ECONSTOR
Make Your Publications Visible.

A Service of

ZBW Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Tervo, Hannu

Conference Paper

Post-migratory employment prospect: Evidence from Finland

38th Congress of the European Regional Science Association: "Europe Quo Vadis? - Regional Questions at the Turn of the Century", 28 August - 1 September 1998, Vienna, Austria

Provided in Cooperation with:
European Regional Science Association (ERSA)

Suggested Citation: Tervo, Hannu (1998) : Post-migratory employment prospect: Evidence from Finland, 38th Congress of the European Regional Science Association: "Europe Quo Vadis? - Regional Questions at the Turn of the Century", 28 August - 1 September 1998, Vienna, Austria, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:
https://hdl.handle.net/10419/113392

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

WWW.ECONSTOR.EU

Mitglied der Leibniz-Gemeinschaft

European Regional Science Association

38th European Congress

28 August - 1 September 1998 in Vienna

Hannu Tervo
School of Business and Economics
University of Jyväskylä
Jyväskylä, Finland
htervo@kosti.jyu.fi

POST-MIGRATORY EMPLOYMENT PROSPECTS: EVIDENCE FROM FINLAND

ABSTRACT. This paper deals with the role which migration has in improving post-migratory employment prospects of (long-distance) migrants within Finland, by analysing the employment status of migrants and non-migrants at the end of the migration interval. The analysis is based on micro data from the period 1985-90. The results from multivariate analyses suggest that migration by itself has not augmented the likelihood of getting a job even though tabular comparisons of re-employment rates between migrants and non-migrants would show this to be the case.
Keywords: Migration, employment status, logit model

1. Introduction

From the point of view of the efficiency of interregional labour migration, an essential question relates to the outcome of the move: do the migrants benefit from their actions in terms of enhanced employment and/or income opportunity? (Hoover and Giarratani 1984; Van Dijk et al. 1989). This paper concerns the question of the improvement of employment. That this improvement would take place, unemployment should have to provide the spur for migration in the first instance ("the first dimension of micro-economic efficiency"), and migration should have to improve the prospects of employment in the second ("the second dimension of micro-economic efficiency").

A number of recent studies have analysed the first condition according to which unemployment should have affected the migration decision (for a review, see Herzog et al., 1993, also Antolin and Bover 1997; Groenewold 1997). A previous analysis on the causes of long-distance migration within Finland could not give strong evidence in favour of the hypothesis that personal unemployment augments the likelihood of migration, all else being equal (Tervo 1997). Instead, regional unemployment was found to have been a significant determinant of migration likelihood in Finland. This analysis showed that the equilibrating process of interregional migration is slow, though working in the right direction.

A major problem with previous research is that little attention has focused on the question of the effect of migration on re-employment. Furthermore, the rare previous research on this issue has been inconclusive (see Herzog and Schlottman 1984; Van Dijk et al. 1989; Herzog et al. 1993). The empirical analysis of the present paper analyses the role which migration has in improving the post-migratory employment prospects of migrants within Finland, and is thus related with the second dimension of micro-efficiency in labour migration.

We may distinguish between two patterns of behaviour as regards the job search process of migrants, viz. "speculative migration" and "contracted migration". In the case of speculative

migration workers move in the hope of finding a job at their destination, while in the case of contracted migration workers move only after a job at the destination has already been arranged (Silvers 1977). In the latter case, a migrant should have to be employed by definition; not so in the former, although we may suppose that moving improves the worker's employment opportunities.

If moving takes place speculatively, migration can be considered as spatial job-search (see e.g. Herzog et al. 1993). According to the job search theory, expansion of the search radius increases the number of available jobs thereby increasing the re-employment likelihood of the unemployed. Destination reservation wages may also be lowered such that relocation costs are recouped more quickly through re-employment. The association between migration and employment may also be negative if migration is viewed as a 'strategy of last resort' (Bailey 1994). The positive association between migration and employment is, however, intuitively more appealing.

For migrants who already have a contract for a job in the new region, migration is the outcome of the information gathering and job search process, and not part of job search as it is for speculative migrants. Either strategy may be appropriate, depending on the circumstances in which individuals find themselves. According to Flowerdew (1992), the bulk of migration behaviour in contemporary Britain and most other developed countries is contracted. To my knowledge, there are no studies on the relative importance between these two main types of labour migration in Finland.[1] It is however likely that contracted migration compared with speculative migration is also more popular in Finland.

As predicted by both the job-search model and the human capital model of migration, migration should augment the employability of migrants as compared with non-migrants (if

[1] The number of those persons who found a job outside their home municipality through the Employment Service Agency varied between 8 000 and 10 000 in Finland during 1983-87 (Kettunen 1990, 25). This is about 8-10 % of all jobs mediated by the Agency. Only part of all vacancies go, however, through the employment exchange since many employers prefer to fill vacancies through other information channels, especially in the case of more qualified jobs. For example in 1986, the share of jobs mediated by the Employment Service Agency was only 15% of all available vacancies (Sääski 1988, 10).

earnings potential is held constant) for both the employed and the unemployed, be it contracted or speculative. The empirical analysis of the present paper will examine whether this hypothesis holds true in Finland. Based on the 1985-90 data, the employment status within different labour force groups in 1990 is compared between migrants and non-migrants under the ceteris paribus conditions, on the basis of which the effect of migration on the improvement of employment prospects is analysed.

The rest of the paper is structured as follows. Section 2 presents the data and the variables used, the results of which are presented in Sections 3 and 4. Section 3 shows some tabular comparisons of unemployment rates between migrants and non-migrants. Section 4 presents the results based on multivariate analysis in which employment / unemployment status is regressed upon sets of independent variables composed of human capital characteristics, regional labour market characteristics and a dichotomous variable representing migration status. Section 5 concludes the paper.

2. Data and variables

The data set used was a sample from the Finnish longitudinal census file which contains data on population, economic activity, dwelling conditions and family gathered at the censuses of 1970, 1975, 1980, 1985 and 1990. The file contains data on 6.4 million people who were residents of Finland at the time of one or more of the censuses. The census file is maintained and updated by Statistics Finland. The data set used here is a 1 percent sample from the census data file from the year 1990.[2] The data set was supplemented by data on the characteristics of municipalities.

The number of individuals in the total sample (drawn from the total population, not only the labour force) was over 50 000. The analysis was directed at three sub-groups: those who belonged to the labour force both in 1985 and 1990 (“old workers”); those who came to the

[2] In this study, data from other years than 1990 is used only in the determination of the migration and unemployment variables. The panel nature of the Census data file will be utilised in subsequent studies.

labour market during the period 1985-90 (“new entrants”); and those who were unemployed in 1985 and belonged to the labour force in 1990 (“unemployed”). The number of individuals in these three groups were 18849, 5687 and 881, respectively. The mean values of the variables in these three groups are presented in Table 1.

-- Table 1 around here --

The definition of migration involves a change of residence from one location to another. This geographical interaction may occur over very short distances as well as across much longer distances. The interest in the present paper was in those moves which were motivated by labour market considerations. In addition to work-related reasons, people may also migrate for family, housing or educational reasons. These moves should have to be excluded from the analysis provided that they did not involve a change of or search for a job. Interview data on individuals’ reasons for moving usually show these to be multi-factorial. Based on postal inquiry among those who moved from one of the 460 municipalities to another in Finland in 1988-89, Korkiasaari (1991) reported that for 34% migrants the most important reason for moving was work.

The interest in the analysis was directed at those who belonged to the labour force in 1990 and who had moved over a long distance. In most of these cases, individuals moved because of a new job, or at least they had to leave the old job because of the move. Long-distance migration is defined as occurring where an individual is resident in a different province at the end of 1990 than at the end of 1985. At the time of investigation, Finland was divided into eleven large continental provinces and the autonomous province of the Ålands Islands.

In most cases, a move from of one these provinces to another leads to a change of the local labour market and a search for a new job. Labour migration flows between contiguous provinces may include a small number of short-distance, non-labour market motivated moves. The importance of this source of error is not likely to be great however. Another drawback is related to the long time span (5 years) for observing migration. If a migrant has first moved to another province and then moved back within the time span, the move was not registered in the data. In addition to return migration, repeat migration which took place within the five

years time interval was also excluded. Due to the long time span, the observations related to workers' employment status at the end of the period (1990) may also be far off from the event of the move. This may weaken the reliability of the results, but, on the other hand, we may argue that migration should improve workers' employability in the longer run and not necessarily instantly after the move.

A group of other variables taken from the census data file was used in the multivariate analysis (see Table 1). First, the employment variable was used as an independent variable. A person is registered as employed if he/she was not unemployed and belonged to the labour force in 1990.

Second, a subgroup of variables describing workers' personal and family characteristics in 1990 was used as control variables. These included the individual's sex, age and education. Sex was a dummy variable which took the value of 1 if the person is female. Age was measured as the person's age in years. Age was also squared to control its possible non-linear effect. In the census data file, educational attainment is presented as a five-digit code giving details about the level and the field of education, degree, programme of study and major subject. Each person is assigned only one qualification per census year, i.e. the highest degree. In this study, the educational level was divided into three categories: basic education (reference class), upper secondary education and higher education.

Two dummy variables were used to indicate workers' family structure. The first dummy showed whether the worker was living alone, while the second one showed whether the person lived in the same dwelling unit with another person (which in most cases is his/her spouse). A dwelling unit consists of all persons who live in the same dwelling and treat the dwelling as their principal residence. A dummy variable was also used to show whether the worker is a home owner or holds the shares of entitling occupancy of the dwelling.

Two dummy variables were related to the time before 1990. A dummy variable showed whether the migrant has also changed province in the period 1970-85. This dummy took the value of 1 if the person had moved to another province in at least one of the periods 1980-85, 1975-80 and/or 1970-75. The unemployment variable showed whether the person was

unemployed in 1985.

Third, six variables aimed to control labour market conditions in the migrant's destination municipality. Two variables were used to describe the unemployment situation in the destination area, of which the first one measured the unemployment level (percentage) in the municipality in 1990 and the second change in this level during the period 1985-90. The latter variable was the differential between the unemployment percentages in 1990 and 1985.

Besides the unemployment situation, certain other variables were used to describe the characteristics of the destination municipality. The first of these variables was the size of the municipality, indicating the resident population in 1 000's. The second variable described the degree of urbanization, indicating to within an accuracy of 10% the proportion of the population living in built-up areas. Two variables measured the industrial structure of the municipality, indicating the share of the employed labour force in primary production (acriculture and forestry) and in industry (in units of ten percent).

3. Pre- and post-migratory unemployment rates

The development of the employment situation of migrants can be examined by simply looking at their pre- and post-migratory unemployment rates, and compare this development to the development of the non-migrants. Table 2 shows the 1990 unemployment rates of those who belonged to the labour force already in 1985 as well as those came to the labour market during the period 1985-90 as separated by mobility status into migrants and non-migrants. Those who belonged into the labour force in 1985 (the first group) can be separated into employed and unemployed. Table 3 shows the unemployment rates of both these sub-groups by mobility status before and after the move.

Table 2 indicates that the unemployment rate of migrants as compared with that of the non-migrants was slightly higher in 1990 when examining the labour force as a whole (3.4% and 3.0%, respectively). The observed difference is not however statistically significant, which would show that moving does not as such affect the employment situation of workers. But when the labour force is separated into two groups, old and new workers, the results seem to

show significant differences with respect to mobility status. Among the old workers, the unemployment rate of the migrants is significantly *higher* than the unemployment rate of non-migrants. On the contrary, the unemployment rate of those new workers who migrated is *lower* compared with those who did not. These results would indicate that it is worthwhile to move when one is entering the labour market, but not if one is already there.

-- Table 2 around here --

In the analysis of the group of old workers, the unemployment situation in 1985 should have to be taken into account, since unemployment is often one of the main reasons for moving. As can be observed in Table 3, the unemployment rate of migrants was higher in 1985 compared with that rate of non-migrants. We can also see that the unemployment rate of the migrants improved faster than that of the non-migrants: the change was from 7.8% to 3.8% among the migrants and from 4.5% to 2.6% among the non-migrants.[3] The unemployment differences between these two groups diminished both in absolute and proportionate terms. We might reach a preliminary conclusion that it was also worthwhile for the old workers to move, since by doing this they could improve their employment situation.

In Table 3, workers are separated into employed and unemployed during 1985. Table 3 shows that from the pool of unemployed a fifth (20.1%) was still unemployed five years later. The unemployment rate of those unemployed who moved was lower in 1990 than the rate of those did not. The difference is not statistically significant, which is, at least partly, due to the small number of unemployed in the sample for 1985. Among those who were employed in 1985 the incidence of unemployment was higher for migrants than for non-migrants. This would give contradictory evidence related to the employment effect of migration. If migration takes place speculatively, it may, however, be argued that the higher unemployment level of employed migrants compared with that of employed non-migrants is not surprising.

[3] In the aggregate, the unemployment rate was somewhat higher in Finland in 1985 than in 1990. The year 1990 was the last 'good' year with respect to the unemployment situation. Due to the economic crisis, unemployment climbed within a few years from about 3% to over 20% in the 1990s.

-- Table 3 around here --

In all, these tabular comparisons of unemployment (re-employment) rates between migrants and non-migrants would show that moving has a positive effect on job prospects, though the effect varies between various labour force groups. But as migration is selective of the young, the better educated and in general those with higher levels of human capital, it is also selective of those workers who are more attractive to employers. Thus these conclusions cannot be definitive without an analysis of the direct effects of migration which takes into account said factors.

4. The effect of migration on re-employment

The examination above showed that a deeper analysis on the effects of migration on re-employment is needed. The analysis in this paper is directed at three groups: those who were in the labour market already in 1985, new entrants in the labour force and those who were unemployed in 1985. Using the microdata, the direct impact of migration on re-employment is estimated among these three groups while holding constant both the personal characteristics and local labour market conditions. The binary-logit estimation method based on the logistic distribution is utilised. The dependent variable is a dummy variable showing whether the worker is employed or not, and the independent variables consist of the selectivity and labour market variables and a binary variable representing migration status. The estimation results are presented in Tables 4 and 5.

The estimated coefficients of the control variables are mainly as expected. In the group of old workers, previous unemployment seems to be the most important factor preventing re-employment (see Table 4). Education increases the likelihood of getting a job, especially in the case of new entrants into the labour force. This effect is not, however, statistically significant in the case of the unemployed. Women have better post-migration employment prospects than men. Surprisingly, age does not have a statistically significant effect, except in the case of the unemployed. Among the old workers and unemployed workers, to live alone or together with another person decreases the likelihood of being employed.

-- Tables 4 and 5 around here --

High local unemployment as well as its increase prevents re-employment. A high share of industry in the municipality decreases post-migratory employment prospects. In the group of entrants, a high degree of urbanization decreases the likelihood of being employed. The other effects related to local labour market conditions did not reach statistical significance.

From the point of view of the goals of the analysis, the most important variable in the estimations is the migration variable measuring the effect of migration. This variable provides information on the comparative efficiency of job search between migrants and non-migrants as well as information on the working of the job information and matching mechanisms.

The estimation results do not seem to give strong evidence in favour of the positive effects of migration on employment prospects. Taking into account the selectivity factors and labour market conditions, it cannot be shown that moving would advance re-employment in the group of old workers. On the contrary, the estimated effect of migration is significantly negative. In the group of entrants, the estimated coefficient is of the right sign, but does not reach the statistical significance. In the group of unemployed, the sign of the migration effect is also as expected but not statistically significant.

Thus, the results based on multivariate analyses would suggest that migration by itself has not improved employment prospects, even though tabular comparisons of re-employment rates between migrants and non-migrants would show this to happen. The direct effect of migration on employment would even seem to be negative (i.e. the group of old workers), or at least statistically insignificant (i.e. the groups of entrants and unemployed). It is possible to obtain a statistically significant coefficient on the migration variable ($p=0.049$) in the case of the unemployed if the age and unemployment level variables are left out from the specification of the model. It is, however, difficult to give good reasons for omitting these important selectivity and labour market condition variables from the model.

Certain reservations concerning the results should have to be made. First, it is possible that a worker becomes unemployed during the 5-year period, even though he/she is not unemployed

at the outset of the period, and moves as a response. In this case, the experience of unemployment decreases the chances of getting a job, which may explain the estimation result related to the group of old workers according to which migration has a negative effect on re-employment. In the same way, the situation in which a worker moves for other than labour market related reasons may have an effect on this result, e.g. women may relinquish employment in order to migrate with their husbands and enter a period of unemployment.

Second, the amount of unemployed in the sample is small (n= 881) even though the total sample is big. This weakens the reliability of the estimation results in this group. Third, the end year 1990 of the period was still the time of full-employment in Finland. The results may be different in the analysis of the period 1990-95 at which time the unemployment was at a high level during the whole period.

What are, then, the most important factors which advance employment among the migrants? A logit-model was estimated to find out this. The estimation included only those who had migrated. As can be observed in Table 6, three significant factors having an effect on employment can be found. First, higher education increases the likelihood of getting a job after the move. Second, unemployment prevents strongly this likelihood. Thirdly, the likelihood for getting a job decreases strongly if the unemployment rate has been increasing in the destination region. It is also worth noting that no other personal or local characteristics were statistically significant.

-- Table 6 around here --

4. Conclusions

If we simply examine the development of the employment status of migrants compared with that of non-migrants we get the impression that labour force migration improves the level of employment. This conclusion does not, however, seem to stand the test of multivariate analysis in which the selectivity factors of individuals and labour market conditions in the destination region are taken into account. We cannot show that labour force migration would be efficient in the sense that its direct effect on the level of employment would be positive

under the *ceteris paribus*- conditions.

Migrants who move to those regions with positive unemployment development, who are educated and who do not bear the burden of being unemployed at the origin region also tend to get a job in their destination region. These facts (together with generous unemployment benefits) may also explain the result that the unemployed do not appear very willing to migrate in Finland (Tervo 1997).

Previous analyses have shown that unemployment, and especially regional unemployment, increases the likelihood of out-migration in Finland (Tervo 1997). Now, if migration does not increase the likelihood of getting a job, as the results in the present study would show, then neither does it decrease aggregate unemployment. This would suggest that regional unemployment differences even out as unemployment "spreads" from one region to another as a result of inter-regional migration, not because labour mobility in itself advances the efficient allocation of resources or economic growth. This conclusion is important, but should be regarded as only tentative. For example, Van Dijk et al. (1989) pointed out that the willingness of workers to assume risk within the labour market, with many becoming speculative migrants in the process, may promote macro-efficiency in migration.

Acknowledgments. This study is a part of a project supported by the Academy of Finland and Yrjö Jahnsson Foundation.

References

Antolin P. and Bover O. (1997) "Regional Migration in Spain: the Effect of Personal Characteristics and of Unemployment, Wage and House Price Differentials using Pooled Cross-sections", *Oxford Bulletin of Economics and Statistics* 59: 215-235.

Bailey A.J. (1994) "Migration and Unemployment Duration Among Young Adults", *Papers in Regional Science* 73: 289-308.

Flowerdew R. (1992) "Labour Market Operation and Geographical Mobility", in Champion T.

and Fielding T. (eds.) *Migration Processes & Patterns. Volume 1. Research Progress & Prospects,* London: Belhaven.

Groenewold N. (1997) "Does Migration Equalise Regional Unemployment Rates? Evidence from Australia", *Papers in Regional Science* 76: 1-20.

Herzog H.W. Jr. and Schlottman A.M. (1984) "Labor Force Mobility in the United States: Migration, Unemployment, and Remigration", *International Regional Science Review* 9: 43-58.

Herzog H.W. Jr, Schlottman A.M. and Boehm T.B. (1993) "Migration as Spatial Job-Search: a Survey of Empirical Findings", *Regional Studies* 27: 327-40.

Hoover E.M. and Giarratani F. *An Introduction to Regional Economics,* New York: Alfred A. Knopf

Kettunen J. (1990) "*Re-employment, labour mobility and welfare of unemployed persons*" (in Finnish) The Research Institute of the Finnish Economy B 67, Helsinki.

Korkiasaari J. (1991) "*Mobility and structural change*" (in Finnish), Työministeriö, Työpoliittinen tutkimus n:o 11, Helsinki.

Silvers A.L. (1977) "Probalistic Income-maximizing Behaviour in Regional Migration", *International Regional Science Review* 2: 29-40.

Sääski N. (1988) "External and internal labour mobility in 1986" (in Finnish), *Labour Reports* 31,3: 10-15.

Tervo H. (1997) "Long-Distance Migration and Labour Market Adjustment: Empirical Evidence from Finland 1970-90, University of Jyväskylä, School of Business and Economics, Working Paper n:o 168, Jyväskylä.

Van Dijk J., Folmer H., Herzog H.W. and Schlottman A.M. (1989) "Labor Market Institutions and the Efficiency of Interregional Migration: A Cross-National Comparison", in van Dijk J., Folmer H., Herzog H.W. and Schlottman A.M. (eds.) *Migration and Labor Market Adjustment,* Dordrecht / Boston / London: Kluwer.

Table 1. Sample means of the variables in the three groups

Variable	Group		
	Old workers	New entrants in labour force	Unemployed
	(n=18849)	(n=5687)	(n=881)
Employed in 1990 (=1)	0.974	0.955	0.799
Has migrated in 1985-90 (=1)	0.058	0.121	0.096
Personal characteristics (1990)			
Sex (female = 1)	0.466	0.515	0.385
Age	41.2	30.0	37.1
$(Age)^2$	1792.0	1035.5	1478.7
Upper secondary education (=1)	0.494	0.570	0.599
Higher education (=1)	0.133	0.112	0.041
One person-household (=1)	0.121	0.125	0.171
Two person-household (=1)	0.254	0.264	0.250
Home owner (=1)	0.786	0.662	0.605
Previous migration experience (=1)	0.188	0.135	0.178
Unemployed in 1985 (=1)	0.047	-	-
Labour market conditions (municipality) (1990)			
Unemployment percent	3.24	3.28	4.14
Change in unemployment percent (Absolute difference between unemployment percents in 1990 and 1985)	-3.11	-3.41	-4.63
Size of municipality (in 1000's)	97.54	98.44	62.07
Degree of urbanization	7.55	7.41	7.05
Share of primary production (in units of ten percent)	0.58	0.66	0.78
Share of industry (in units of ten percent)	2.39	2.35	2.42

Table 2. Unemployment rates by mobility status in different labour force-groups, 1990

Mobility status	Unemployment rate (percent) in 1990		
	Old workers (n=18849)	New entrants (n=5687)	Total (n=24536)
Migrants (n=1783)	3.8	2.8	3.4
Non-migrants (n=22753)	2.6	4.7	3.0
Total (n=24536)	2.6	4.5	3.1
p-value	.010	.021	.353

Notes:

Migrants: Those who were resident in a different province in 1990 from that five years earlier

Non-migrants: Those who were resident in the same province in 1985 and 1990

Old workers: Those workers who belonged to the labour force both in 1985 and 1990

New entrants: Those workers who were in the labour force in 1990 but not in 1985.

p-value: p-value shows the lowest significance level at which the null hypothesis of equal unemployment rates can be rejected (t-test)

Table 3. Pre- and post-move unemployment rates by mobility status, 1985 and 1990

Mobility status	Unemployment rates (percent)			
	1985	1990		
		Employed in 1985 (n=17968)	Unemployed in 1985 (n=881)	Total (n=18849)
Migrants (n=1094)	7.8	3.0	14.1	3.8
Non-migrants (n=17755)	4.5	1.7	20.7	2.6
Total (n=18849)	4.7	1.8	20.1	2.6
p-value	.000	.003	.149	.010

Notes:

Migrants: Those who were resident in a different province in 1990 from that five years earlier

Non-migrants: Those who were resident in the same province in 1985 and 1990

p-value: p-value shows the lowest significance level at which the null hypothesis of equal unemployment rates can be rejected (t-test)

Table 4. Determinants of re-employment among old and new workers in 1990, binary logit estimates

Variable	Old workers				New entrants in labour force			
	B	s.e.	p	R	B	s.e.	p	R
Constant	4.79	.948	.000	-	5.16	.986	.000	-
Migrant	-.391	.186	.036	-.023	.413	.261	.114	.016
Personal characteristics								
Female	.346	.099	.001	.047	.282	.133	.034	.035
Age	-.008	.037	.819	.000	-.046	.033	.160	.000
$(Age)^2$	-.000	.000	.494	.000	.001	.000	.231	.000
Upper secondary education	-.006	.106	.952	.000	.891	.146	.000	.131
Higher education	.895	.244	.000	.050	1.15	.302	.000	.078
One person-household	-.611	.131	.000	-.066	-.129	.204	.529	.000
Two person-household	-.227	.117	.053	-.020	.064	.162	.692	.000
Home owner	.756	.107	.000	.102	.746	.147	.000	.107
Previous migration experience	-.064	.134	.636	.000	.003	.209	.988	.000
Unemployed in 1985	-2.45	.113	.000	-.320	-	-	-	-
Labour market conditions (municipality)								
Unemployment rate	-.202	.022	.000	-.135	-.248	.030	.000	-.177
Change in unemployment rate	-.054	.017	.002	-.042	.004	.021	.861	.000
Size of municipality	-.001	.001	.223	.000	.002	.001	.090	.021
Degree of urbanization	.012	.056	.826	.000	-.177	.084	.035	-.034
Share of primary production	-.053	.113	.640	.000	-.235	.159	.141	-.009
Share of industry	-.125	.064	.050	-.020	-.153	.089	.086	-.021
Sample size		18849				5687		
Number of employed		18353				5433		
-2 Log-likelihood		3786.9				1883.5		
Correctly classified, %		97.4				95.5		

Notes: B = estimated coefficient
s.e. = standard error
p = exact level of significance (Wald statistic)
R = R statistic showing the contribution the variable has in the model

Table 5. Determinants of re-employment among unemployed, binary logit estimates

Variable	B	s.e.	p	R
Constant	7.53	1.87	.000	-
Migrant	.215	.362	.552	.000
Personal characteristics				
Female	.521	.194	.007	.077
Age	-.251	.075	.001	-.102
$(Age)^2$	.003	.001	.007	.078
Upper secondary education	-.392	.203	.053	-.044
Higher education	.038	.537	.944	.000
One person-household	-.765	.239	.001	-.096
Two person-household	-.390	.224	.081	-.035
Home owner	.431	.195	.027	.057
Previous migration experience	-.383	.231	.097	-.029
Labour market conditions (municipality)				
Unemployment rate	-.191	.044	.000	-.140
Change in unemployment rate	-.046	.027	.090	-.032
Size of municipality	.002	.001	.210	.000
Degree of urbanization	-.028	.108	.797	.000
Share of primary production	-.018	.210	.931	.000
Share of industry	-.031	.121	.796	.000
Sample size		881		
Number of employed		704		
-2 Log-likelihood		781.8		
Correctly classified, %		80.1		

Notes: B = estimated coefficient
s.e. = standard error
p = exact level of significance (Wald statistic)
R = R statistic showing the contribution the variable has in the model

Table 6. Determinants of post move employment among migrants in 1990, binary logit estimates

Variable	B	s.e.	p	R
Constant	1.79	2.52	.476	-
Personal characteristics				
Female	.359	.280	.199	.000
Age	-.020	.105	.851	.000
$(Age)^2$	.000	.001	.961	.000
Upper secondary education	.336	.324	.300	.000
Higher education	.952	.455	.036	.067
One person-household	-.052	.359	.886	.000
Two person-household	.192	.339	.571	.000
Home owner	.211	.288	.463	.000
Previous migration experience	-.292	.280	.296	.000
Unemployed in 1985	-1.75	.374	.000	-.194
Labour market conditions (municipality)				
Unemployment rate	-.106	.077	.170	.000
Change in unemployment rate	-.116	.044	.009	-.096
Size of municipality	-.000	.002	.956	.000
Degree of urbanization	.186	.169	.270	.000
Share of primary production	.243	.357	.496	.000
Share of industry	-.045	.182	.804	.000
Sample size		1783		
Number of employed		1722		
-2 Log-likelihood		466.5		
Correctly classified, %		96.6		

Notes: B = estimated coefficient
s.e. = standard error
p = exact level of significance (Wald statistic)
R = R statistic showing the contribution the variable has in the model