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WHERE DO MIGRANTS GO? AN ANALYSIS OF RURAL AND URBAN DESTINED/ORIGINATED MIGRATION IN FINLAND IN 1996-1999

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Helsinki, December 2003

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ABSTRACT: This study examines urban and rural destined/originated migration in Finland in 1996-1999 using a large micro-level data set. Three conclusions stand out from the results. Firstly, migrants not only differ from stayers but there are also many differences between migrants from and to rural and urban areas. In particular, rural-to-urban migrants are highly educated while those moving from urban to rural areas are not. Secondly, locational preferences vary according to the life-cycle: young and single individuals head to urban areas, whereas couples and retired persons tend to relocate from urban to rural areas. Thirdly, the results suggest that both rural-to-urban and urban-to-rural migration work to the benefit of the urban areas; hence regional disparities are likely to increase rather than decrease upon continuing migration.

Keywords: *Migration, rural, urban*

NIVALAINEN, SATU. 2003. MINNE MUUTTAJAT MENEVÄT? KAUPUNKI- JA MAASEUTUALUEIDEN MUUTTOLIIKE SUOMESSA VUOSINA 1996-1999. Pellervon taloudellisen tutkimuslaitoksen työpapereita n:o 66. 22 s. ISBN 952-5299-70-8, ISSN 1455-4623.

TIIVISTELMÄ: Tutkimuksessa tarkastellaan kaupunki- ja maaseutualueiden muuttoliikettä Suomessa vuosina 1996-99 laajan yksilötason aineiston avulla. Tulosten perusteella voidaan tehdä kolme johtopäätöstä. Ensiksi, muuttajat eivät eroa vain paikallaan pysyvistä, vaan myös muuttajien välillä on eroja. Huomionarvoista on erityisesti, että maalta kaupunkiin muuttajat ovat korkeasti koulutettuja, mutta kaupungista maalle muuttajat eivät ole. Toiseksi, sijaintimieltymykset vaihtelevan elämänvaiheen mukaan: nuoret ja perheettömät muuttavat kaupunkialueille ja pariskunnat ja eläkeläiset suuntaavat kaupungeista maalle. Kolmanneksi, kaikkiin suuntiin tapahtuva muuttoliike näyttää hyödyttävän kaupunkialueita. Täten muuttoliikkeellä on pikemminkin alueellisesti epätasapainottava kuin tasapainottava vaikutus.

Asiasanat: *Muuttoliike, maaseutu, kaupunkialueet*

CONTENTS

1. INTRODUCTION

Finland experienced an exceptionally deep economic crisis during the first half of the 1990s. During the recession, output fell by more than 10 per cent and unemployment quadrupled to almost 20 per cent. The crisis marked the end of a long period of steady regional economic development: when a rapid recovery started in 1994, regional production and employment differences began to increase. At the same time, the rate of migration accelerated at a level not witnessed in nearly three decades, and a migration boom has been prevailing ever since. For example, between 1995 and 2000 about 1.5 million Finns migrated between municipalities (on average 5% of the population per year), while the respective figure for the period 1985-1990 was only 1.2 million.

After the slump the concentration of migration also became much more intense than before; post-recession migration flows have been heavily directed towards the largest urban centres located mainly in the southern parts of the country. Even though a centralizing process has also been evident in other Nordic countries, the tendency in Finland has been peculiarly strong. For example, in recent years the capital, Helsinki, has been one of the fastest growing centres in the European Union (EU), and at the same time some 90% of Finnish territory has been losing population through out-migration (Hanell et al., 2002). Rural areas have been hardest hit; since the mid-1990s the population decline has been very fast, and seems to be accelerating with the continuous out-migration, low birth rates and rapid ageing of the population (see Hanell et al., 2002; Nivalainen and Haapanen, 2002).[i]

Traditional economic theories consider migration as an important equilibrating mechanism in the economy. Nevertheless, regional imbalances in Finland have not diminished with intense internal migration, but rather the reverse (e.g. Tervo, 2002). For example, regional income differences showed a growing tendency towards the end of the 1990s, and the regional unemployment spread in Finland is the widest among the Nordic countries, and very large within the EU context, too (Hanell et al., 2002; Taipale, 2002). A clear spatial differentiation is evident; unemployment rates are highest in rural areas in northern and eastern Finland, and lowest in the largest centres in the south (see Hanell, 2002a).

The new features of migration, the demographic development and the advantage that urban centres have over the rest of the country have not escaped public attention in Finland. Fears about depopulation of rural areas have been expressed, and migration has become a very popular research topic. Considerable evidence now exists of the determinants of moving, based mainly on countrywide analyses of regional out-migration (e.g. Tervo, 2000; Ritsilä and Tervo, 1999). Some studies have also dealt with in-migration, i.e. destination choices of migrants, but these have typically focused on

moves (from undefined origins) towards urban areas or growth-centres (e.g. Pekkala, 2000; Haapanen, 2002).[ii] In other words, earlier studies usually have concentrated only on one dimension of moving, and have not considered both origin and destination simultaneously.

Nevertheless, every migrant has both origin and destination, and not all migrants go in the same direction. Each end of population movement is equally important from the regional perspective. In particular, it is not in- or out-migration alone but it is both that define the total impact of migration on different regions. Moreover, not only the quantity, but also the quality of migrants is important. Especially the human capital content of place-to-place[iii] migration is vital; human capital plays a central role in the economic growth and future prospects of a region, and an uneven distribution of educated and capable people may have severe effects on the regional development potential in the longer run (see e.g. Forslid, 1999).

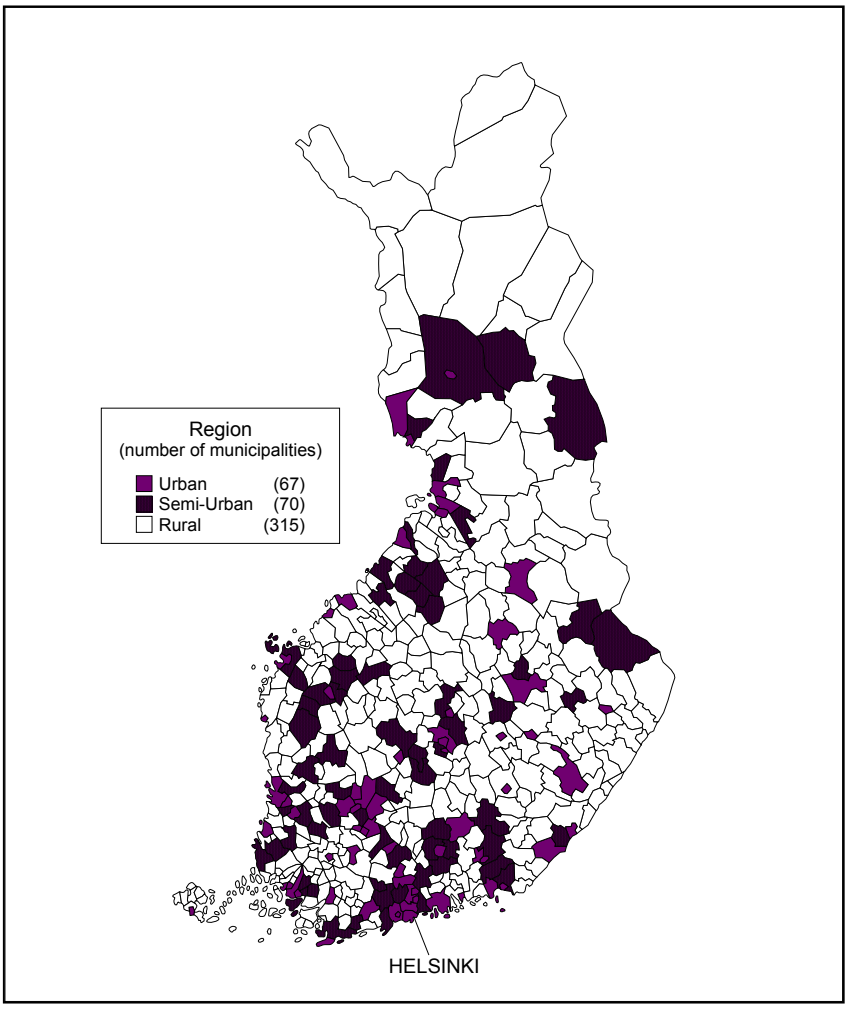
Clearly, a more profound understanding of the relationship between the components of the migration nexus is required. In particular, to be able to evaluate the impact of migration on different areas, not only place-to-place migration streams but also potential variation in migrants' characteristics need to be investigated. It is not likely that all migrants are similar; there might be considerable spatial variation in the role of many variables. In fact, at least partly, the stubbornness of regional differentials in Finland might be due to diversity in migrants' characteristics. However, practically nothing is currently known about the determinants of place-to-place migration in Finland, and there are also surprisingly few attempts in the international micro-economic literature to provide evidence on the origin-destination specific characteristics of movers. [iv]

This paper aims at filling this gap by analysing migration to and from urban and rural areas in Finland during the latter part of the 1990s. Not only the migration streams but also the determinants of migration are examined. The urban-rural gradient is especially interesting since, as mentioned above, the divergence between urban and rural areas in recent years has been very sharp. A large and up-to-date micro-level data set from the years 1995-1999 is utilised, and migration is defined as occurring between municipalities, which are the lowest regional units in Finland. Since the general characteristics of migrants have been well documented in earlier Finnish studies, particular emphasis is placed here on the rural dimension.[v]

The paper is set out as follows. The next section introduces the regional classification and shortly describes the recent regional development in Finland. The theoretical background, data and variables are introduced in the third section. Section four presents the empirical findings and a summary and conclusion are provided in section five.

2. REGIONAL CLASSIFICATION AND A CLOSER LOOK AT MIGRATION STREAMS

Finland is a large and sparsely populated country, and on the European scale almost the whole Finland could, roughly speaking, be considered as rural.[vi] Nevertheless, Statistics Finland's (1997) regional classification divides municipalities into urban, semi-urban and rural according to the proportion of population living in urban settlements and the population of the largest urban settlement (see Map 1).



Map 1. *Urban, semi-urban and rural areas in Finland*

More specifically, rural municipalities are those in which *i)* less than 60% of the population lives in urban settlements, and the population of the largest urban settlement is less than 15 000 or *ii)* at least 60% but less than 90% of the population lives in urban settlements, and the population of the largest urban settlement is less than 4 000. To

simplify the analyses, all other municipalities, i.e. urban and semi-urban, are here combined as urban areas. This is reasonable, since most semi-urban municipalities are located in the neighbourhood of urban centres and typically have a high share of commuters to urban areas.

In the latter part of the 1990s there were 452 municipalities in Finland. Based on the above definition, 315 of these were rural. Generally speaking, rural municipalities are characterised by scattered settlement (population density 5 per square kilometre as compared with 170 in urban areas), a high share of primary production and a more distant location from the large centres. At present around 1.2 million Finns, i.e. about quarter of the population, live in rural areas.

Due to low birth rates and modest immigration, internal migration is the major source of variation in regional population growth in Finland. It is of great importance in general, and in rural areas in particular. The population in rural areas has slowly declined since the 1970s with the ongoing structural change and continuing urbanisation of the country, but in the last few years the countryside has been losing inhabitants at an accelerating rate. For the largest part, this is due to intense internal migration (Figure 1).

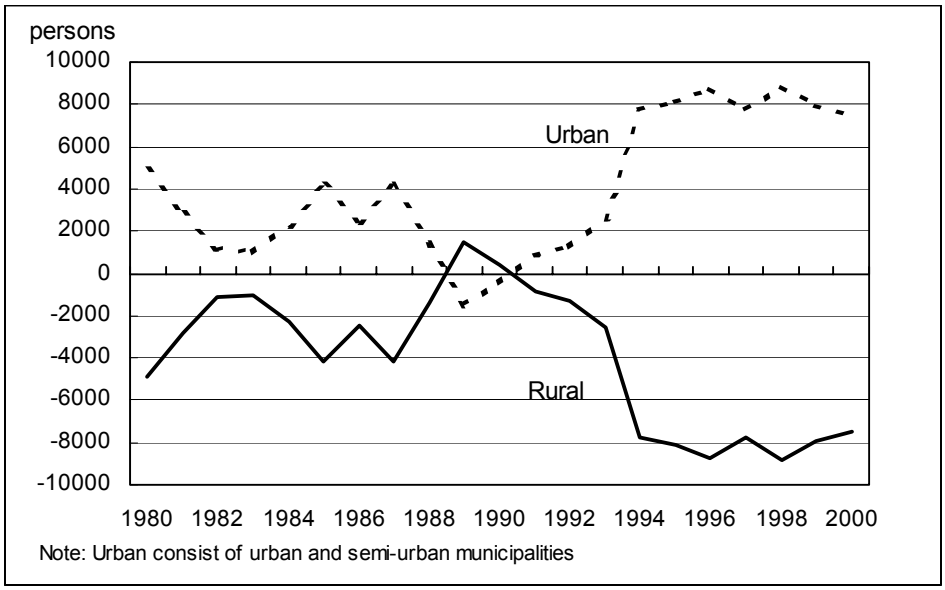


Figure 1. *Net migration in urban and rural areas in Finland in 1980-2000*

Mobility in Finland dramatically speeded up around the mid-1990s and has remained high ever since. During 1996-99 a total of about one million Finns migrated between municipalities (Table 1). In recent years the polarisation of the population has been very strong, and there has been a clean break between the aggregate losses of the rural areas and the net gains of urban regions. For example, in 1996-99 rural areas experienced a

net loss of over 30 000 inhabitants, which corresponds to around 3% of their population. Negative natural change (-0.2% per year) further accelerated the population decline.

Table 1. *Migration streams according to origin and destination in 1996-99 (persons, % of total moves in parenthesis)*

	Destination		
Origin	Urban	Rural	Total
Urban	645 700 (65%)	132 800 (13%)	778 500
Rural	165 800 (17%)	46 900 (5%)	212 700
Total	811 500 (82%)	179 700 (18%)	991 200
Net-migration	33 000	-33 000	
% of population	0.83	-2.86	

Note: Urban consists of urban and semi-urban municipalities

With regard to place-to-place migration streams, the statistics show that between 1996 and 1999 about 80% of all internal migrants headed to urban areas. The majority of urban oriented moves were taking place between urban areas (urban-to-urban migration), but around 17% occurred from rural to urban locations (rural-to-urban migration). It should be noted, however, that there also exists a continuous flow of migrants to rural areas (see also Figure 2). In fact, rural in-migration also rose at the same time as general migration activity in the latter part of the 90s, although not to the same degree as out-migration. Every year about 20% of movers head to rural areas. In-migration is by no means insignificant from the rural perspective: for example, in 1999 newcomers represented around 4% of the rural population. A notable share of rural in-migrants originate from urban locations (urban-to-rural migration), but rural-to-rural migration also exists.

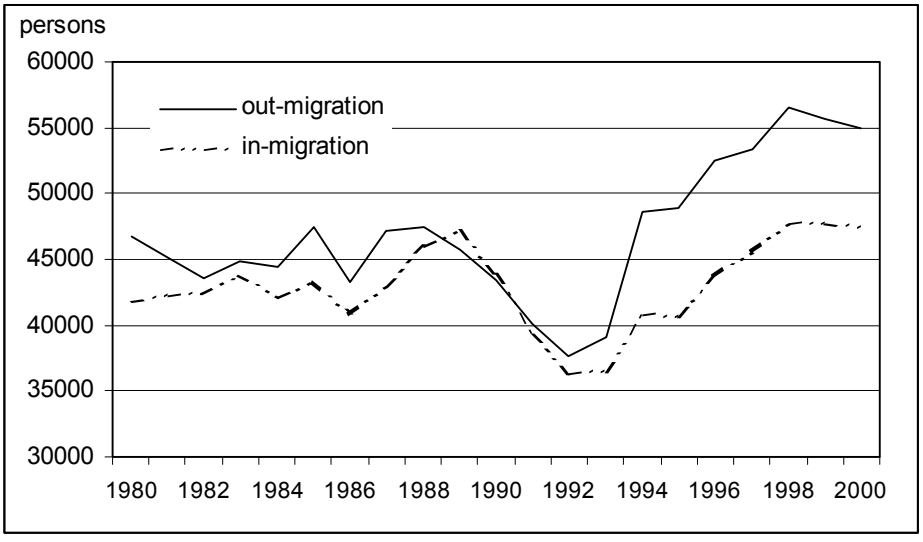


Figure 2. *Rural in-migration and out-migration in 1980-2000*

Based on the above figures, the quantitative effect of migration is clear; urban areas are growing and rural areas declining. Besides redistribution of population, the role of migration in the spatial allocation of human capital and economic activity can be assumed to be crucial. At present, the educational level of urban Finns is almost 50% higher than that of rural inhabitants (Havén, 1999). Moreover, analyses of regional income differentials demonstrate that the highest incomes are concentrated in urban regions, while rural locations lag far behind (e.g. Loikkanen et al., 2000; Rusanen et al., 2000). To be able to assess the qualitative effect of migration on different regions, information on the quality of migrants is needed. Therefore, the rest of the paper investigates origin-destination specific determinants of migration and potential spatial variation in the characteristics of migrants in the rural-urban context.

3. THEORETICAL UNDERPINNING, DATA AND VARIABLES

3.1 Theoretical considerations

Sjaastad's (1962) human capital approach is widely used as a starting point in migration analysis. According to this view, migration is regarded as an investment in human capital: by devoting time to activities whose benefits accrue in the future, individuals are making investments in their human resources. Education and training are other examples of such investments. While the basic human capital model may apply well to urban-oriented migration, it is not necessarily valid in all moves. The approach views individuals almost entirely in terms of the income they could earn, and ignores many non-pecuniary aspects of a move. The non-monetary factors may, however, be of great importance in migration decisions, especially when considering rural destined moves. For example, Stevens (1980) points out that many non-metropolitan in-migrants expect to find some things that money could not buy in metropolitan areas (unpolluted environment, quality of life, etc.). Morrison and Wheeler (1976) also stress the significance of life-style and other non-monetary factors in migration decisions. Moreover, housing considerations, among others, are important determinants of moving (see Rossi, 1980).

Furthermore, decisions about migration are usually made at the household, rather than individual, level (Mincer, 1978). A household can consist of any number of persons, including a single individual, and the migration decision depends on the household's expected utility flows in the current and other locations, as well as on migration costs (see e.g. Böheim and Taylor, 1999). It is clear that choices of where to live involve many trade-offs. Expected utility depends not only on the wages of household members but also on other labour market features, such as employment opportunities. Housing market related factors (such as house prices), the condition and suitability of the current/alternative house of residence and the costs of living also are important in determining utility flows, not to mention tastes and preferences, which are of primary importance and do not depend on the location. Moreover, one should remember that migration is a costly process; both material and emotional costs are involved in moving. Whether or not a household changes location will depend on whether the outcome of such a change is positive or negative, i.e. migration takes place only if the expected net gains (expected utility minus costs) from relocation are greater than those from staying.

It should be noted that when a household's situation and preferences change, the migration decision can be revised. Due to diverse preferences, different areas meet the requirements of different categories of the population (Clark and Hunter, 1992). A

household's migration behaviour tends to vary especially according to life-cycle, which is considered as one of the strongest factors underlying migration decisions (Plane and Heins, 2003). In particular, in the early years of working life, career-related motives and economic opportunities are likely to operate as the driving force behind the location choice. In turn, residential reasons such as housing and environment presumably become more important in later stages of the life cycle (following the arrival of dependants, in retirement, etc.).

3.2 Data and variables

The empirical analysis is based on a 1% representative sample drawn from the longitudinal population census file of Statistics Finland. This dataset covers the years 1995-1999 (partly also earlier years) and contains information collected in population and housing censuses, completed with employment data and information from various official registers. The data are ideally suited to the study of migration, providing detailed information on individuals' characteristics as well as on their family relations.[vii]

From the 1% sample, a subsample consisting of individuals aged 20-69 was selected.[viii] In addition to the mobility of the working-aged population, this age interval enables an examination of the migratory behaviour of retirees.[ix] This perspective is particularly interesting, as the baby-boomers, born in 1945-50, will exit working life during this decade, and can thereafter choose their location more freely. The final sample, an unbalanced panel, comprises 112 109 individual-per-year-observations. Of these, around 87 000 originally lived in urban and 25 000 in rural areas. In total, the data include 3 927 moves across the Finnish municipalities during the period under scrutiny (1996-99). More precisely, there were 2 600 (66% of all moves) urban-to-urban, 600 (15%) urban-to-rural, 500 (13%) rural-to-urban and 200 (5%) rural-to-rural migration events.

Independent variables as well as their means according to destination are presented in Table 2. Migration takes place in the year t+1. The independent variables are measured prior to moving, most often in year t. The names of the variables are largely self-explanatory, but a definition is given in some cases. The covariates can be grouped into personal and family characteristics. Personal characteristics control for observable differences in an individual's age, human capital accumulation, labour market status and other variables that have been found in earlier studies to be important determinants of migration. Family-related variables define family relations, the existence of children and the spouse's characteristics. All variables except age, age2 and income are dummies. Discussion of earlier evidence and the expected effects of the variables will follow below.

Table 2. *Means of independent variables according to the destination of migrants*

Variables	MEAN Stayers	Urban in-migrants	Rural in-migrants
PERSONAL CHARACTERISTICS			
Age	45.46	35.46	39.12
Age2 ((Age/10) squared)	20.67	12.57	15.30
Female	0.53	0.52	0.55
Education			
Secondary (1 if higher secondary)	0.45	0.52	0.50
Higher (1 if university of equivalent)	0.19	0.26	0.16
Main type of activity			
Unemployed	0.11	0.15	0.18
Student	0.03	0.10	0.05
Retiree	0.19	0.07	0.14
Self-employed	0.08	0.04	0.06
Recently graduated	0.01	0.05	0.03
Income (1000e)	18.7	17.2	14.9
Rented apartment	0.22	0.45	0.45
Car	0.49	0.47	0.53
Swedish-speaking	0.05	0.03	0.05
Commuter (1 if home and job in different municip.)	0.17	0.28	0.20
Migrated earlier (betw. 1990 and t)	0.21	0.60	0.54
FAMILY/HOUSEHOLD CHARACTERISTICS			
Couple (1 if married or cohabiting)	0.80	0.70	0.76
Children under 18 y. (in 1995)	0.40	0.33	0.38
Maternity leave (1 if on maternity leave)	0.09	0.12	0.14
Home care allowance (1 if on home care allowance)	0.04	0.07	0.09
Household size change (t-(t-1))			
Increased	0.08	0.18	0.17
Decreased	0.09	0.15	0.14
Spouse employed	0.49	0.41	0.36
Spouse highly educated	0.15	0.17	0.11
N	108 182	3 130	797

Notes: Migration takes place in year t+1.Variables are measured in the year prior to migration (i.e. in t), unless otherwise stated.

Vast evidence shows that migrants are young and educated persons (see e.g. Greenwood, 1997). Life-cycle events typically occur at certain ages, and age also strongly determines the geographic channels of area-to-area movement; both the opportunities for moving and attractiveness of destinations vary greatly depending on the life-course. Starting or ending an education, getting or loosing a job, getting married, separated or divorced, having a child and children leaving home are among the major life events that are known to affect mobility (Häkkinen, 2000; Haapanen, 2002; Nivalainen, 2003; Plane and Heins, 2003). Retirement can also be considered as an important life-cycle event; the location of retirees does not depend on the job, and their income is largely independent of location. Indeed, empirical evidence from Finland and other countries suggests that retirement migrants are a specific rural in-migrant group (Cross, 1990; Nivalainen, 2003). On the other hand, the origin of retirees has so far remained unexplored.

A number of empirical studies indicate that personal unemployment augments migration (see, for example, Van Dijk et al., 1989). Earlier migration experience and commuting are also important mobility boosting factors (DaVanzo, 1978; Nivalainen, 2000). The effect of income is not self-evident. On the one hand, higher incomes might inhibit migration (particularly long-distance moves) due to larger opportunity costs associated with relocation, but on the other hand higher incomes could also provide more finance for moving. Likewise, car ownership has no a priori sign. Car may enable longer commuting distances, thus reducing the need to move. Based on the same argument, a car could also enhance migration, in particular to rural areas. Hardill and Green (1998), for example, observed that rural in-migrants are extensive car users.

Owner-occupancy is very common in Finland, and home-ownership typically acts as a deterrent of migration (e.g. Avikainen et al., 2001). Renters tend to be more mobile than owners. Furthermore, for many reasons self-employed persons may be tightly rooted in their home region, and therefore a negative association is expected between self-employment and moving. With regard to language, Finland is a bi-lingual country with Finnish and Swedish as official languages. Nevertheless, only 5% of the population speaks Swedish as their mother tongue, and the Swedish-speaking population is concentrated mainly on the southern and western coasts of Finland. Due to the small number of potential destinations, it is reasonable to expect the Swedish-speaking population to be less mobile (see Häkkinen, 2000).

As noted above, the household, rather than the individual, is frequently the key unit in migration decisions. Therefore, controlling for family status is very important. Family relations in general should deter migration (Nivalainen, 2000; Haapanen, 2002).[x] Especially school-aged children tend to tie families to current locations. Note, however, that the existence of under 18-year-old children is here measured in 1995 (there is no information on children in 1996-99); as a result, the variable only captures the effect of older children.[xi] An employed spouse is also expected to hinder migration. On the other hand, a spouse's high education might increase the family's mobility. Finally, changes in household size reflect various life-cycle changes, including, for example, the birth of children, death of a spouse, divorce and marriage. These have all been observed to boost mobility, mainly due to changing housing needs (see Clark et. al, 1994; Clark and Dieleman, 1996).

Before proceeding, one should note that due to data shortcomings, regional information is not available for the inspection period. Hence, regional variables cannot be used in the analysis, even though earlier studies show a clear connection, for example, between migration and local unemployment rates (e.g. Ritsilä and Tervo, 1999; Häkkinen, 2000). On the other hand, it can be argued that the need for regional variables is at least to some degree reduced by the control of the migrants' origin. Housing-space and cost-of-living differentials might also be important migration determinants, and ideally these effects would also be tested.[xii] Unfortunately the data do not allow this.

4. EMPIRICAL ANALYSIS OF MIGRATION FROM AND TO RURAL AND URBAN AREAS

In this section, the determinants of migration across municipalities are examined, and in the analysis the origin and destination of migrants is acknowledged. For this purpose, the sample is split into urban and rural populations, after which migration decisions are modelled in each part separately. The probability of migration is a function of personal and family variables, and the multinomial logit framework is utilized in exploring the effect of these variables on migration behaviour.[xiii] The dependent variable, *Migration*, has three classes: 0 = non-migrant, 1 = urban in-migrant and 2 = rural in-migrant, i.e. the estimates give the probability of urban and rural in-migration relative to the reference state of not moving. The standard errors are corrected for repeated observations on the same persons.

The results are presented in Table 3. Models 1 and 2 refer to a rural origin, and models 3 and 4 to an urban origin. In addition to coefficients (b), the results are reported as relative risk ratios (RRR), i.e. exp(b), which give the relative risk associated with an one-unit change in the explanatory variable. Figures greater than (less than) one indicate a higher (lower) risk of moving relative to not moving. For continuous variables (e.g. income), the basic RRR is not a very reasonable measure, and therefore the RRR for income is calculated at 75^{th} vs. 25^{th} percentiles. Note also that in the case of multinomial logit checking the marginal effects is important (see e.g. Greene, 1997). However, in the present study the migration categories have an uneven number of observations, and the marginal effects (which give the absolute change in probability) may not be the most illustrative way of analysing results. Therefore, the interpretation here is based mainly on relative risk ratios. For comparison, marginal effects are presented in the Appendix.

As mentioned earlier, semi-urban and urban municipalities are combined into an urban category. This is reasonable, since the main focus is on rural areas. However, as a robustness check, all models were also estimated after excluding those living in or moving to semi-urban locations. For the most part the results remained unchanged and only a few changes emerged. When necessary, these are discussed below (the results are not shown but are available from the author upon request).

Table 3. *Estimation results from multinomial pooled logit models: coefficients and relative risk ratios (RRR)*

Variables	Model 1 Rural to Urban vs. Stay		Model 1 Rural to Rural vs. Stay		Model 2 Rural to Urban vs. Rural		Model 3 Urban to Urban vs. Stay		Model 3 Urban to Rural vs. Stay		Model 4 Urban to Rural vs. Urban	
	Coeff.	RRR	Coeff.	RRR	Coeff.	RRR	Coeff.	RRR	Coeff.	RRR	Coeff.	RRR
Constant	-1.08*		-5.67**		4.58**		-2.24**		-5.58**		-3.35**	
PERSONAL CHARACTERISTICS												
Age	-0.12**	0.88	0.02	1.02	-0.15**	0.86	-0.05**	0.95	0.03	1.03	0.08**	1.08
Age2	0.11**	1.11	-0.05	0.95	0.15**	1.17	0.01	1.01	-0.07**	0.93	-0.08**	0.92
Female	0.08	1.09	0.27	1.31	-0.19	0.83	-0.03	0.97	0.10	1.10	0.13	1.13
Education												
Secondary	0.40**	1.49	0.01	1.01	0.38*	1.47	0.03	1.03	-0.15	0.86	-0.18	0.83
Higher	0.70**	2.01	-0.25	0.78	0.95**	2.58	0.19**	1.21	-0.23*	0.79	-0.42**	0.66
Main type of activity												
Unemployed	0.41**	1.51	0.24	1.27	0.18	1.19	0.26**	1.30	0.26**	1.30	0.00	1.00
Student	0.47**	1.60	0.58*	1.79	-0.12	0.89	0.39**	1.48	-0.33	0.72	-0.73**	0.48
Retiree	-0.07	0.93	0.13	1.14	-0.20	0.82	0.04	1.04	0.55**	1.73	0.51**	1.66
Self-employed	-0.22	0.81	0.38	1.46	-0.59*	0.55	-0.00	1.00	-0.24	0.79	-0.24	0.79
Recently graduated	0.04	1.05	-0.19	0.83	0.23	1.26	0.45**	1.56	0.48**	1.61	0.03	1.03
Income	0.00	1.02	-0.02	0.80	0.02	1.30	0.00	1.01	-0.01**	0.83	-0.01**	0.83
Rented apartment	0.59**	1.80	1.04**	2.83	-0.46**	0.63	0.35**	1.41	0.45**	1.56	0.10	1.10
Car	-0.22**	0.80	0.29*	1.34	-0.51**	0.60	0.10**	1.10	0.43**	1.53	0.33**	1.39
Swedish-speaking	-0.56**	0.57	0.34	1.41	-0.90**	0.41	-0.04	0.97	0.16	1.17	0.19	1.21
Commuter	0.49**	1.63	0.11	1.12	0.37	1.45	0.50**	1.65	0.23**	1.26	-0.27**	0.76
Migration history	1.04**	2.84	1.53**	4.61	-0.48**	0.62	1.00**	2.72	0.98**	2.66	-0.02	0.98
FAMILY/HOUSEHOLD CHARACTERISTICS												
Couple	-0.40**	0.67	-0.21	0.81	-0.19	0.82	-0.13**	0.88	0.31**	1.37	0.45**	1.56
Children	-0.16	0.85	0.16	1.17	-0.32	0.73	-0.30**	0.74	-0.31**	0.73	-0.01	0.99
Maternity leave	-0.33*	0.72	0.24	1.27	-0.57**	0.57	-0.11	0.90	0.03	1.04	0.14	1.15
Home care allowance	0.16	1.18	0.31	1.36	-0.15	0.86	0.15	1.16	0.34*	1.40	0.19	1.20
Household size												
Increased	0.39**	1.47	0.09	1.09	0.30	1.35	0.46**	1.58	0.51**	1.66	0.05	1.05
Decreased	0.49**	1.63	0.12	1.12	0.37	1.45	0.27**	1.31	0.36**	1.44	0.09	1.10
Spouse employed	-0.61**	0.54	-0.73**	0.48	0.12	1.13	-0.22**	0.80	-0.47**	0.63	-0.25**	0.78
Spouse highly educ.	0.09	1.10	0.30	1.35	-0.21	0.82	0.16**	1.17	-0.21	0.81	-0.37**	0.69
N	25 115						86 994					
Log likelihood	-3 118.07						-13 669.47					
Model chi2(52)	1 022.19 (p=0.000)						3390.98 (p=0.000)					
Pseudo R2	0.13						0.11					

Notes: All models incl. year-dummies. Std. errors corrected for multiple observations. */** significant at 10/5% level

From the regional perspective, rural-to-urban and urban-to-rural streams are of primary interest, as it is expressly these counterstreams that define the total impact of migration on rural and urban areas. Rural-originated migration is analysed first (models 1 and 2). The results show that rural-to-urban migration likelihood is highest when young, i.e. rural-to-urban migrants are younger than the existing population of the rural areas.[xiv] They are also younger than those moving between rural areas. Moreover, rural-to-urban migrants are educated persons, and higher education in particular increases the probability of moving away from a rural area (by a factor of 2). Rural-to-urban migrants are also more educated than rural-to-rural migrants. Furthermore, the unemployed and

students have a significantly higher likelihood of leaving rural areas and heading to urban locations. On the other hand, students also seem to move from one rural location to another (significant at 10% level). This is most likely explained by the rural location of some secondary education institutes.

Previous inter-municipal commuting significantly increases the likelihood of rural-to-urban migration (by 60%). By contrast, Swedish-speaking individuals and those with a car have lower probabilities of moving from rural to urban areas. On the other hand, a car increases rural-to-rural mobility (significant at 10% level). Self-employment as such does not significantly influence the likelihood of migration, but if a rural-originated self-employed person moves, the move is likely to occur between rural areas (significant at 10% level).

As expected, family relations are of importance in migration decisions. Being a couple reduces the propensity of a rural-to-urban move (by 30%). Moreover, maternity leave, i.e. the presence of a very young child, inhibits migration away from the countryside (significant at 10% level). A negative, yet insignificant, sign is also attached to the children variable. As mentioned earlier, this variable is likely to capture the effect of older children (see section 3.2).

With regard to urban-to-rural migration (models 3 and 4), it can be seen that the age-variable does not have any significant impact, but age squared is significantly negative, which means that urban-to-rural migration likelihood starts to decrease fairly soon after the beginning of the age interval.[xv] Nevertheless, in relation to urban-to-urban migrants urban-to-rural migrants are significantly older. Moreover, it can be seen that the probability of an urban-to-rural move decreases with education, and highly educated individuals in particular are less likely to head to rural destinations (significant at 10% level). Note also that this is the only direction where the spouse's higher education shows a negative sign. At this point it is also worth mentioning that when the semi-urban municipalities were excluded, the negative effect of education further strengthened (secondary and higher education as well as spouse's higher education showed significant negative signs in urban-to-rural moves).

Moreover, the results explicitly show that retirement migration is an integral part of urban-to-rural migration: being a retiree significantly increases the probability of an urban-to-rural move (by 70%). This is the only instance where retirement is a significant determinant of moving. Furthermore, it can be seen that the unemployed do not solely move to urban destinations, but they are also likely to move from urban to rural locations. Most probably, the finding relates to the migration behaviour of those unemployed who wait for retirement.[xvi] This was checked by entering an interaction between personal unemployment and age. The coefficient on this variable was positive,

although insignificant, and by the inclusion of the interaction personal unemployment lost its significance.[xvii]

Being a student has a negative sign in urban-to-rural mobility, but the effect is insignificant. It is notable that in all other moves the student-variable displays a positive impact. Rather surprisingly, recent graduation not only increases the likelihood of moving between urban areas but also from an urban to a rural location. On the other hand, this only demonstrates that not all graduates stay in cities. Commuting also has a positive effect on urban-to-rural migration. These findings imply that at least some of the moves to rural destinations might be job-related. Furthermore, car ownership increases the likelihood of an urban-to-rural move, indicating that a car is an important rural in-migration enhancing factor. Note also that if a person with a car moves, the destination is more likely to be rural than urban. Current income in general does not seem to play a part in migration decisions, but urban-to-rural moves are an exception: individuals with lower than average incomes tend to head from urban to rural locations.

Influences of family composition on migration are again apparent. Being a couple has a positive and significant effect on urban-to-rural mobility. Even though the existence of children in general diminishes migration propensities, home care allowance increases the odds of rural in-migration (significant at 10% level). As explained above, the children variable is likely to reflect the effect of older children, while the positive effect of home care allowance signals that urban-to-rural moves tend to occur when children are still small. Note, however, that when the semi-urban inhabitants were removed from the analysis, the children variable became insignificant and home-care allowance just failed to reach significance at conventional levels (significant at 10.2% level).

With regard to urban-to-urban migration, those moving between urban areas tend to possess the characteristics of typical migrants (see Ritsilä, 2001; Haapanen, 2002): they are young and educated, and so are their spouses. Being a commuter, unemployed or student also increases the likelihood of relocation between urban areas. Instead, family relations (being a couple and having children) significantly reduce urban-to-urban mobility. Rather surprisingly, a car enhances migration between urban areas. This, however, mainly reflects the quality of semi-urban in-migrants, since after their exclusion the car became insignificant.

Independent of origin and destination, mobility increases when living in a rented apartment and with migration history and decreases when a spouse is working. This is in line with earlier studies (see section 3.2). Changes in the household size also generally augment migration, but there is supposedly considerable variation according to factors underlying the household size change. Unfortunately we could not control for these here.

5. CONCLUSIONS

The purpose of the present paper was to extend the analysis of migration by exploring origin and destination specific population movements and potential spatial variation in the factors influencing migration in the urban-rural context. In these attempts, the determinants of migration to and from urban and rural areas in Finland were examined with a large representative micro-level panel data set from the years 1995-99.

The results show that migrants not only differ from stayers but there are also many differences between migrants from and to rural and urban areas. In particular, rural-to-urban migrants are highly educated while those moving from urban to rural areas are not. Urban-to-rural migrants also have lower than average incomes. Moreover, the findings confirm that locational preferences vary with the life-cycle: young and single individuals move to urban destinations, while couples and retired persons tend to head from urban to rural areas. This corroborates evidence from other countries (see, for example, Lewis et al., 1991; Hardill and Green, 1998). The finding that retirement migration is an integral part of urban-to-rural migration has interesting implications with regard to the forthcoming retirement of the baby-boom generation, and supports the view that rural in-migration will most likely increase during the next 10 years or so. The exact magnitude of these flows is, of course, difficult to evaluate.

As it is expressly the young and educated individuals that urban areas absorb from rural areas, migration not only decreases rural population base but also distorts the (already skewed) age structure of rural areas and deprives rural regions of critically needed human capital. Furthermore, the loss tends to be permanent, since those moving in the opposite direction, from urban to rural, are less educated. In practice this means that both rural-to-urban and urban-to-rural migration works to the benefit of the urban areas, and this two-way impact strengthens the unbalancing effect of internal migration. Hence, regional disparities are likely to increase (rather than decrease) upon continuing migration. This, in fact, is in line with the observed development and the persistence of regional differences in Finland.

What should be done then? In some countries it has been proposed that improvements in transportation that lower commuting times might be an effective means of supporting rural economic development (see Renkow and Hoover, 2000; So et al., 2001). Commuting has remained largely unexplored in Finland. Obviously, patterns of commuting and factors affecting them, as well as the choice between moving and commuting should be analysed; without a proper understanding of individual behaviour it is impossible to develop and target policy measures, for example. Nevertheless, when considering the cure, one should keep in mind that, due to the special character of

Finland, the experiences and actions of other countries may not be directly applicable.[xviii] In particular it seems clear that in a country with a large area and sparse population the means to alleviate the problems of rural and remote areas cannot be profitably based upon urban strengths and reflective effects of urban growth alone.[xix]

Even though migration does not seem to be optimal from the regional point of view, it is quite evident that the majority of migrants seek a better life. Earlier Finnish research, however, has suggested that relocation does not increase migrants' employment propensities, not even in the case of unemployed migrants (Pekkala and Tervo, 2002). This intuitively unappealing result might at least partly be explained by the destination choices of movers. Therefore, the success of migrants and the potential variation according to destination merits investigation. Moreover, it would be important to be able to acknowledge the effect of tastes and preferences and other unobserved factors on migration choices, which might explain a notable proportion of rural-destined moves, in particular. Future work will concentrate on these topics.

Endnotes:

[i] Recently, out-migration from rural areas and in-migration to urban areas has abated somewhat. However, this is most likely due to a slight economic recession, and is therefore assumed to be temporary. Nevertheless, rural areas still lose population through migration. Moreover, the age structure in rural areas is older than average. For example, the proportion of the elderly in rural areas is over 19%, in comparison with 13.5% in urban areas.

[ii] In the case of Finland, Kauhanen and Tervo (2002) and Nivalainen (2003) are exceptions. Both use cross-sectional data. The former examines the characteristics of in-migrants in depressed regions, and finds out that those moving to more backward destinations are older and more likely unemployed in relation to other migrants. The latter inspects the determinants of migration to rural areas. Among other things, the results show that rural in-migrants tend to be older and less educated than those moving to other areas. However, neither of these studies considers both the origin and destination of migrants.

[iii] The term place-to-place migration is here used to draw a distinction to earlier studies that do not consider each end of migration simultaneously.

[iv] Rural-to-urban migration has been studied mainly in LDCs (e.g. Stark, 1984; Sabatés, 2000). In developed countries some work has been done on urban directed migration (see Cadwallader, 1992; Fielding, 1993). Much less is known about urban-to-rural population movements.

[v] Since most migrants relocate between urban areas, earlier Finnish studies are likely to mainly reflect the characteristics of urban-to-urban migrants.

[vi] Finland's urbanisation rate is one of the lowest in the EU.

[vii] A drawback is that the actual reasons for moving are unknown.

[viii] Children (i.e. those living with their parents) and those living in institutions were dropped.

[ix] The official retirement age in Finland is 64, and the actual retirement age is 59 years.

[x] It should be noted that the event of marriage may encourage migration, but the state of marriage tends to hinder it (see Greenwood, 1997). Unfortunately the effect of events such as getting married or divorced could not be tested with the present data.

[xi] For example, those who were 1 year old in 1995 were 5 years old in 1999. Moreover, the children variable does not take into account new births between 1995 and 1999, even though having children is considered a major life cycle event. Additional births increase the space requirements of a family, and may result in moving. The effect of young children is partly captured by the variables indicating maternity leave and home care allowance, but both are far from perfect measures (for example, they are associated only to females in the sample).

[xii] According to Virtanen (2003), housing related factors are the second most important reason for moving. Moreover, Nivalainen (2003) shows that living space is an important factor underlying rural in-migration.

[xiii] For discussion of the multinomial logit model see Greene (1997).

[xiv] Even though the age2-variable is significant and positive, i.e. after some point rural-to-urban migration odds start to (slowly) increase again, the migration likelihood still peaks at young age.

[xv] If age squared is excluded from the model, age has a significant and negative coefficient in urban-to-rural moves.

[xvi] Another explanation could be that living costs are lower in rural areas.

[xvii] The duration of the unemployment spell was also tested out but it was insignificant.

[xviii] The regional structure in Finland (as in other Nordic countries, too) is very different from the rest of the Europe, for example. Finland has a small population base and a large area. Population density in the continent of Europe is usually ten times or more than of Finland, and distances in Finland are considerably longer.

[xix] Indeed, there is little evidence of the reflective effects of being able to penetrate the areas beyond the immediate vicinity of the urban centres themselves (Eskelinen and Schmidt-Thomé, 2002; see also Hanell, 2002b).

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APPENDIX

Table 1. *Estimation results from multinomial pooled logit models: marginal effects*

Variables	Model 1			Model 3		
	Move from Rural to Urban	Move from Rural to Rural	Stay in Rural	Move from Urban to Urban	Move from Urban to Rural	Stay in Urban
	Marg.eff.	Marg.eff.	Marg.eff.	Marg.eff.	Marg.eff.	Marg.eff.
PERSONAL CHARACTERISTICS						
Age	-0.14**	0.01	0.13**	-0.09**	0.02	0.07**
Age2	0.12**	-0.02	-0.10**	0.01	-0.03**	0.02
Female	0.09	0.12	-0.21	-0.05	0.05	0.00
Education						
Secondary	0.44**	0.00	-0.44**	0.05	-0.08	0.02
Higher	0.77**	-0.11	-0.66**	0.35**	-0.12*	-0.23
Main type of activity						
Unemployed	0.46**	0.10	-0.56**	0.47**	0.13**	-0.60**
Student	0.52**	0.25	-0.77**	0.72**	-0.17	-0.56**
Retiree	-0.08	0.06	0.02	0.07	0.27**	-0.33
Self-employed	-0.24	0.17	0.07	-0.00	-0.12	0.12
Recently graduated	0.05	-0.08	0.03	0.81**	0.23**	-1.04**
Income	0.20e-04	-0.81e-04	0.61e-04	0.85e-05	-0.65e-04**	0.56e-04**
Rented apartment	0.64**	0.45**	-1.10**	0.63**	0.21**	-0.84**
Car	-0.25**	0.13*	0.12	0.17**	0.21**	-0.38**
Swedish-speaking	-0.62**	0.15	0.47	-0.06	0.08	-0.01
Commuter	0.54**	0.05	-0.59**	0.91**	0.11*	-1.02**
Migration history	1.15**	0.67**	-1.81**	1.82**	0.47**	-2.29**
FAMILY/HOUSEHOLD CHARACTERISTICS						
Couple	-0.44**	-0.09	0.53**	-0.24**	0.15**	0.09
Children	-0.18	0.07	0.11	-0.55**	-0.15**	0.70**
Maternity leave	-0.37*	0.11	0.26	-0.19	0.02	0.18
Home care allowance	0.18	0.13	-0.31	0.27	0.16*	-0.44**
Household size						
Increased	0.43**	0.04	-0.47**	0.83**	0.24**	-1.08**
Decreased	0.54**	0.05	-0.59**	0.49**	0.17**	-0.67**
Spouse employed	-0.67**	-0.32**	0.99**	-0.40**	-0.23**	0.62**
Spouse highly educated	0.10	0.13	-0.23	0.29**	-0.10	-0.19

Notes: The figures are marginal effects multiplied by 100. */** significant at 10/5% level