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Immobility in Sweden: Are those Born in the Baltic Countries Less Mobile than Those Born in Sweden or Finland?

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Abstract

Traditional migration theory analyzes and explains why and when people migrate. However, most people do not move at all. We therefore discuss the explanation of immobility and suggest a new approach: the insider-advantage hypothesis. A new dataset allows us to investigate empirically (im-)mobility patterns between Swedish labor market regions. From an aggregate point of view, there seem to be significant differences in mobility patterns with respect to place of birth. People born in Sweden are on average more immobile than those born abroad. This is true also for those born in Finland. The mobility of persons born in the Baltic countries, however, was only half as high as for those born in Sweden. Are Balts thus especially immobile in Sweden? Our analysis of the data suggests that distinct socio-demographic profiles rather than any origin-specific behavioral particularities explain the different mobility patterns. People living in Sweden who were born in the Baltic countries are on average older than Swedish natives. They are resident in the country for longer than most other groups of foreigners and cluster in the main metropolitan areas.

Keywords: Baltic and Finnish immigrants in Sweden, determinants of (im-)mobility, probit analysis of microdata, JEL-Keywords: J60, F22, C21.

Introduction

Migration theory has been quite successful in explaining causes and consequences of international and internal spatial mobility. At present we have several satisfactory answers as to why migration streams may fluctuate over time and space. Less clear is, however, why migrants remain a tiny minority all over the world. Worldwide, only about two percent of the total population live outside their home countries (ILO/IOM/UNHCR 1994). In Europe, records on inter-

nal mobility are not substantially different (Salt, Singleton, and Hogarth 1994). In Sweden, only about two percent of all residents migrated from one local labor market to another during 1994. During a ten-year period, nine out ot ten Swedes remained in the same labor market region. Net flows are almost balanced over the years. Often those who move somewhere soon move back and/or subsequently move again.

In the latter half of this century, Sweden has become an important immigration country. One starting point was the early immigration from the Baltic countries during the Second World War. Major immigration flows have been the labor migration from Finland and Southern Europe in the 1950s, 1960s, and 1970s, and the more recent refugee immigration from many parts of the world. Immigration has had an important impact on the population redistribution in the country, partly due to higher migration propensity among immigrants (Borgegård, Håkansson, and Malmberg 1995). But there are also immigrant groups such as the Balts who are on average particularly immobile.

The aim of this study is to identify determinants of immobility among the Baltic and Finnish immigrants in Sweden, as compared to the native Swedish population. A new micro-dataset is used to analyze internal (im-)mobility in Sweden. Our data allows us to investigate mobility patterns by country of birth and socioeconomic characteristics. At first glance, people born in the Baltic countries seem to be distinctively less mobile than those born in Sweden. Only one percent of all those born in the Baltic countries migrated from one labor market to another. This is just half as much as for those born in Sweden. Those born in Finland, for comparison, have been more mobile than those born in Sweden. What determines these differences? Are there any cultural or group-specific explanations to the different (im)-mobility patterns? Or are these differences merely related to the socio-demographic composition?

In what follows, we first briefly discuss the explanation of migration and immobility. We suggest an insider-advantage theory of immobility. For most people staying at the present location is a necessary and sufficient condition for the accumulation and exploration of location-specific insider-advantages. To move does not pay off for them, even if living conditions differ substantially on the aggregate. Second the data on internal (im)mobility in Sweden is introduced and a brief statistical portrait of the Baltic-born population living in Sweden is presented. Third these findings are interpreted in the light of a statistical analysis of determinants of immobility in Sweden. Finally the conclusions are presented.

Explaining (im-)mobility

In general, migration theories explain mobility in terms of differences between attributes of places on the macro-level, group dynamics and networking on the meso-level, and socioeconomic characteristics and behavioral strategies on the micro-level (for a comprehensive multidisciplinary comparative survey on theories of migration see Hammar et al. 1997). Studies using aggregate data have shown that changes in place-specific living standards and labor market conditions may explain fluctuations in migration flows (Ghatak, Levine and Wheatley Price 1996). This success, however, is less pronounced as far as absolute levels are concerned. Despite considerable macro-economic differences persisting both between many countries as well as within them, and despite technological and political decreases in obstacles to migration, the vast majority of people have not and do not consider moving.[1] To complicate things even further, migration does not necessarily diminish between places that seem very similar on an aggregate level.

From a micro-perspective, two approaches have been common in explaining mobility. First, the *simple utility approach* sees migration as the result of comparisons individuals make of utility levels at different locations. A person will move if she expects the utility level that she

[1] With respect to the decrease in obstacles to migration we think not only of the general reduction in transport and communication costs and the progress in international economic integration. We also refer to political developments like the fall of the 'iron curtain'.

can achieve at an alternative location to exceed the one at the present location by more than the moving costs involved. There have been different ways of thinking about locational-specific utility differences. Most simply, this type of reasoning has led the standard economic theory of migration to identify differences in wage levels as the main cause for migration. In more complex reasoning, it has often been assumed that individual utility is connected to consumption and leisure time, eventually corrected by risks of getting unemployed and by location-specific amenities. Distinguishing between income and leisure draws attention to the difference between the work-oriented wealth generation and its leisure-oriented use. The described approach may be extended in various ways, e.g. to account for scarce or selective availability of (costly) information (Maier 1985).

The second standard approach of the behavioral micro theory on migration is the so-called *human capital approach* dating back to the seminal work of Sjaastad (1962). In many respects it just develops the simple utility approach further. People are supposed to consider moving in terms of an investment decision that generates short-to medium-term costs but which is expected to yield a higher return in the future. *Expected* future costs and benefits are discounted and people are supposed to move, if the net present value of benefits minus costs at an alternative location exceed the one at the present location. The human capital approach differs from the simple utility approach in that it introduces the time-dynamic aspect of a migration decision and emphasizes its probability dimension. It can be extended to account for joint decision making by families or groups (Massey 1990; Stark 1991). More generally, an achievement of the human capital approach has been that it may explain why socioeconomic differences matter for migration: young people who adopt a relatively long time horizon for their mobility decision, skilled persons who face fewer obstacles to migrating and who find it easier to integrate are more likely to be willing to move.[2]

The classic migration theories described above explain immobility despite persisting macroeconomic wealth and labor market differences by *migration costs*. These have been interpreted first of all as the costs of traveling and communicating. Search theory emphasizes the cost of obtaining and processing relevant information (McCall and McCall 1987). Within the human capital framework, immobility could also be explained by risk adversity.

Skeldon (1990) and Chapman and Prothero (1983) have emphasized that migration is not only a choice between staying and going, but between a huge variety of time-space mobility patterns, of which some are dominant. Time-space strategies (staying, migrating, commuting, circulation, etc) are often functionally related to social institutions and the choice between various types of time-space mobility are influenced by cultural or society-specific values and not necessarily an adjustment to present conditions in origins and destinations (Bjerén 1997; Malmberg 1997).

The time-geographical theory, developed by Hägerstrand (1975, 1993), emphasizes the influence of constraints on migration. It points to the importance of people's engagement in everyday projects and activities, such as work, studies, hobbies, friends, family, for our long-term decisions. The propensity to move is related to the possibility to transfer or substitute these local projects. Immobility might also be related to people's attachment to a physical place. Strong ties to places, people, and projects are constraints to migration (Malmberg 1997).

Although contributing insights as to why some people do not move, each of these classical explanations is somewhat unsatisfactory in explaining why most people never consider moving. We therefore suggest adopting another, new approach which we call *the insider-advantage approach towards immobility*. In itself it accommodates several elements of traditional explanations, but derives some new conclusions with respect to the underlying dynamics of mover-stayer decisions.

Under the conventional static view, a micro-level decision maker compares her or his present and future level of utility in different macro-level units on the basis of her or his present stock of assets and abilities. In most cases this is not a realistic judgement because a certain part of the

[2] For a more detailed survey of economic contributions to the theory and empirics of the behavioral micro approach to explaining migration see Fischer, Martin and Straubhaar (1997). Malmberg (1997) provides an overview on dynamic time-space migration strategies in the geographic migration literature.

abilities and assets of every human being are *location-specific*, in other words they can only be used (or are only existent) in a specific place. These are what we a call *insider-advantages*. They are not transferable to other places of work and residence. An important part of these abilities has to be obtained in a location-specific learning process which requires time, information and temporary immobility. Mobility turns such investments into *lost* sunk costs, i.e. costs which are tied to a specific project or – in this case – a specific location and lost in the case of emigration.

The insider-outsider concept has become popular in other fields of economics. It has been used to explain unemployment and wage setting as a result of divergent interests of "insiders" and "outsiders" in labor market research (see e.g. Lindbeck and Snower 1984, 1986) as well as to explain strategic behavior in the field of game theory and the political economy (Gray, 1996). With respect to mobility, Becker was probably the first to emphasize that part of the knowledge an individual acquires is often *firm*-specific and cannot be transferred to another employment (Becker 1962). Migration may therefore result in a decrease of potentially achievable relative wages because firm-specific abilities are "sunk" in case of a change of workplace. For a somewhat different treatment of location-specific advantages emanating from the labor supply aspect see Chiswick (1986). We believe, however, that society-specific insider advantages arising from a built-up network of friends and contacts are at least as important as traditional firm-specific insider considerations. Also, leisure-oriented insider advantages are probably more important in explaining immobility than work-oriented insider advantages.

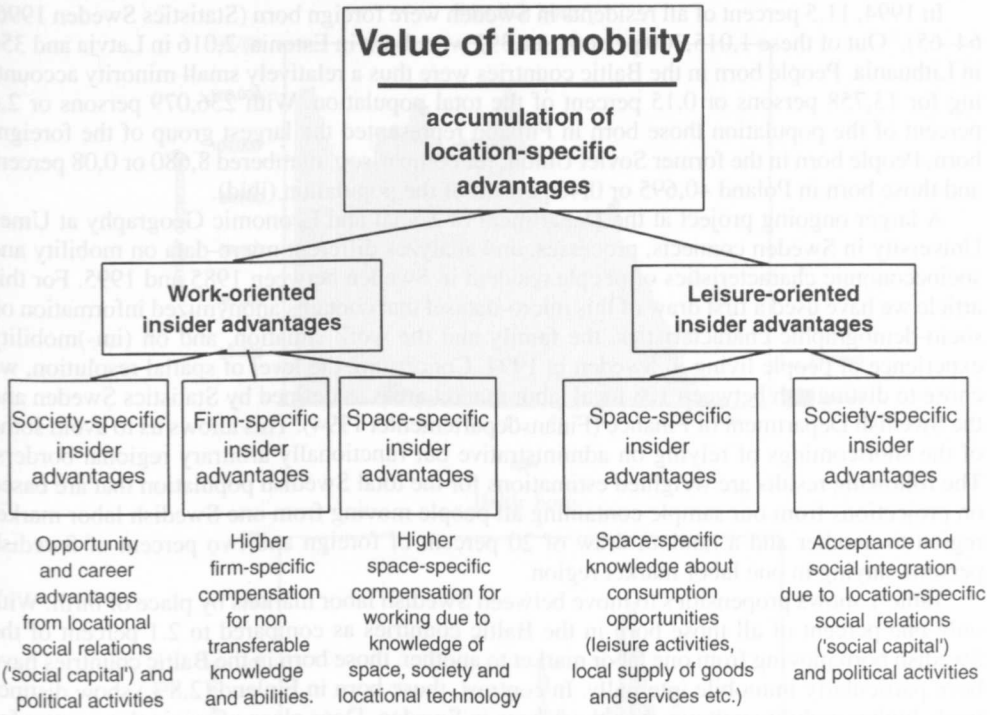
Temporarily, insider-advantages may be partly recovered and "updated" if one returns, but they nevertheless strongly increase the (opportunity) costs of staying away. Henceforth, immobility makes sense to a majority of people *because the loss of location-specific assets and abilities induced by migration would be too severe and because it is immobility which allows accumulation of insider-advantages*. Immobility can also be interpreted as part of individual dynamic utility-optimization strategies. *Normally* mobility is thus not a beneficial option once people have stayed longer at a certain place of residence. Consequently, *exceptional* life-course events such as getting divorced, completing education or becoming unemployed are likely to become important determinants of mobility.

There is some similarity between our insider-advantage approach and the human capital approach. The human capital approach emphasizes the point that people are very different in their characteristics and their abilities and that migration may be a form of investment on which the return will occur within a given future time span. The insider-advantage approach stresses that during periods of immobility at a particular location, individuals invest in the accumulation of location-specific skills, abilities and assets. This way they can significantly increase the realisable individual utility at this location. Consequently, even if on an aggregate level, considerable locational differences in average incomes, unemployment risks, or endowment with natural amenities may be observed, an individual may actually rightly expect a move there to decrease her personal utility due to the incurred loss on non-transferable knowledge and the costly need to acquire new insider-advantages in order to get into a similar relative position at the new location.[3]

As an illustration imagine, for example, a university professor wondering whether to change jobs and move to another university. The longer she or he will have been staying at the previous place, the better integrated he will have become there and the more important will be the insider advantages lost in case of leaving. Moving away, the professor might lose most of his previous contacts and possibilities to discuss things and problems with colleagues nearby. At his new place of work he will first have to establish new contacts. He will have to plan lectures anew so that they fit into the other university's different teaching program; he will have to organize and coordinate his research differently and eventually he will have to find new ways to make his results known and his research financed. While accumulating the necessary knowledge and information to adapt to the new place, the professor's productivity in the job will thus be severely reduced. Even more important, he most likely will have a family moving with him. The

[3] In that sense, the insider-advantage approach towards explaining immobility can also be seen as an alternative, more explicit formulation of traditional pecuniary and non-pecuniary ('psychological' and 'social') migration costs.

Figure 1. The insider-advantage approach towards immobility.



other family members will lose insider-advantages too and have to make substantial efforts to integrate into the new place, make new friends, find out how to organize daily family life efficiently, get children to a different school, etc. Eventually they will have to sell their previous house and buy a dwelling. Family-specific work invested in the old house will be lost and not recoverable. In brief, due to leisure-oriented insider advantages that are sunk and have to be accumulated at another place all over again, the value of a higher salary earned at a new place will be actually worth less.[4]

Figure 1 gives a graphical representation of the structure of the insider-advantage idea. It differentiates insider-advantages further according to their origin (work- or leisure-related) and specificity (firm-, space- or society-specific). For a more detailed discussion of these aspects see Fischer, Martin and Straubhaar (1997) and Fischer et al. (1998).

Important empirical implications of the insider-advantage approach towards immobility are that mobility patterns should be time-dependent and that the degree of transferability of skills, abilities and personal relations ought to be of central importance for observed (im-)mobility behavior. The more people have accumulated location-specific insider-advantages and the less transferable their abilities and current 'life projects' are, the more likely they are to stay immobile. Somebody who has moved recently and thus has lost his accumulated insider-advantages should be more likely to move again. The longer she or he keeps staying at the new place of residence, the further the probability of an additional move will again decrease.

[4] Note that while the loss of insider-advantages may explain why having stayed for some time at a certain place *most* people do not move anymore, exploring *outsider*-advantages may be motivation enough for a *few* to migrate. For a professor to be (one of the very few) specialists on Nordic economies in Central Europe could eventually be more attractive than being just one among many in Finland. Also, moving to a new, different environment can (especially in younger years) be an appropriate action taken to satisfy a certain lust for adventure and change.

People born in the Baltic countries and living in Sweden

In 1994, 11.5 percent of all residents in Sweden were foreign born (Statistics Sweden 1996; 64–65).[5] Out of these 1,015,300 persons, 11,392 were born in Estonia, 2,016 in Latvia and 350 in Lithuania. People born in the Baltic countries were thus a relatively small minority accounting for 13,758 persons or 0,15 percent of the total population. With 236,079 persons or 2,6 percent of the population those born in Finland represented the largest group of the foreign-born. People born in the former Soviet Union, for comparison, numbered 8,680 or 0,08 percent and those born in Poland 40,695 or 0,46 percent of the population (ibid).

A larger ongoing project at the Department of Social and Economic Geography at Umeå University in Sweden connects, processes, and analyzes different micro-data on mobility and socioeconomic characteristics of people resident in Sweden between 1985 and 1995. For this article we have used a first draw of this micro-dataset that contains anonymized information on socio-demographic characteristics, the family and the work situation, and on (im-)mobility experience of people living in Sweden in 1994. Concerning the level of spatial resolution, we chose to distinguish between 108 local labor market areas as defined by Statistics Sweden and the Swedish Department of Finance (Finansdepartementet 1994). This allows us to avoid some of the shortcomings of relying on administrative but functionally arbitrary regional borders. The following results are weighted estimations for the total Swedish population that are based on projections from our sample containing all people moving from one Swedish labor market region to another and a random draw of 20 percent of foreign and two percent of Swedish persons staying in one labor market region.

Table 1 shows propensities to move between Swedish labor markets by place of birth. With only one percent of all those born in the Baltic countries as compared to 2.1 percent of the Swedish born moving from one labor market to another, those born in the Baltic countries have been particularly immobile internally. In contrast, those born in Finland (2.8%) show distinctively higher mobility patterns than those born in Sweden. Does place of origin thus matter for mobility behavior?

Table 1. Mobility between Swedish local labor markets in 1994, by country of birth.

Country of birth	*Stayers (%)*	*Movers (%)*	*Total persons**	*Percent of total population*
Sweden	97.9	**2.1**	7,931,817	89.4
Baltics**	99.0	**1.0**	13,183	0.1
Finland	97.2	**2.8**	211,458	2.4

* The number of stayers are projections from our data which contains all movers but only a random sample of 20% of foreign and 2% of Swedish stayers.
** Estonia, Latvia, and Lithuania.

It follows from the migration theories reviewed in the first part of this article that personal characteristics should matter for individual moving propensities. The insider-advantage approach towards immobility further implies that the time people stay at the same place of residence as well as transferability of knowledge should influence the degree to which people are immobile.

Figure 2 shows age profiles of people born in Sweden, the Baltic countries, and Finland according to whether they were stayers or movers in 1994. These profiles reveal striking differences. For Sweden, we get the usual age pyramid with some signs of cyclical birth rate fluctuations in the young ages. As far as mobility is concerned, the graph illustrates that moving is a highly age-specific phenomenon. More than half of all movers born in Sweden were aged 18–28. This also supports our insider-advantage theory: once people have settled at a certain place

[5] Note that the figures given in this paragraph are the official ones from the Statistical Yearbok of Sweden. They slightly differ from the results of our estimations (Table 1) because they are calculated at a different time of the year as well as due to the possible sampling error.

Figure 2. Age profiles of people living in Sweden in 1994, by place of birth and stayers and movers.

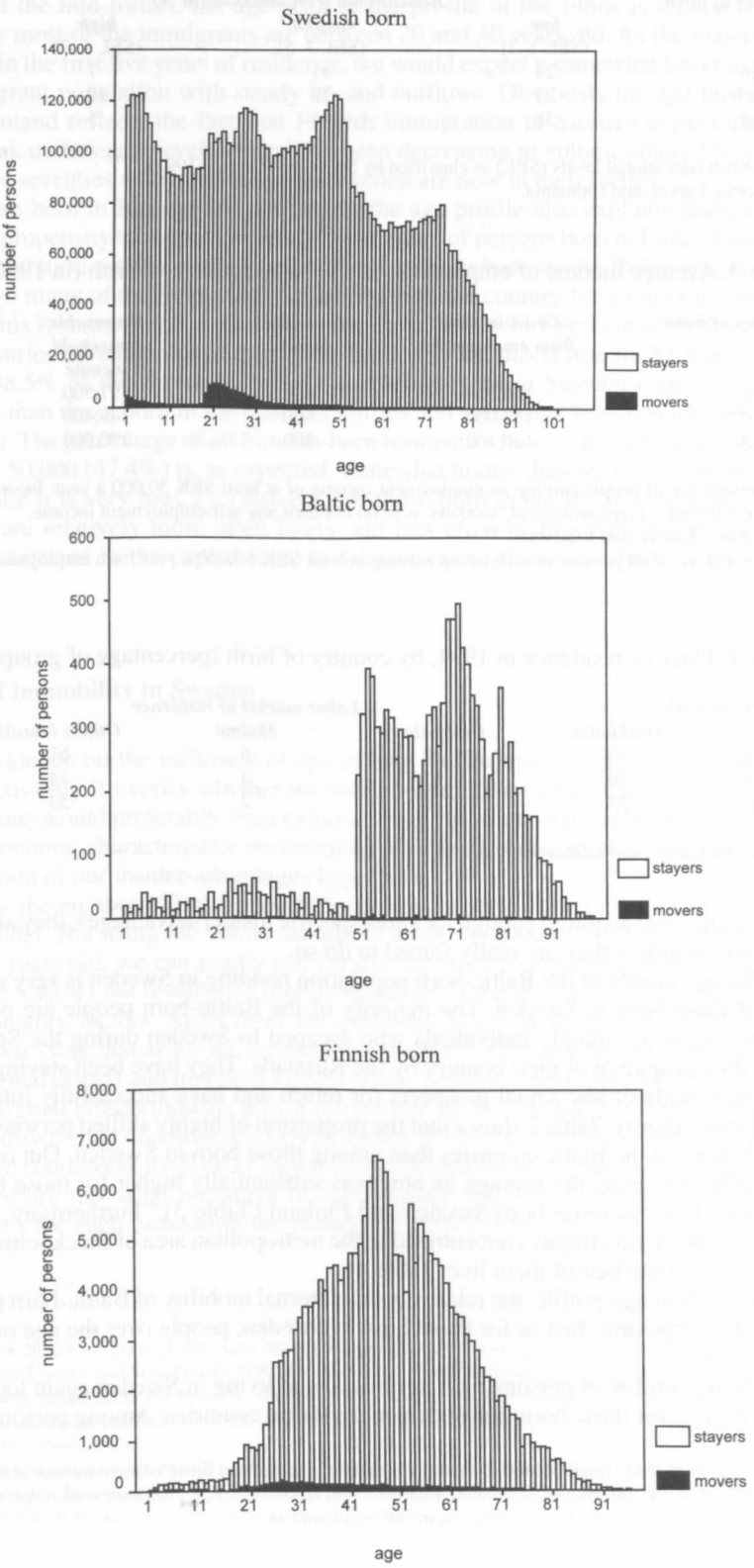


Table 2. Distribution of highest educational level obtained in 1994*, by country of birth.

Country of birth	*Educational level obtained (in %)*			
	low (SEL 1–2)	*medium* (SEL 3–5)	*high* (SEL 6–7)	*unknown* (SEL 0.9)
Sweden	24	41	7	29
Baltics**	23	29	**10**	38
Finland	**38**	44	5	13

* Swedish educational levels (SEL) as classified by Statistics Sweden (1992).
** Estonia, Latvia, and Lithuania.

Table 3. Average income of employees* in 1994, by country of birth (in 1990, SEK).

Country of birth	*Gross income from employment*	*Self-empl. income*	*Disposable household income*	*Employees in percent of total population*
Sweden	126,900	400	197,500	44.5
Baltics**	151,000	800	249,400	23.1
Finland	120,100	400	190,000	47.4

* average for all people earning an employment income of at least SEK 50,000 a year. Income from self-employment includes zero earnings of 'workers' who do not earn any self-employment income.
** Estonia, Latvia, and Lithuania.
*** percentage of all persons in each group earning at least SEK 50,000 a year from employment.

Table 4. Place of residence in 1994, by country of birth (percentage of group total).

Country of birth	*Labor market of residence*				
	Stockholm	*Gothenburg*	*Malmö*	*Others (rural)*	*Unknown*
Sweden	18	9	6	61	6
Baltics**	**40**	**13**	4	34	9
Finland	**33**	8	2	53	4

** Estonia, Latvia, and Lithuania.

of residence and acquired enough location-specific insider-advantages, they are highly unlikely to move on unless they are really forced to do so.

The age profile of the Baltic-born population residing in Sweden is very different from the one of those born in Sweden. The majority of the Baltic-born people are over 50 years old. Clearly, these are mainly individuals who escaped to Sweden during the Second World War from the occupation of their country by the Russians. They have been staying in Sweden for a long time without any actual prospects for return and have successfully integrated into their new home country. Table 2 shows that the proportion of highly skilled persons is higher among people born in the Baltic countries than among those born in Sweden. Out of those who were gainfully employed, the average income was substantially higher for those born in the Baltic countries than for those born Sweden and Finland (Table 3).[6] Furthermore, Baltic-born residents in Sweden are highly concentrated in the metropolitan area of Stockholm and Gothenburg, where more than half of them live (Table 4).

Given their age profile, the relatively low internal mobility of Baltic-born people in Sweden is hardly surprising. Just as for those born in Sweden, people over the age of 40 are basically immobile.

The age profile of persons born in Finland and living in Sweden again looks very different from the one for those born in Sweden or the Baltic countries. Among persons born in Finland

[6] Note that to exclude small second incomes, we have excluded from these average income statistics all earning less than SEK 50,000 a year from employment. Mean incomes from self-employment are with respect to the entire group of 'workers' and thus include zero earnings from self-employment.

and living in Sweden, children and old people are relatively underrepresented. This is typical for immigrants who have been moving for labor-market-related reasons, as many Finns did.[7] Being situated in the mid-forties, the age peak in the profile of the Finns is relatively late, however. Usually most of the immigrants are between 20 and 30 years old. As the majority of them return within the first five years of residence, we would expect a somewhat lower average age for an immigrant population with steady in- and outflows. Obviously the age profile for those born in Finland reflects the fact that Finnish immigration to Sweden experienced an extraordinary peak in the early seventies and has been decreasing in volume since. The young immigrants of the seventies who have stayed in Sweden are now in their forties.

As far as those born in Finland are concerned, the age profile also explains much of the relatively higher propensity to migrate internally. The share of persons born in Finland who are in the 'critical migration age' is clearly larger than for those born in the Baltic countries or Sweden. Although many of the Finns have already been in the country for a long time and are well integrated, this is somewhat less so than for the Balts. While 94.1 percent of all those born in the Baltic countries have not moved during the last ten years, this is true for 87.5 percent of the Finns (and 88.5% of the Swedes). Finnish-born employees in Sweden earn on average significantly less than those born in the Baltic countries and somewhat less than those born in Sweden (Table 3). The percentage of all Finnish-born residents who earn income from employment above SEK 50,000 (47.4%) is, as expected, somewhat higher than for those born in Sweden (44.5%), while it is very low, 23.1 percent, for those born in the Baltic countries. Those born in Finland are relatively more often lowly and less often highly skilled (Table 2) and though also concentrated in the capital area, to a lesser extent than those born in the Baltic countries.

Determinants of immobility in Sweden

The above evidence on the influence of age effects on (im)mobility has been from total correlation analysis only. To verify whether the foreign-born have different mobility behavior than the natives, one would preferably want to know about the joint partial influences of differences in socioeconomic characteristics on mobility. This is also of particular interest for an empirical evaluation of our insider-advantages hypothesis.

Unfortunately, the number of Baltic movers is too small to allow for a joint estimation of a more detailed model. But using the whole sample of about 360,000 individuals, who are between 19 and 64 years old, we can jointly test for the importance of possible determinants of immobility. Table 5 shows our results of a probit estimation of the likeliness to stay conditional on various explanatory factors. Apart from the estimated slope coefficients b, the marginal effects β are shown. Note that as we are estimating a nonlinear function, slope coefficients are not equal to marginal effects and marginal effects of one regressor not independent of the size of the others. Marginal effects indicate how a differential change in one explanatory variable alters the probability to stay conditional to given values of all other variables. The one shown here are calculated conditional to all other explanatory variables being at their mean value.[8] The z values provided are the usual measures of significance (coefficient b / standard error).[9] R^2-MZL calculates for each estimation the pseudo-R^2 proposed by Mc Kelvey and Zavoina

[7] Contrary to Baltics or other Europeans, Finns have been free to migrate and work within the Nordic Common Labour Market since 1954. See Fischer and Straubhaar (1996) for an evaluation of causes and consequences.

[8] Strictly speaking, marginal effects for bivariate dummies may not be very meaningful. Generally, however, the marginal effects calculated here produce a reasonable approximation to the change in the probability to stay at the regressor means (Greene 1993, 641).

[9] Using the fact that z-test statistics are normally distributed in probit estimations one should use the standard normal table rather than the t table for critical points. Z-values larger than 1.64 (2.3) thus indicate that the coefficients are significantly different from 0 with a probability greater than 0.95 (0.99).

Table 5: Probit estimation of probability to stay in Sweden 1994
(Left hand variable is staying in the same or moving between labor market regions in Sweden for people aged 19–64 during 1994.)

Explanatory variable	Model (1); all obs.			Model (1); Baltic-b.			Model (2); all obs.		
	b	β	z=b/s.e.	b	β	z=b/s.e.	b	β	z=b/s.e.
Constant	0.999	0.058	40.91	1.277	0.046	1.55	0.619	0.0136	5.26
Duration since last move (in months)*	0.0087	0.0005	44.05	0.008	0.0003	1.21	0.0066	0.00014	13.02
Number of previous moves*	–0.021	–0.0012	–2.79	–0.083	–0.0003	–0.24	–0.014	–0.0003	–1.03
Age							0.0447	0.001	8.22
Age squared							–0.0004	–0.000008	–5.36
Educational level							–0.0957	–0.0021	–14.26
Low skilled worker (dummy)							0.0729	0.0016	2.45
Low skilled white collar (dummy)							–0.0001	–0.000002	0.00
Highly skilled (dummy)							–0.067	–0.0015	–2.30
Married							0.163	0.0036	5.63
Household separation							–0.211	–0.0046	–4.66
ln (partner's income)							0.273	0.0006	7.15
Number of children							0.102	0.0023	7.62
New baby (dummy)							–0.06	–0.0013	–1.34
Own house							0.149	0.0033	3.85
Not employed							–0.343	–0.00076	–18.58
Foreign born							–0.047	–0.001	–1.57
Relative income difference proximate (1000 SEK)							–0.0066	–0.00015	–2.69
Relative income difference remote (1000 SEK)							–0.0065	–0.00014	–0.71
Metropolitan LM dummy							0.143	0.0031	8.43
Log likelihood	–44682			–86			–13844		
Pseudo R^2-MZL	0.59			0.33			0.66		
Number of valid obs.	360924			1087			198550		

* during the previous ten years. Included as migrants are only movers who have stayed at their previous place of residence for at least 12 months. Missing observations are excluded from the sample.

(1975) and Laitila (1993). This is a goodness of fit measure scaled between 1 (perfect fit) and 0 (no fit whatsoever).[10]

Our estimations generally produce the expected results at high significance levels. They support one of the main implications of the insider-advantage hypotheses: the longer it is since somebody moved for the last time, the less likely she or he is to move. Those who have moved recently and thus have already lost their insider-advantages accumulated at a previous place of residence are significantly more likely to move again compared to the average population.

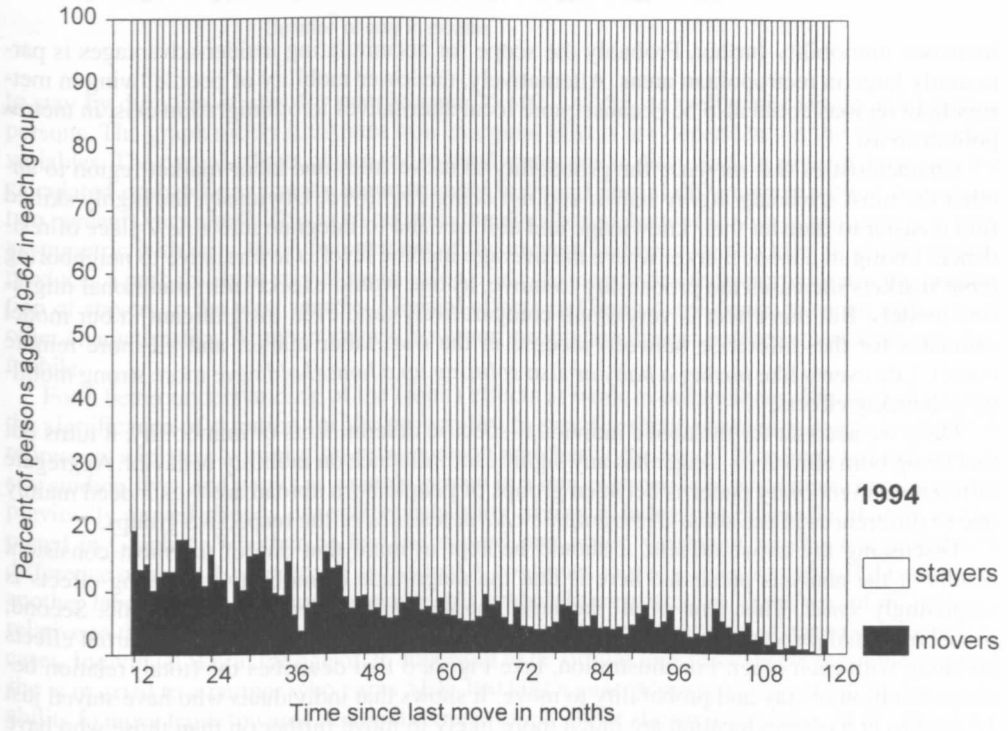
[10] Note that R^2-MZL is a pseudo-R^2 that imitates the properties of the R^2-MZL in the regression model as well as possible for binary choice models. It is pseudo in the sense that it actually does not give exactly the proportion of variation explained by the model. Indeed, for model specification tests using the log-likelihoods would be more appropriate. On the ambiguity of measuring goodness of fit in binary choice models see e.g Greene (1993; 651ff.)

Because the small number of Baltic movers does not allow for a more differentiated estimation, Model 1 shows the result of a probit estimation of the likeliness to stay on only two explanatory factors: duration since last move (in months) and number of previous moves. Those who have previously moved several times are more likely to move again, but duration since last move is a much more significant determinant of (im-)mobility. For the small sample of Balts, standard errors are too large for the estimates to be significant. But the close similarity in the size of the estimated coefficients indicates that the determinants of immobility for those born in the Baltic countries probably differ little from the estimates for the whole population.

In Model 2 we take into account further individual effects like age, education and the individual family and labor market situation. The results show that Model 1 suffers from a severe omitted variable bias. The duration-since-last-move effect is smaller in the second model. But it is not a simple age effect. Despite controlling for age and other socioeconomic variables, duration remains one of the most significant determinants of immobility. Consequently, people who have moved previously are more likely to move again.[11]

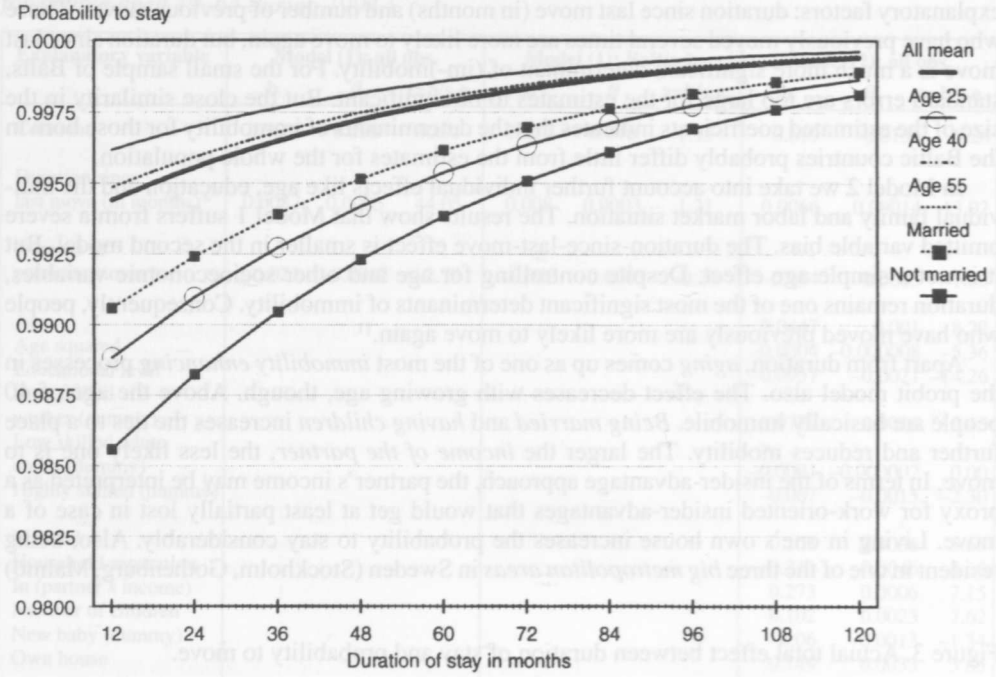
Apart from duration, *aging* comes up as one of the most *immobility enhancing* processes in the probit model also. The effect decreases with growing age, though. Above the age of 40 people are basically immobile. *Being married* and *having children* increases the ties to a place further and reduces mobility. The larger the *income of the partner*, the less likely one is to move. In terms of the insider-advantage approach, the partner's income may be interpreted as a proxy for work-oriented insider-advantages that would get at least partially lost in case of a move. Living in one's own house increases the probability to stay considerably. Also, being resident in one of the three *big metropolitan areas* in Sweden (Stockholm, Gothenburg, Malmö)

Figure 3. Actual total effect between duration of stay and probability to move.



[11] It could also be argued that there are simply migrant and non-migrant types of people who are selected into the one group or the other on grounds of unobservable criteria. If this would hold strictly, whether somebody has moved previously should be the only (highly) significant explanatory factor. The significance of our other regressors shows that at least to a certain extent it is possible to explain why some people move and others not.

Figure 4. Estimated partial effects on probability to stay.



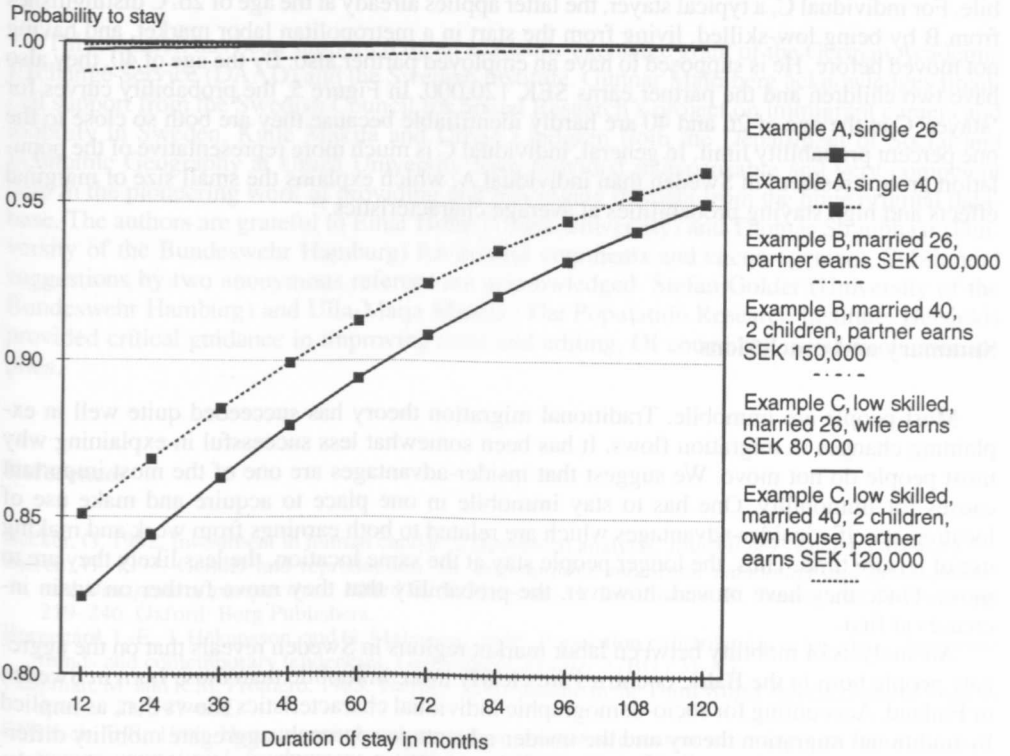
increases immobility further. Probably the scope for accumulating insider-advantages is particularly large in metropolitan areas. Alternatively, the lower mobility of people living in metropolitan regions could also be because more local alternatives to outmigration exist in metropolitan areas.

Characteristics that *increase* the probability to move from one labor market region to another the most are being *highly skilled* and *not being employed*. Obviously, the highly skilled find it easier to transfer their knowledge and abilities and to integrate into a new place of residence. Living in a labor market where the average income level is low relative to neighboring labor markets increases the probability to move, as one would expect from traditional migration models. But this effect is very small comparatively (and even insignificant in our model estimates for the difference between income in the own labor market and all more remote ones!). Life events like *having a baby* or also *splitting up a household* have more strong mobility enhancing effects.

Once we account for the above individual-specific determinants of immobility, it turns out that being born abroad *no* longer has any significant influence on mobility behavior. Aggregate differences in mobility patterns between groups of people born abroad are thus indeed mainly due to differences in the *socio-demographic characteristics* of the respective groups.

Discussing the above effects, it should be kept in mind that one of the most consistent results of the analysis presented here is that the magnitude of mobility-increasing effects is surprisingly *small*. This, first of all, because people are in general *very* immobile. Second, partial marginal effects are not always very informative because several typical partial effects go along with each other. For illustration, take Figure 3 that describes the (total) relation between duration of stay and probability to move. It shows that individuals who have stayed just 12 months at a certain location are much more likely to move further on than those who have stayed at the same place of residence for the last ten years. Indeed, out of the first group approximately every fifth person moved to another labor market in 1994, while in the latter group more than 99 in a hundred stayed immobile. Looking just at the partial effect of duration on the probability to stay, however, does not reveal this strong correlation. Figure 4 depicts probability

Figure 5. Estimated probability to stay – some examples.



to stay by duration of stay for people aged 25, 40, and 55, as well as for single and married persons. The graph nicely illustrates how marginal effects are dependent on the value of other variables. The partial effects of age and marital status are as discussed. In general, however, the calculated probabilities to stay are extremely high and partial differences (with at maximum two percent) very small. This is so because the distribution between movers and stayers is very asymmetric with only about two percent of the movers and because this kind of probit models produces a probability to stay at mean value of all characteristics that approximates the proportion of stayers in the total sample.[12] Partial effects in Graph 4 are drawn at mean value of all other characteristics. At mean values, however, people are almost perfectly certain to stay immobile.

For a better understanding of the (joint) effects at work in our analysis, Figure 5 illustrates the significance of duration for the probability to stay for three exemplary cases. Example A represents a relatively migration-prone person who has at the age of 26 completed full university studies, lives and works as a single person in a non-metropolitan labor market and who has previously moved already once. His probability to stay is indeed much smaller than those depicted in Graph 4. Whether he has last moved one or ten years ago results in a probability difference of about 10 percent. If individual A continues to study, completes his PhD, moves to another labor market but remains single, his probabilities of staying at the age of 40 increase relative to the age of 26, but still remain considerably lower than those of the other exemplary cases. Individual B is at the age of 26 supposed to be similar to A in all respects but the fact that she is married to a partner who earns SEK 100,000 a year. Already at the age of 26, her probability to move tends towards zero and comes close to those shown in Figure 4. At the age of 40, having completed a PhD, moved to a metropolitan labor market, and had two children with a

[12] Probably due to the asymmetric distribution of our individuals, our probit model actually overestimates the probability to stay.

partner now earning SEK 150,000 net, our model estimates her to be basically perfectly immobile. For individual C, a typical stayer, the latter applies already at the age of 26. C distinguishes from B by being low-skilled, living from the start in a metropolitan labor market, and having not moved before. He is supposed to have an employed partner also. By the age of 40, they also have two children and the partner earns SEK 120,000. In Figure 5, the probability curves for 'stayer' C at the age of 26 and 40 are hardly identifiable because they are both so close to the one percent probability limit. In general, individual C is much more representative of the population groups resident in Sweden than individual A, which explains the small size of marginal effects and high staying probabilities at average characteristics.[13]

Summary and conclusions

Most people are immobile. Traditional migration theory has succeeded quite well in explaining changes in migration flows. It has been somewhat less successful in explaining why most people do not move. We suggest that insider-advantages are one of the most important causes for immobility. One has to stay immobile in one place to acquire and make use of location-specific insider-advantages which are related to both earnings from work and making use of leisure time. Thus, the longer people stay at the same location, the less likely they are to move. Once they have moved, however, the probability that they move further on again increases at first.

An analysis of mobility between labor market regions in Sweden reveals that on the aggregate people born in the Baltic countries are clearly more immobile than those born in Sweden or Finland. Accounting for socio-demographic individual characteristics shows that, as implied by traditional migration theory and the insider-advantage approach, aggregate mobility differences are not due to any place-of-birth or culture-specific factors. The mobility behavior of the foreign-born in Sweden is not significantly different from that of those born in Sweden. The reason for the aggregate differences is to be found in different socio-demographic profiles.

Most of those born in the Baltic countries and living in Sweden have escaped to Sweden in the course of the Second World War, before and after the occupation of their homelands by Communist Russia. Mobility patterns are highly age-specific. Baltic-born residents are on average older than those born in Sweden or Finland; a substantial part have already left the labor market. The falling of the 'Iron Curtain' has not led to any substantial increase in immigration of people born in the Baltic countries to Sweden. Most of those living in Sweden have been residents for a long time. They have accumulated location-specific insider-advantages and are well integrated into the Swedish society. People born in the Baltic countries are predominantly resident in the Swedish metropolitan areas of Stockholm and Gothenburg, where the scope for acquiring and exploring insider-advantages is particularly large and where more local alternatives are accessible.

With regard to the Finnish-born population in Sweden, children and old people are underrepresented. This is usually so when immigration has been labor-market-oriented and when return migration is easy. Because Finnish immigration to Sweden reached its maximum intensity already in the early seventies, the mean age of persons born in Finland and living in Sweden is already beyond forty. Nevertheless, more Finns than those born in the Baltic countries or Sweden have moved relatively recently and are therefore more likely to move again.

More generally, the present analysis of internal mobility in Sweden by place of birth demonstrates the importance of a proper micro-foundation in explaining immobility. Aggregate partial analyses run the risk of being seriously misleading. The insider-advantage approach to explaining immobility is suggested to complement traditional behavioral micro-theories of mobility.

[13] A more in depth econometric analysis of determinants of immobility in Sweden and the relevance of the insider advantages approach may be found in Fischer et al. (1998).

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