		-1.06
LOCTURN		-.64		.67	*	-2.45		-1.54
EMP	*	-4.40	*	-3.50	*	-3.49	*	-3.93
AGE		-1.24		-.48	*	-2.49		-1.65
BRW		1.19		1.61	*	2.26		.97
INC		1.03	*	2.37		-1.28		-1.23
KNOWINT		-.079		-.58		-.73		-1.75
INMIG		1.64	*	3.19	*	2.00		1.72
<b>Studies</b>	<b>R<sup>2</sup>:</b>	<b>.48</b>	<b>R<sup>2</sup>:</b>	<b>.37</b>	<b>R<sup>2</sup>:</b>	<b>.46</b>	<b>R<sup>2</sup>:</b>	<b>.46</b>
POP	*	-5.60	*	-4.26	*	-4.09	*	-3.83
EDHIGH	*	3.18		1.22	*	2.04	*	2.17
EDLOW		-1.79		-1.84	*	-3.32		-1.86
LOCTURN		-.21	*	-3.76	*	-3.20	*	-3.15
EMP		-.50		-.30		-1.27	*	-3.37
AGE		-1.40	*	2.54		1.85		.82
BRW	*	2.60	*	2.77	*	3.16	*	3.76
INC		-.69		-1.41	*	-3.85	*	-1.95
KNOWINT		1.95		.96		1.08		1.13
INMIG		-.89		1.08		1.68	*	3.41
<b>”Other”</b>	<b>R<sup>2</sup>:</b>	<b>.50</b>	<b>R<sup>2</sup>:</b>	<b>.51</b>	<b>R<sup>2</sup>:</b>	<b>.51</b>	<b>R<sup>2</sup>:</b>	<b>.42</b>
POP		-1.49		-.68		-.02		-.95
EDHIGH		-1.69		1.81	*	-3.50		.79
EDLOW		1.14		.90		-.22		.89
LOCTURN		-.03		-1.71	*	-2.10	*	-2.31
EMP		-1.26	*	-2.05	*	-2.57		-1.35
AGE		.85		-.22	*	-2.35		-.43
BRW		.23		-.19		1.22		-.20
INC		1.86		1.39		.88		-.49
KNOWINT		.14		1.62		1.32		-.63
INMIG		1.49	*	2.42	*	5.60		1.22
<b>Total</b>	<b>R<sup>2</sup>:</b>	<b>.73</b>	<b>R<sup>2</sup>:</b>	<b>.67</b>	<b>R<sup>2</sup>:</b>	<b>.69</b>	<b>R<sup>2</sup>:</b>	<b>.71</b>
POP	*	-5.41	*	-4.25	*	-4.98	*	-5.32
EDHIGH		-.49		-.23		-.52		.96
EDLOW		.17		-.10	*	-2.11		-.70
LOCTURN		.09		-1.65	*	-2.32	*	-2.42
EMP	*	-3.49		-1.47	*	-2.05	*	-3.64
AGE	*	3.74	*	2.40		.89		1.39
BRW	*	2.10		1.32	*	2.68	*	3.10
INC	*	2.55		1.52		1.13		.68
KNOWINT		-.07		1.25		.49		-.15
INMIG	*	3.23	*	3.32	*	4.48	*	4.89



**Table 4.** Out-migrants to various labour market “careers”. \* = t-values significant at 5%-level.

	1991		1993		1996		1997	
<b>Employment</b>	<b>R<sup>2</sup>:</b>	<b>.72</b>	<b>R<sup>2</sup>:</b>	<b>.55</b>	<b>R<sup>2</sup>:</b>	<b>.59</b>	<b>R<sup>2</sup>:</b>	<b>.61</b>
<i>POP</i>	*	-5.32	*	-2.97	*	-4.32	*	-4.27
<i>EDHIGH</i>		-.48		.16		.06		.63
<i>EDLOW</i>		-.29		.82		-1.82		.50
<i>LOCTURN</i>		.04		-.94		-1.32		-1.47
<i>EMP</i>	*	-3.27		.20		.49	*	-2.77
<i>AGE</i>	*	4.47	*	3.60		1.67	*	2.99
<i>BRW</i>	*	2.40		.41		1.70	*	2.31
<i>INC</i>		1.92		1.09		1.88		1.46
<i>KNOWINT</i>		-.69		1.00		-.39		-.11
<i>INMIG</i>	*	4.11	*	2.55	*	3.04	*	4.16
<b>Unemployment</b>	<b>R<sup>2</sup>:</b>	<b>.61</b>	<b>R<sup>2</sup>:</b>	<b>.77</b>	<b>R<sup>2</sup>:</b>	<b>.75</b>	<b>R<sup>2</sup>:</b>	<b>.73</b>
<i>POP</i>	*	-3.56	*	-3.26	*	-2.52	*	-3.28
<i>EDHIGH</i>		-.08		-1.38		-.48		-.24
<i>EDLOW</i>		1.26		-.12		1.60		-1.12
<i>LOCTURN</i>	*	2.38		1.34		-.58		-1.09
<i>EMP</i>	*	-2.05	*	-4.31	*	-3.91		-1.31
<i>AGE</i>		1.92		-.33		-.72		-.96
<i>BRW</i>		.68		.73		.13		.60
<i>INC</i>	*	3.02	*	2.42	*	2.80		-.57
<i>KNOWINT</i>		.15		.66		.87		-.81
<i>INMIG</i>		.19	*	3.73	+	2.53		.84
<b>Studies</b>	<b>R<sup>2</sup>:</b>	<b>.43</b>	<b>R<sup>2</sup>:</b>	<b>.38</b>	<b>R<sup>2</sup>:</b>	<b>.52</b>	<b>R<sup>2</sup>:</b>	<b>.45</b>
<i>POP</i>	*	-5.75	*	-5.07	*	-6.29	*	-4.60
<i>EDHIGH</i>	*	2.26		1.31		.12		1.50
<i>EDLOW</i>		-.57	*	-2.17	*	-3.88		-1.94
<i>LOCTURN</i>		-.30	*	-3.55	*	-3.62	*	-2.73
<i>EMP</i>		-1.51		-.86	*	-2.63	*	-3.15
<i>AGE</i>		1.01		1.86		1.21		-.68
<i>BRW</i>	*	2.82	*	3.24	*	6.34	*	4.42
<i>INC</i>		.69		-.67		-1.82		-.16
<i>KNOWINT</i>		1.10		.68		-.76		.46
<i>INMIG</i>		-.49		.72	*	2.96	*	3.23
<b>”Other”</b>	<b>R<sup>2</sup>:</b>	<b>.42</b>	<b>R<sup>2</sup>:</b>	<b>.60</b>	<b>R<sup>2</sup>:</b>	<b>.59</b>	<b>R<sup>2</sup>:</b>	<b>.48</b>
<i>POP</i>		-.67		-.74		1.31		-1.08
<i>EDHIGH</i>	*	-2.08	*	-2.07	*	-3.01		-.46
<i>EDLOW</i>		1.07		1.47		.42		.10
<i>LOCTURN</i>		-1.36		-.57		-1.37		-.93
<i>EMP</i>		-1.59		-1.75	*	-2.56		-1.60
<i>AGE</i>		1.29		-.20	*	-2.41		-.87
<i>BRW</i>		-.03		-.46		-.92		.23
<i>INC</i>		1.93	*	2.99		.59		.17
<i>KNOWINT</i>		.51		1.32		.80		-.42
<i>INMIG</i>		1.86	*	3.56	*	5.20	*	2.98
<b>Total</b>	<b>R<sup>2</sup>:</b>	<b>.73</b>	<b>R<sup>2</sup>:</b>	<b>.67</b>	<b>R<sup>2</sup>:</b>	<b>.69</b>	<b>R<sup>2</sup>:</b>	<b>.71</b>
<i>POP</i>	*	-5.41	*	-4.25	*	-4.98	*	-5.32
<i>EDHIGH</i>		-.49		-.23		-.52		.96
<i>EDLOW</i>		.17		-.10	*	-2.11		-.70
<i>LOCTURN</i>		.09		-1.65	*	-2.32	*	-2.42
<i>EMP</i>	*	-3.49		-1.47	*	-2.05	*	-3.64
<i>AGE</i>	*	3.74	*	2.40		.89		1.39
<i>BRW</i>	*	2.10		1.32	*	2.68	*	3.10
<i>INC</i>	*	2.55		1.52		1.13		.68
<i>KNOWINT</i>		-.07		1.25		.49		-.15
<i>INMIG</i>	*	3.23	*	3.32	*	4.48	*	4.89

**Table 5.** Net-migrants *in to/out from* various labour market “careers”. \* = t-values significant at 5%-level.

	1991		1993		1996		1997	
<b>Employment</b>	<b>R<sup>2</sup></b>	<b>.64</b>	<b>R<sup>2</sup></b>	<b>.31</b>	<b>R<sup>2</sup></b>	<b>.52</b>	<b>R<sup>2</sup></b>	<b>.45</b>
POP	*	3.12		.41		1.57	*	2.03
EDHIGH	*	6.00		1.94	*	3.64		1.17
EDLOW	*	2.53	*	2.00	*	2.32		.57
LOCTURN		.57		1.15		.51		1.42
EMP	*	7.94	*	3.79	*	5.42	*	6.25
AGE	*	-2.98		-.94		.80		-1.03
BRW	*	-3.42		.38		-1.43	*	-2.01
INC	*	-2.93		-1.75	*	-2.36		-.69
KNOWINT		-.27		-1.06		-1.54		.22
<b>Unemployment</b>	<b>R<sup>2</sup></b>	<b>.13</b>	<b>R<sup>2</sup></b>	<b>.19</b>	<b>R<sup>2</sup></b>	<b>.29</b>	<b>R<sup>2</sup></b>	<b>.36</b>
POP		-.01		2.50		1.60		1.12
EDHIGH		.34		1.78		1.25		-.09
EDLOW		.85		-.08		1.78		1.26
LOCTURN		-.04		.28	*	2.51		.78
EMP		.10		.75	*	3.49	*	3.63
AGE		.59	*	-2.18		.37		1.33
BRW		.99	*	-2.02		-1.76		-.68
INC		-.67	*	-2.35		-.46		-.52
KNOWINT	*	-2.03		-.70		-.15		-.05
<b>Studies</b>	<b>R<sup>2</sup></b>	<b>.61</b>	<b>R<sup>2</sup></b>	<b>.57</b>	<b>R<sup>2</sup></b>	<b>.60</b>	<b>R<sup>2</sup></b>	<b>.60</b>
POP	*	3.50	*	2.53	*	2.29	*	3.41
EDHIGH	*	3.48	*	4.07	*	3.18	*	2.38
EDLOW		1.06		-.485	*	2.16		-.04
LOCTURN		.21		.01		1.03		1.46
EMP		.77		-1.36		-.24		-.62
AGE	*	5.95	*	3.84	*	4.80	*	5.30
BRW	*	-3.05		-2.20	*	-1.96	*	-3.55
INC	*	-2.36		-1.75		-.21		-1.59
KNOWINT	*	-2.47	*	-2.06		-.66		-1.82
<b>”Other”</b>	<b>R<sup>2</sup></b>	<b>.32</b>	<b>R<sup>2</sup></b>	<b>.41</b>	<b>R<sup>2</sup></b>	<b>.26</b>	<b>R<sup>2</sup></b>	<b>.11</b>
POP		1.75		.12		.25		.20
EDHIGH	*	2.72	*	3.55	*	2.87		.17
EDLOW		.98		-.03		.98		-.59
LOCTURN		-.24		1.79		.43		1.00
EMP		1.71		.17		1.53	*	2.12
AGE		-.31		-.90		-.77		-.47
BRW		-1.16		.28		-.62		-.34
INC	*	-4.36	*	-4.52	*	-3.54	*	-2.33
KNOWINT		-.60	*	-3.38		-1.83		-.21
<b>Total</b>	<b>R<sup>2</sup></b>	<b>.58</b>	<b>R<sup>2</sup></b>	<b>.50</b>	<b>R<sup>2</sup></b>	<b>.57</b>	<b>R<sup>2</sup></b>	<b>.54</b>
<i>POP</i>	*	3.75	*	2.31	*	2.75	*	2.90
<i>EDHIGH</i>	*	5.73	*	5.14	*	4.82		1.94
<i>EDLOW</i>		1.82		.39	*	2.86		.28
<i>LOCTURN</i>		.22		1.46		1.78	*	1.99
<i>EMP</i>	*	5.33		1.68	*	3.97	*	4.50
<i>AGE</i>		-1.38		.45		1.88		2.23
<i>BRW</i>	*	-3.72	*	-2.03	*	-2.88	*	-3.32
<i>INC</i>	*	-4.62	*	-4.65	*	-3.05		-1.91
<i>KNOWINT</i>		-1.28	*	-2.88	*	-2.17		-.65