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INTERNAL MIGRATION AND REGIONAL POPULATION DYNAMICS IN EUROPE: FINLAND CASE STUDY

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ABSTRACT

Both natural increase and internal migration have played roles in the shaping of population distribution of Finland since 1900. Far reaching recent changes in the economy have brought about massive shift of jobs from agriculture to manufacturing and services. As a result people have relocated from rural to urban areas. Both natural change and net migration have distinct geographical patterns, resulting in serious depopulation in remote areas in the east and north of the country. Internal migration benefits the south, the west, coastal areas, urban agglomerations and suburban areas. International migration is a marginal phenomenon in Finland and has little impact on population dynamics. Net migration losses in the past were offset by high natural increase and in recent decades Finnish emigrants have returned.

Urban concentration is a dominant feature of the Finnish migration system. At the subregional level, suburbanisation is visible, but is not as strong as in the overcrowded metropolises of Western Europe. The relationships between migration and size of municipality, migration and population density and migration and urban/rural class of municipalities show that the process of concentration is the strongest force at work in shifting people to urban agglomerations and their suburban rings.

Regional patterns of migration show strong transfers of population from north and east to south and to lesser extent to west of the country. The Baltic Sea coast has a strong attraction to migrants. Migration is sex-selective, with a much higher propensity of females to leave remote and rural areas and migrate to urban centres and the southern part of the country. The result is a significant gender imbalance: a deficiency of females in rural areas and in the north and east of the country and a surplus in urban and semi-urban areas. However, the economic indicator unemployment has a rather weak and imprecise effect on migrants.

1. CONTEXT

This study funded by a research grant of the Economic and Social Research Council *Internal Migration and Population Change in Europe. A Comparative Study* and constitutes a continuation of a research project on *Internal Migration and Regional Population Dynamics in Europe* commissioned to the School of Geography of the University of Leeds by the Council of Europe and the European Commission over the period 1995-1998. Within the ESRC project ten countries evenly distributed across Europe are being studied, adding to earlier ten case studies completed within the Council of Europe and the European Commission funded project, providing in total 20 case studies based on a unified methodology and carrying out a spatial analysis in each country. The analyses are designed to be as comparable as possible, keeping in mind differences in how migration is defined and operational differences in how migration data are being acquired by National Statistical Offices.

The aims of this study are:

+ to compare the patterns of internal migration and population change in Finland in the 1980s (using data for 1984) and the 1990s (using data for 1996)
+ to examine the way in which these patterns differ between different life course stages, again comparing 1984 and 1996
+ to establish the contribution of internal migration to regional population change against the contributions of external migration and natural change
+ to review how internal migration is structured in terms of the spatial organisation of the country using classifications relating to settlement size, population density, municipality type and degree of rurality

+ to assess, from this analysis, the degree to which internal migration is contributing concentration or deconcentration, and whether deconcentration is merely suburbanisation unit large (periurbanisation) or represents a return to scattered rural settlements, and
+ to ascertain the degree to which internal migration is responsive to economic labour market conditions, as tracked by the level of unemployment.

The focus of attention in this case study, as in the others, is migration internal to the country. Comparisons across European countries in the levels and structure of internal migration at a fine spatial scale are needed because previous work has focussed on the total population change or total net migration (which includes the balance of international migration), and usually for large regional divisions which hide the complexities of settlement structure.

2. INTERNAL MIGRATION AND POPULATION CHANGE REVIEWED

Finland is, in terms of the population size, one of Europe's smaller states. Her territory is extensive (338,145 sq.km.), sparsely populated, with a long coast line and numerous inland lakes. Richly endowed in natural resources (timber, non-ferrous metals) Finland's economy relied on them the past. However, in recent decades it has experienced profound changes, developing an industrial base in metal and shipbuilding industries, but also poineering in high technology industries and services. The success is well known of Finland's largest company by value, NOKIA, which leads the world in inventing and developing wireless telephony ("mobile phones"). This economic shift resulted in an extensive occupational restructuring of Finnish society.

Between 1950 and 1996 population of Finland increased from 4.03 millions to 5.13 millions, that is by 27%. International migration has never made a decisive contribution to population change in Finland. Net migration losses or gains have oscillated over time around 1-2 persons per thousand. A major share of immigration and emigration came from and went to other Scandinavian countries, mainly to Sweden. Cultural differences between Scandinavian countries are small by world standards, which has facilitated population exchanges. The healthy population increase had two sources: high and stable fertility and decreasing mortality. Total fertility was well above 2 children per female up to 1970s and between 2 and 1.6 since then. Simultaneously, mortality decreased: life expectancy improved from 68.6 years for males and 65.9 years for females in 1950 to 72.8 and 80.2 years in 1994. A substantial contribution to this increase came from rapid improvement in infant mortality, which dropped from 43.5 per thousand live births in 1950 to 4.7 in 1997. However, the longevity increase (Martelin 1987) together with falling gently fertility did not allow Finland to escape the ageing process. Karjalainen (1993a:22) calculated that between 1950 and 1989 the share of the age group 65-74 more than doubled and the share of population at the age 75

and over increased by over 2.5 times. The elderly population is located mostly in the southern half of the country with exception of largest urban centres on the south coast.

One of the peculiarities of the Finnish spatial population system is its extremely unequal distribution. The Uusimaa region itself, containing capital Helsinki, accounts for around a quarter of the total population of the country but only 3% of its territory, whereas some distant communities are hardly inhabited at all. The municipality with the smallest population, Sottunga, has only 123 inhabitants. The Helsinki agglomeration (Helsinki, Espoo, Vantaa and Kauniainen) attracts migrants from all over the country (Valkonen, Summa 1985). Fast urbanisation partly contributed to this polarisation. In 1950 32% of Finnish population was classified as urban. This indicator had increased to 68% in 1990. Average European values equalled to 52.4% and 73.5% respectively (Heilig 1997). Such a rapid urbanisation process required large scale population shifts from rural to urban areas. Age selective migration from rural areas had an inevitable negative impact on the age structure of rural population (Karjalainen 1993b) and reduced fertility (Karjalaninen 1991).

The pattern of internal migration evolved substantially over time. The underlying reasons for the change in migration patterns were the shifts in the structure of Finnish economy and its transformation from a farming, forestry and fishing based economy to a manufacture and service based economy. After the first World War around 4/5 of the work force were employed in the primary sector. In the early 1960s around 1/3 of the employed worked in each of the sectors of economy (primary, secondary, tertiary). In the 1980s the share of employment in primary sector plummeted to well below 1/5 whereas the share in tertiary sector exceeded 50% (Kultalahti 1984). In 1996 7% of labour force worked in agriculture and forestry, 28% in manufacturing and 65% in services (Statistics Finland). Kultalahti (1984) noted that the structural changes that in Finland took thirty years, took two centuries in Norway. These changes in the structure of economy and employment triggered

massive internal migration (Hietala 1981). Post-war rapid urbanisation fuelled migration from rural to urban areas. The share of rural to urban migration exceeded the share of migration in the opposite direction up to the early 1980s. Simultaneously the role of urban to urban migration increased and the role of rural to rural migration decreased (Heikkilä 1996). The increase in the share of urban to urban migration is linked to the process of suburbanisation where people migrate from large urban centres to smaller suburban settlements and periurban towns.

Long lasting migration from rural and remote to urban areas led to depopulation of the former (Naukkarinen 1990). The rural population reached its maximum in the 1950s and has been declining since then. The most significant outflow from rural areas occurred in 1960s. The relocation of population occurred from the north and east towards the south and south-east (Alestalo 1983). Some municipalities lost over a half of its population (Kultalahti 1984). In the regions of population concentration at the regional scale a simultaneous process of deconcentration on subregional scale occurred (Naukkarinen 1981). This process started in the 1970s when urban areas exhibited negative net migration – a sign of counterurbanisation. One consequence of rural depopulation was the acceleration of the ageing process in rural populations because of the exodus of young migrants (Naukkarinen 1990).

International migration has played a limited role in the population dynamics of Finland. Traditionally the main destination and the main source of international migrants was Sweden. Over the period 1945-1996 530 out of 705 thousand of emigrants moved to Sweden. Return migration from Sweden was a substantial part of international inflow to Finland (Korkiasaari, Söderling 1999). Up to the early 1970s Finland had nearly constant net outflow. In the decade of the 1970s the balance changed and from the early 1980s Finland has maintained a constant positive net international migration. Since the Second World War Finland has lost on balance 246 thousand persons due to international migration. Korkiasaari

(1993) estimates that without emigration the Finnish population would have reached from 6 to 7 millions, compared with its 1996 level of 5 millions.

In 1980s a significant change in the structure of international migration occurred: migration to and from Sweden and other Nordic countries decreased and the inflow of migrants from Central Europe and since 1989 from former Soviet Union increased. The number of asylum seekers increased in early 1990s, but stricter policies reduced this flow in recent years.

In comparison with other European countries international migration had a restricted impact on population growth in Finland in the last fifty years. Large scale return migration of Finns effectively reduced the migration-induced losses of population. The inflow of foreigners, both migrants and asylum seekers, to Finland was low in comparison to the inflow to other European countries as the share of foreign-born in the national population is low.

3. METHODS USED AND DATA EMPLOYED

3.1 Geographical scale, geographical units and variables used

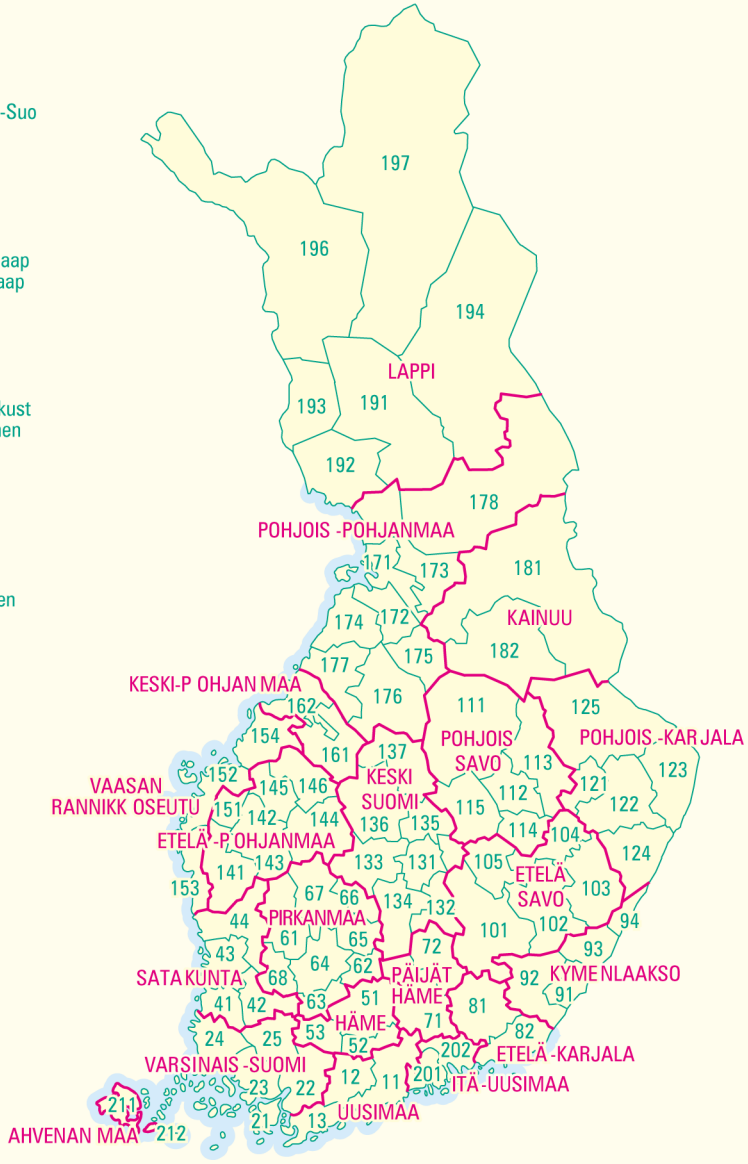
For the investigation of population dynamics and migration in Finland two geographies have been used: 452 municipalities (*kunnat*) and 20 regions. Figure 1 shows the regions and sub-regions of Finland used in this study. Figure 2 maps the municipality boundaries and identifies the principal cities. Data for 1984, 1994 and 1996 were converted to the administrative divisions of the country as in 1998, for which we had digital boundaries. The extraordinary sophistication of spatial statistics in Finland, in which all records in the country's population register are given accurate geo-coordinates, allowed a direct extraction of statistical data for various years recalculated to the predefined spatial division. The Research and Development Centre of Kajaani at the University of Oulu and Statistics Finland very kindly provided us with most of the data recalculated to the 1998 administrative division of the country.

3.2 Mapping techniques and problems

The mapping techniques used in this study were explained fully in Rees, Durham and Kupiszewski (1996). For mapping purposes we obtained from the Research and Development Centre of Kajaani of the University of Oulu the Finnish digital boundaries for 452 municipalities, 85 subregions, 20 regions and 12 provinces for 1996 and 1998, which nest hierarchically.

Figure 1: The regions and sub–regions of Finland

11	Helsingin
12	Lohjan
13	Tammisaaren
21	Åboland-Turunmaan
22	Salon
23	Turun
24	Vakka-Suomen
25	Loimaan
41	Rauman
42	Kaakkois-Satakunnan
43	Porin
44	Pohjois-Satakunnan
51	Hämeenlinnan
52	Riihimäen
53	Forssan
61	Luoteis-Pirkanmaan
62	Kaakkois-Pirkanmaan
63	Etelä-Pirkanmaan
64	Tampereen
65	Itä-Pirkanmaan
66	Koillis-Pirkanmaan
67	Pohjois-Pirkanmaan
68	Lounais-Pirkanmaan
71	Lahden
72	Heinolan
81	Kouvolan
82	Kotka-Haminan
91	Lappeenrannan
92	Savitaipaleen
93	Imatran
94	Kärkikuntien
101	Mikkelin
102	Juvan
103	Savonlinnan
104	Joroisten
105	Pieksämäen
111	Ylä-Savon
112	Kuopion
113	Koillis-Savon
114	Varkauden
115	Sisä-Savon
121	Outokummun
122	Joensuun
123	Ilomantsin
124	Keski-Karjalan
125	Pielisen-Karjalan
131	Jyväskylän
132	Kaakkoisen Keski-Suo
133	Keuruun
134	Jämsän
135	Äänekosken
136	Saarijärven
137	Viitasaaren
141	Suupohjan
142	Pohjoisten seinänaap
143	Eteläisten seinänaap
144	Kuusiokuntien
145	Härmänmaan
146	Järviseudun
151	Kyrönmaan
152	Vaasan
153	Sydösterbottens kust
154	Jakobstadsregionen
161	Kaustisen
162	Kokkolan
171	Oulun
172	Lakeuden
173	Iin
174	Raahen
175	Siikalatvan
176	Nivala-Haapajärven
177	Ylivieskan
178	Koillismaan
181	Kehys-Kainuun
182	Kajaanin
191	Rovaniemen
192	Kemi-Tornion
193	Torniolaakson
194	Koillis Lapin
196	Tunturi-Lapin
197	Ylä-Lapin
201	Porvoon
202	Loviisan
211	Marienhamns
212	Föglö



121 sub–region

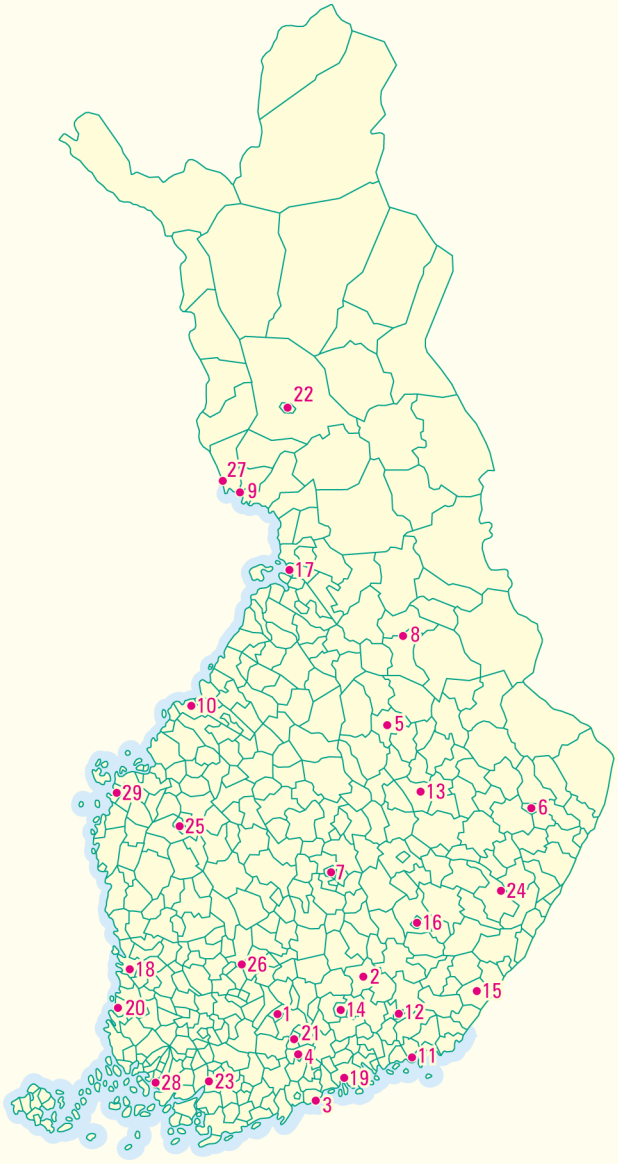
HÄME region

0 Kilometres 300

Figure 2: The municipalities of Finland, 1998 boundaries

Main towns and cities

01 Hämeenlinna
02 Heinola
03 Helsinki
04 Hyvinkää
05 Iisalmi
06 Joensuu
07 Jyväskylä
08 Kajaani
09 Kemi
10 Kokkola
11 Kotka
12 Kouvola
13 Kuopio
14 Lahti
15 Lappeenranta
16 Mikkeli
17 Oulu
18 Pori
19 Porvoo
20 Rauma
21 Riihimäki
22 Rovaniemi
23 Salo
24 Savonlinna
25 Seinäjokl
26 Tampere
27 Tornio
28 Turku
29 Vaasa



0 Kilometres 300

3.3 Variables and key indicators used

In order to extract from a large amount of data on inter-area migration by age and sex the significant information characterising migration patterns and population dynamics we applied a number of fairly simple procedures. The first one was to present the data in cartographic form, which allows for easy identification of spatial patterns. The second technique applied was to reconstruct the full origin-destination migration matrices for clusters of municipalities banded together based on similar values of selected variables. The variables used in this study were: size of municipality, population density and unemployment level. Discussion of variables and indicators used for mapping purposes and for construction of bands is offered below.

Finland operates a system of excellent population registers dating back to the early 17th century (Statistics Finland 1999, Nieminen 1981). Its modern version is run at local level by Evangelican-Lutheran and Orthodox parishes and municipalities and records such events as births, deaths, internal migrations and international migrations. The data collected at local level are passed on to the Population Register Centre, an institution responsible for population registers in Finland. Data processed by the Population Register Centre are supplied to Statistics Finland which, after all necessary checks and corrections, produces the final counts of population and demographic events (Nieminen 1981).

3.3.1 Population and population change data

Data on population stocks for municipalities for 1984, 1994 and 1996 were obtained. The Research and Development Centre of Kajaani at the University of Oulu recalculated these data to the 1998 administrative divisions of the country. Based on this data indices of population change for each administrative unit were calculated.

3.3.2 Migration

Finland is one of the countries with the most detailed information in terms of spatial resolution and demographic characteristics of migrants. All data come from population registers. Inflows and outflows by age, sex and municipality were obtained from Statistics Finland for 1984, 1994 and 1996. They were used for construction of in-migration, out-migration and net migration maps by municipalities as well as for construction of tables of flows between various bands of municipalities defined by selected variables. Maps of in-migration, out-migration and net migration by age between regions were generated from these tables.

3.3.3 Births and deaths

Data on births and deaths were obtained for 1996 computed by the administrative division current in 1998. The data were used for construction of the Webb typology, in which areas are assigned to one of eight types, depending on the level and direction of rates of population change, natural change and migration change.

3.3.4 Population density

Population density was calculated based on population data for municipalities in 1996 and administrative boundaries for 1998.

3.3.5 Size class of communes

Size class of communes was calculated based on population data for municipalities in 1996 and administrative boundaries for 1998 and expressed as persons per square kilometre.

3.3.6 Functional classifications of communes

Two functional classifications have been used. The first, presented in the Regional Classification Handbook (Statistics Finland 1998), divides all municipalities into three classes: urban, in which at least 90% of population lives in urban settlements or in which the largest urban settlement has at least 15000 inhabitants; semi-urban with the share of population living in urban settlements between 60% and 90% or with the largest urban settlement between 4000 and 15000 inhabitants and rural encompassing all other municipalities. This classification is designed to express the location of communes on the rural-urban continuum.

The University of Oulu developed another, more complicated classification which concentrates on the precise characteristics of rural areas. For 1998 the following classes have been defined: remote rural areas, islands, nuclear rural areas, rural areas close to urban settlements and urban areas. This classification is very helpful in exposing the processes going on in rural areas. This classification resembles to some extent classifications into urban, suburban, periurban and rural areas frequently used in high-density countries, but is adapted to the specific geographic conditions of sparsely populated Finland.

3.3.7 Unemployment

The unemployment data (rate of unemployment calculated as the share of unemployed in the total labour force by municipalities) for 1996 has been provided by the Finnish Ministry of Labour. The data were recalculated to the 1998 administrative division of the country.

4. THE PATTERN OF INTERNAL MIGRATION BETWEEN SUBREGIONS THROUGH LIFE COURSE, 1996

Migration has been shown to be selective with respect to the migrant characteristics. The age structure of the migrants affects regional development in in both sending and receiving regions. In-migration and out-migration together create a new demographic situation in an area; net migration classified by age shows the combination of the migration inflows and outflows influences population structures. In this section of the paper we map and interpret the internal migration dynamics of Finland by subregions and age to identify the differences between life course stages and in 1984 and 1996 in order to identify shifts between the two decades, separated by the dissolution of the Soviet Union and economic decline in its successor states, which had a profound impact on the Finnish economy.

In the analysis we use six broad age groups, which correspond to different stages of life course:

0-14	the childhood ages
15-29	the adolescent and young adult ages
30-44	the labour force and family ages
45-59	the older labour force ages
60-74	the retirement ages
75 and over	the elderly ages

In order to make the discussion more compact and comprehensible, these six broad age group have been further aggregated into three groups, which have similar migration patterns. The first group consists of the adolescent and young adult ages (15-29 years), which have been found by Rees and Kupiszewski (1999) to exhibit distinctive migration preferences different from all other ages. The second group consists of family and older labour force ages (0-14, 30-44 and 45-

59 years), shown to have quite similar migration patterns, quite different from those of the adolescent and young adult age group. The third group consists of the retirement and elderly ages (60-74 and 75+ age groups), in which migration is much less intense and which has distinct directions of flow.

4.1 In-migration

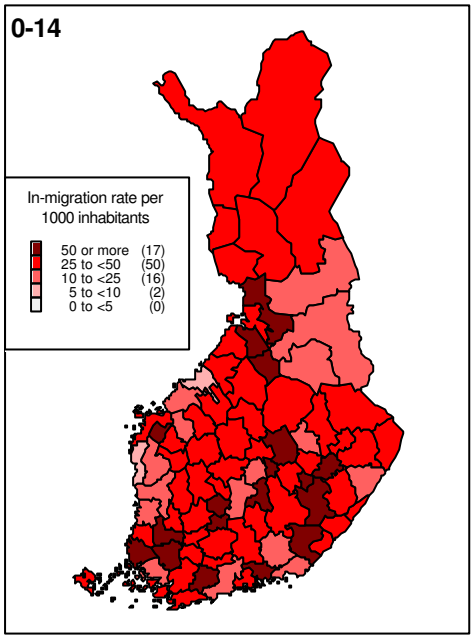
Figure 3 contain six maps plotting in-migration rates, one for each broad age group (Figure 3A (0-14), 3B (15-29), 3C (30-44), 3D (45-59), 3D (60-74) and 3F (75+). Figure 4 provides the equivalent maps for 1996. Table 1 summarises the distribution of municipalities across the migration bands and assesses the degree of stability versus change between the two years.

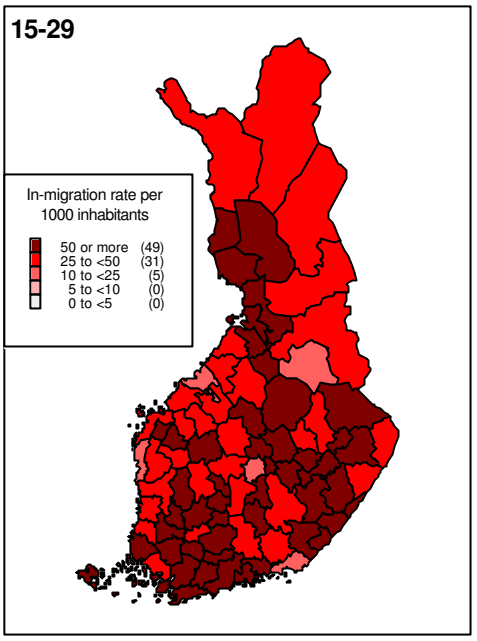
4.1.1 In-migration in the adolescent and young adult ages

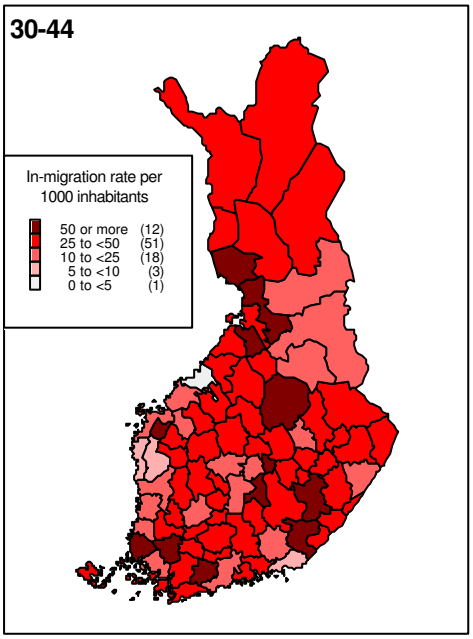
Adolescent and young adults are the age group most prone to migration, an observation confirmed by many analyses (see Karjalainen 1986, Karjalainen 1989:3). The availability of an educated, young labour force is a very important factor for regional development in Finland. Regions vary significantly in their ability to attract such human capital and to retain it (Heikkilä 1997, 173).

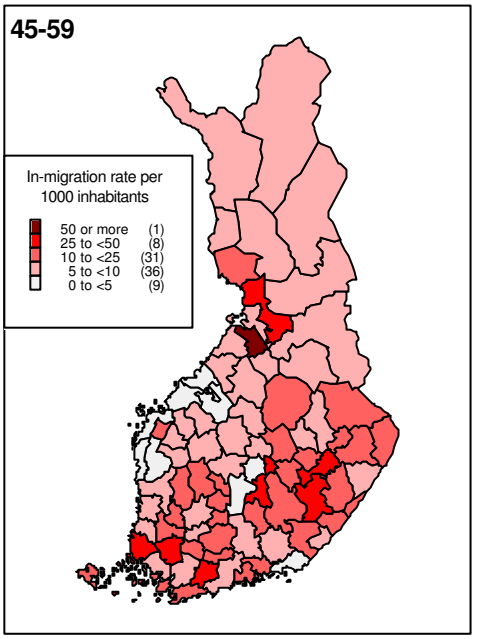
In-migration rates for ages 15-29 in Finland in 1984 are shown in Figure 3B. The highest in-migration rates are mostly located in the central and southern part of Finland, but high rates are also found close to the Oulu area. These subregions are situated in general in areas around cities. In the middle of the 1980s people in their twenties were moving out from the cities to the nearby areas, looking for better and cheaper living areas for bringing up their young children. In-migration was weak along the west coast and in north-eastern Finland.

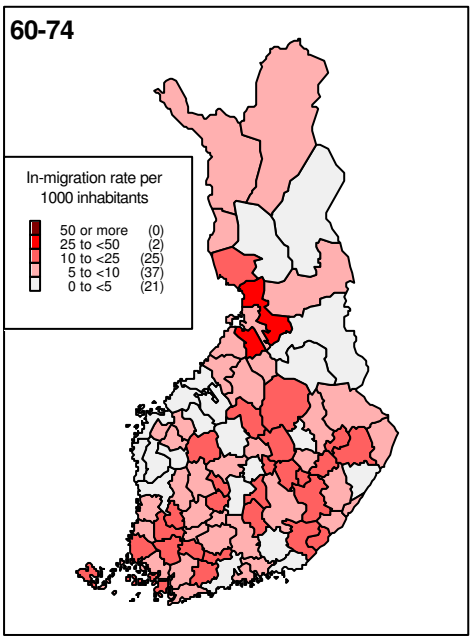
Figure 3: In-migration rates by sub-regions, Finland, 1984











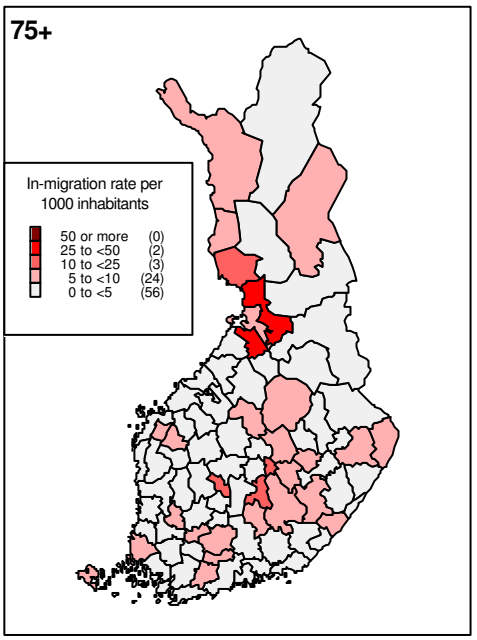
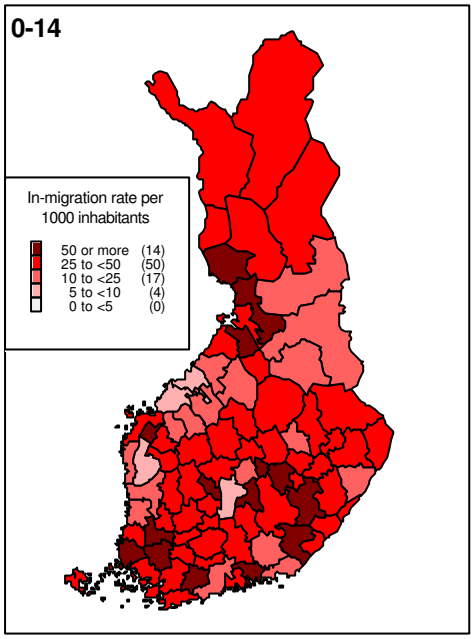
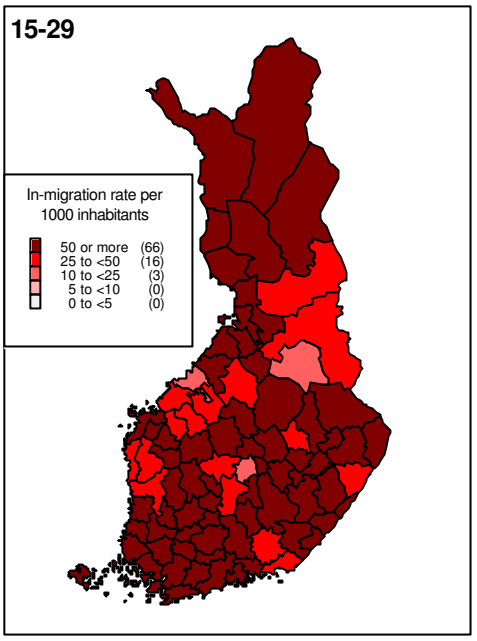
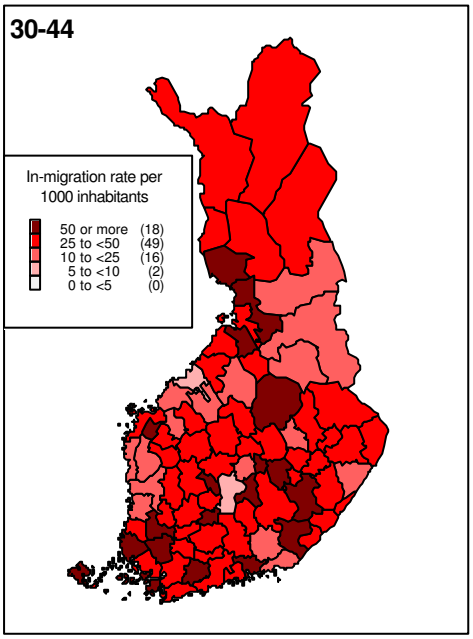
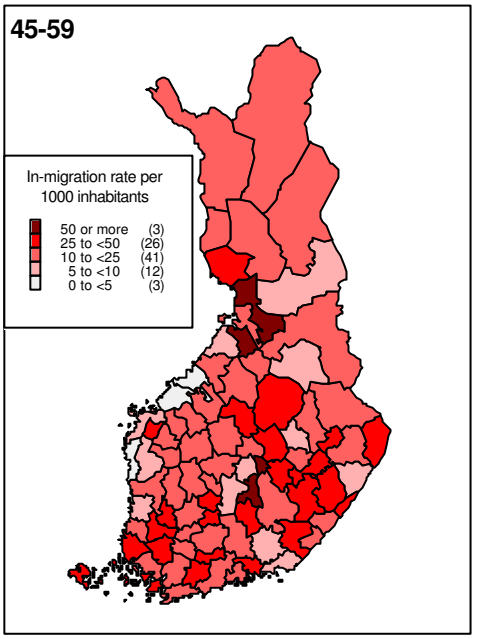


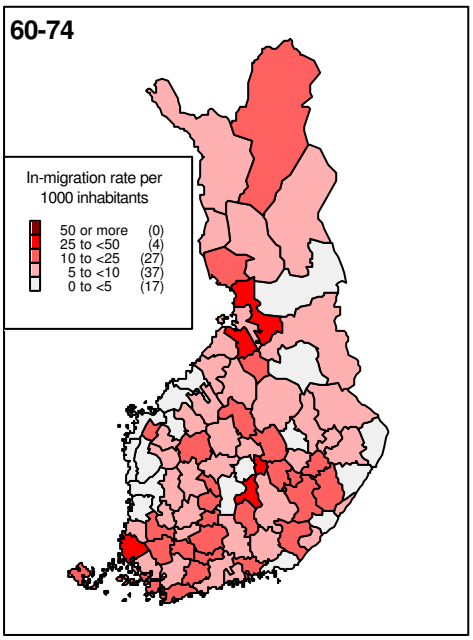
Figure 4: In-migration rates by sub-regions, Finland, 1996











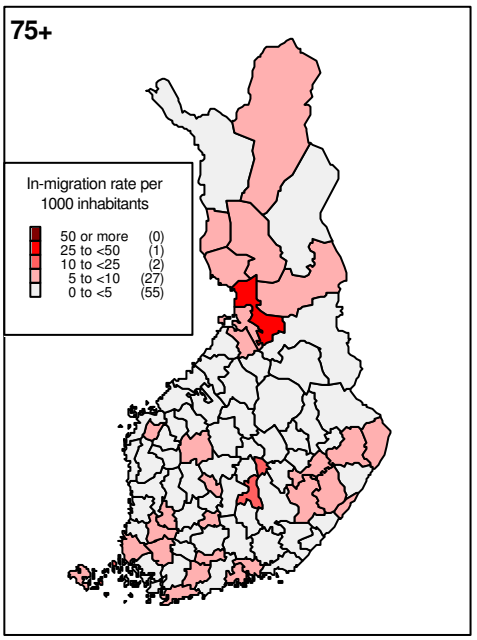


Table 1: The distribution of sub-regions by in-migration rate band for broad ages, Finland, 1984 and 1996

Age group	Year	In-migration rate per 1000 inhabitants					
		0-<5	5-<10	10-<25	25-<50	50-<100	100+
0-14	1984	0	2	27	39	14	3
	1996	0	4	30	37	12	2
15-29	1984	0	0	10	38	26	10
	1996	0	0	8	11	41	25
30-44	1984	1	3	27	42	9	3
	1996	0	2	24	41	15	3
45-59	1984	9	36	36	3	1	0
	1996	3	12	52	15	3	0
60-74	1984	21	37	25	2	0	0
	1996	17	37	28	3	0	0
75+	1984	56	24	3	2	0	0
	1996	55	27	3	0	0	0

In the second half of the 1990's internal migration rose to a new level in Finland. This can be seen also on Figure 4B, which shows that there were 25 subregions in the top category of 100 in-migrations per 1000 population in 1996 compared with only 11 in 1984. The Oulu region in the north and many fast growing areas locating in central and southern Finland attract young people. The lowest in-migration occurs in the Kajaani subregion in the eastern part of Finland.

4.1.2 In-migration in the family and older labour force ages

In 1984 the highest in-migration rate for the age group 0-14 years old was observed only in three subregions of Finland (Figure 3A). Two of those are located close to the city of Oulu and the third one in central Finland. The high in-migration (and out-migration) of children in the Oulu region is mostly due to the large number of children in old Lutheran families. The

lowest in-migration rates are found along the west coast. In-migration rates for the age group 0-14 years old in 1996 (Figure 4A) are quite similar to those in 1984. The highest inflows are directed to two subregions, but these are the same as in the 1980s. The lowest rates are again on the west coast and to Jämsä subregion in central Finland.

People's propensity to migrate has been shown to decrease as life advances (Karjalainen 1989). The in-migration rates are clearly smaller in family age groups (0-14 and 30-44) compared to the young adult ages in 1984. The subregions with highest rates of in-migration are the same for the family age groups (30-44) and the ages 0-14 (Figure 3A, 3C). Also the lowest in-migration subregions are similar for these two age groups. This is, of course, natural as children migrate with their families and not independently. A very similar structure is seen for the year 1996 in these two age groups (Figures 4A, 4C). Little change in migration patterns over time was identified for the family ages.

The older labour force's in-migration rates are much smaller compared to younger age groups. There is only one subregion, Lakeus, close to Oulu, which has an in-migration rate in the highest class (Figure 3D). Mostly in-migration was channelled to central and eastern parts of Finland. In 1996 (Figure 4D) the in-migration rates are clearly higher compared to 1984. The highest rates are for Ii, Lakeus and the south-eastern part of central Finland. The lowest values are found on the west coast.

4.1.3 In-migration in the retirement and elderly ages

The elderly population (65 years and older) contribute very little to total migration, as their share of internal migration in Finland is only 2% (Karjalainen 1993:120). In-migration rates show also the same phenomenon. Two thirds of the subregions belongs to the two lowest categories on the map of in-migration for ages 60-74 in 1984 (Figure 3E). The highest rates are in the areas close to Oulu city. The structure of in-migration for this age group is very similar in 1996 (Figure 4E) to that 1984.

In-migration rates for the elderly ages (75+) are the lowest of all age categories. Two thirds of the subregions belong to the lowest rate category and nearly 95 % of subregions are classified to the two lowest rate groups in 1984 (Figure 3F). In 1996 (Figure 4F) the level and pattern of in-migration rates are very similar to those for 1984.

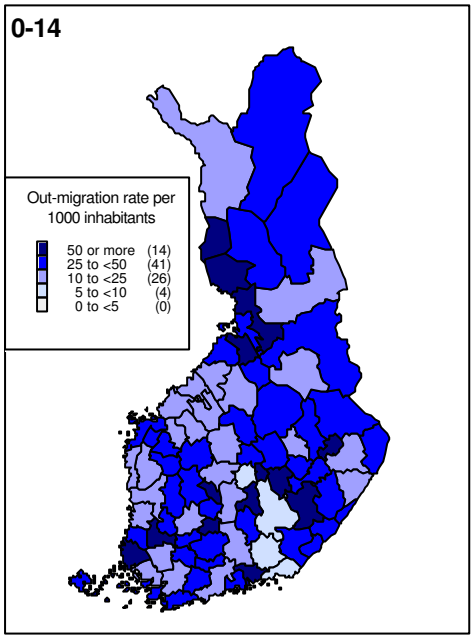
4.2 Out-migration

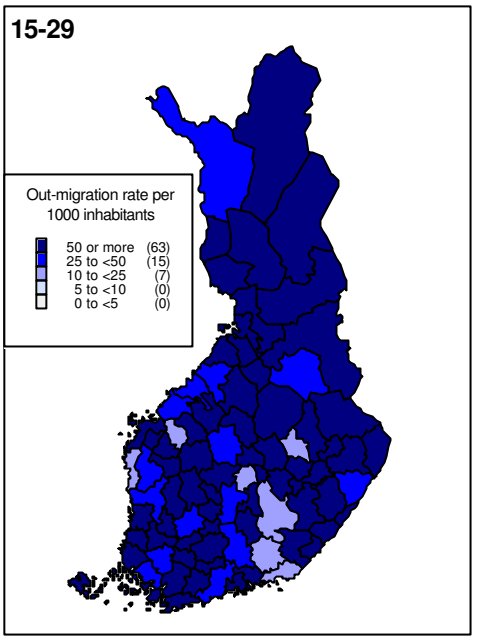
Figure 5 contains six maps plotting out-migration rates, one for each broad age group (Figure 5, maps A, B, C, D, E and F. Figure 6 provides the equivalent maps for 1996. Table 2 summarises the distribution of municipalities across the migration bands and assesses the degree of change between the two years. Note that there is a fair degree of correlation with the previous in-migration maps. The reason is that a large proportion of migrations involve either labour market or housing market vacancy chains. When an employee migrates out to a job in another region, they may be replaced by another person who migrates in. Where this does not occur when jobs are lost, then the out-migration may not be replaced by an in-migration. We consider these shifts at the margin when describing this pattern of net migration. The vacancy chain effect also applies to retired persons who own their own home and want to more. There needs to be a willing buyer for most moves to be made possible.

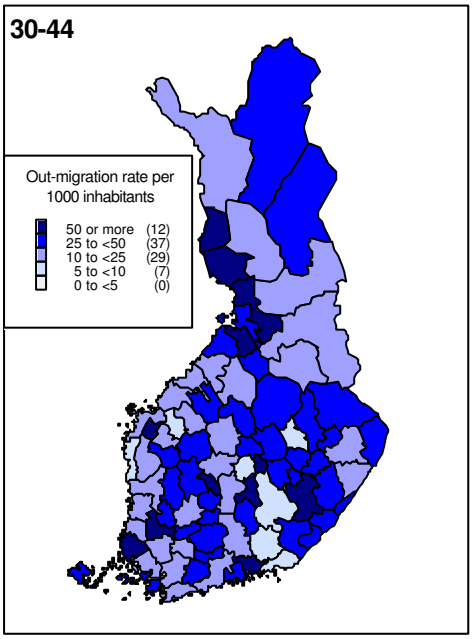
4.2.1 Out-migration in the adolescent and young adult ages

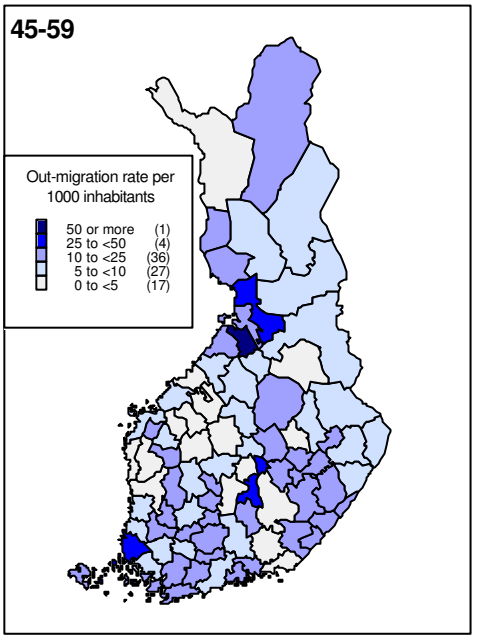
The out-migration rates of young adults (15-29 years) are high. In 1984 75% fall into the two highest rate classes (Figure 5B). These subregions are located all over the country. Out-migration has grown significantly from 1984 to 1996 (Figure 5B, Table 2). The number of subregions in the highest category more than doubled in the period 1984-1996. Some urbanised subregions, such as Helsinki, Jyväskylä and Kuopio, have a lower level of out-migration in 1996, reflecting their greater ability to retain migrants through job growth.

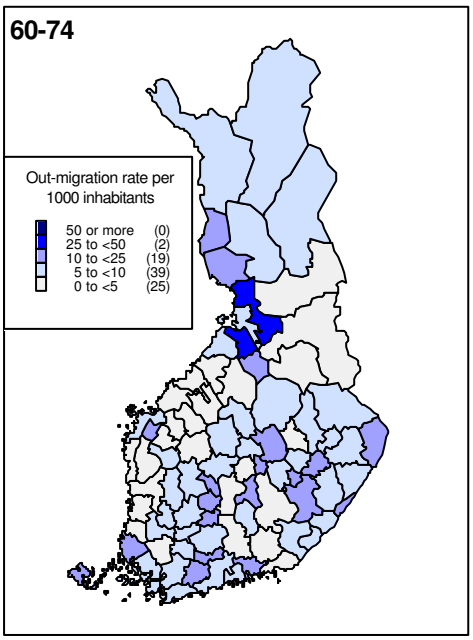
Figure 5: Out-migration rates by sub-regions, Finland, 1984











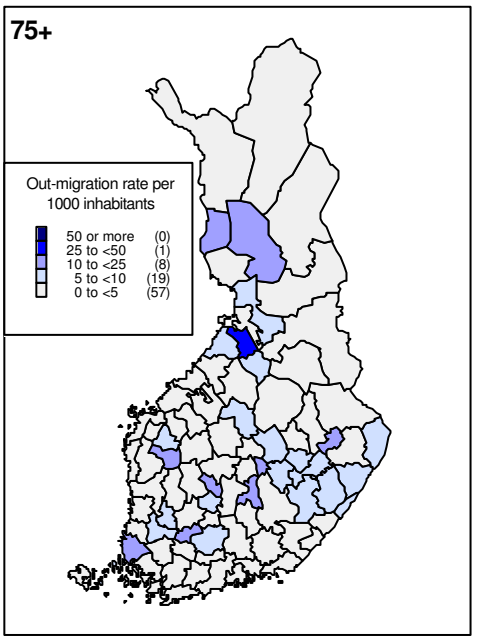
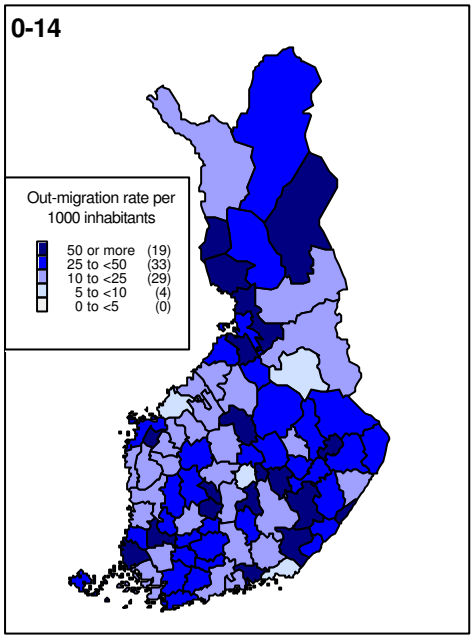
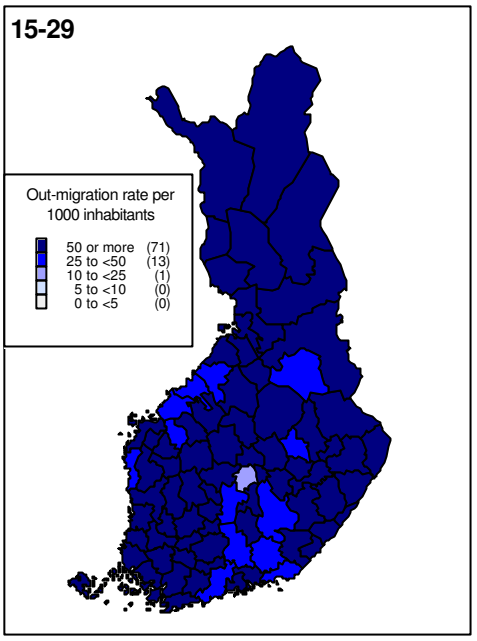
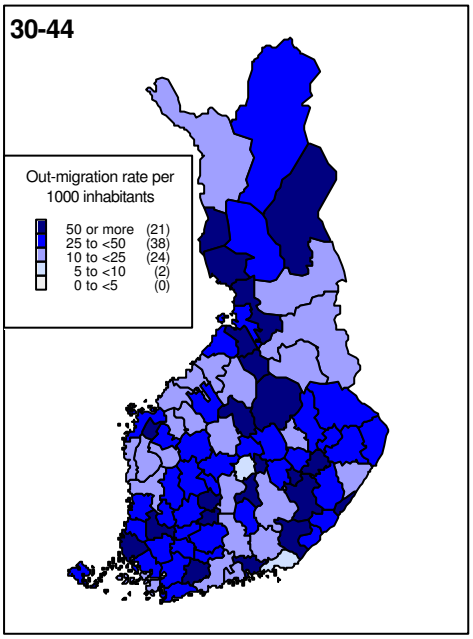
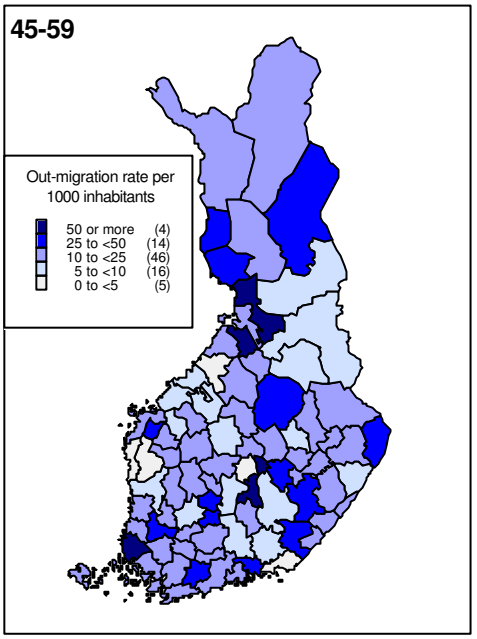


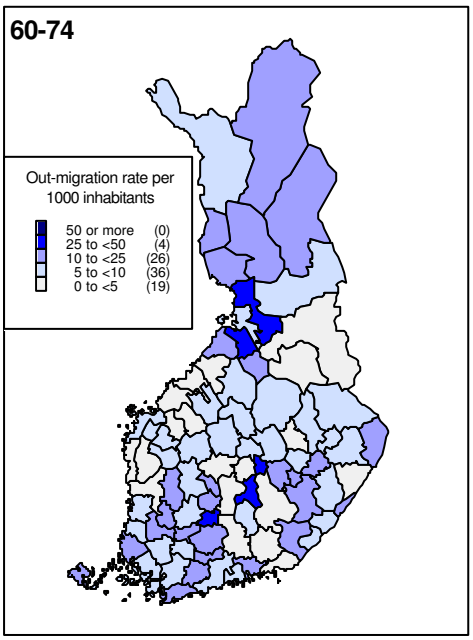
Figure 6: Out-migration rates by sub-regions, Finland, 1996











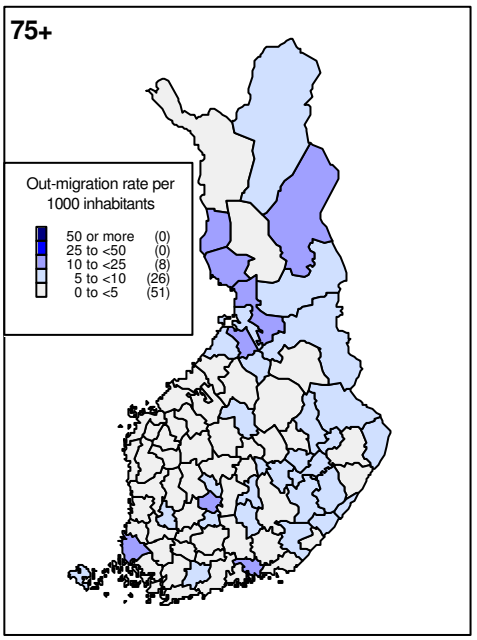


Table 2: The distribution of sub-regions by out-migration rate band for broad ages, Finland, 1984 and 1996

Age group	Year	Out-migration rate per 1000 inhabitants					
		0-<5	5-<10	10-<25	25-<50	50-<100	100+
0-14	1984	0	4	26	41	12	2
	1996	0	4	29	33	16	3
15-29	1984	0	0	7	15	43	20
	1996	0	0	1	13	24	47
30-44	1984	0	7	29	37	9	3
	1996						
45-59	1984	17	27	36	4	1	0
	1996	5	16	46	14	4	0
60-74	1984	25	39	19	2	0	0
	1996	19	36	26	4	0	0
75+	1984	57	19	8	1	0	0
	1996	51	26	8	0	0	0

4.2.2 Out-migration in the family and older labour force ages

Out-migration of children in 1984 has been highest in two areas: Lakeus and and south-east of central Finland (Figure 5A). Other high out-migration areas were situated in the northern and eastern part of country. There is a chain of the lowest out-migration areas in south-eastern part of Finland. Out-migration rates for 1996 (Figure 6A) are quite similar to those for the year 1984. The subregions with the lowest rates are now more widespread than in 1984.

Out-migration patterns in the family age group parallel those of children in 1984 (Figure 5A, 5C). The 30-44 age group has lower migration propensities than the 15-29 age group. Out-migration rates have grown from 1984 to 1996 for the family age group (Figure 5C, 6C). Lowest rates are found in central Finland.

Out-migration rates, like in-migration rates, are low for the older labour force age group. In 1984 over half of the subregions belonged to the two lowest rate categories (Figure

5D, Table 2). In central Finland the rates were the lowest. Out-migration rates have grown from 1984 to 1996 for ages 45-59 (Figure 5D, 6D, Table 2): only 25 % of the subregions were classified in the two lowest rate groups in 1996.

4.2.3 Out-migration in the retirement and elderly ages

People in retirement ages demonstrate very low out-migration levels: in 1984 75 % of subregions fall into the two lowest out-migration rates categories (Figure 5E, Table 2). Highest values are found close to the city of Oulu. The mobility for 60-74 year-olds has risen a little from 1984 to 1996 (Figure 5E, 6E, Table 2): fewer subregions fall in the bottom category.

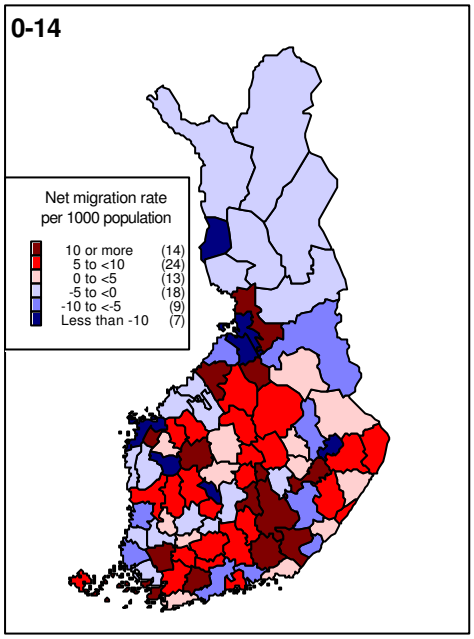
Out-migration rates for the elderly people have very low values and two thirds of the subregions fall into the lowest value category in 1984 (Figure 5F). Only one subregion, Lakeus, has remarkably high out-migration rate for the elderly. In 1996 the out-migration rates increased slightly since some subregions have moved up from the lowest rate category to the second lowest group (Figure 6F, Table 2).

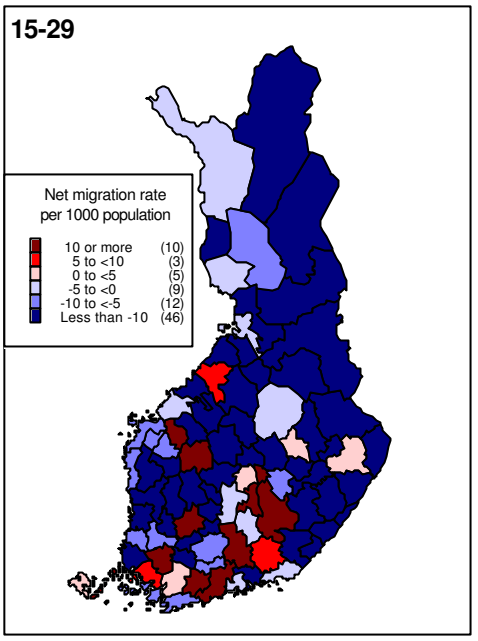
4.3 Net migration

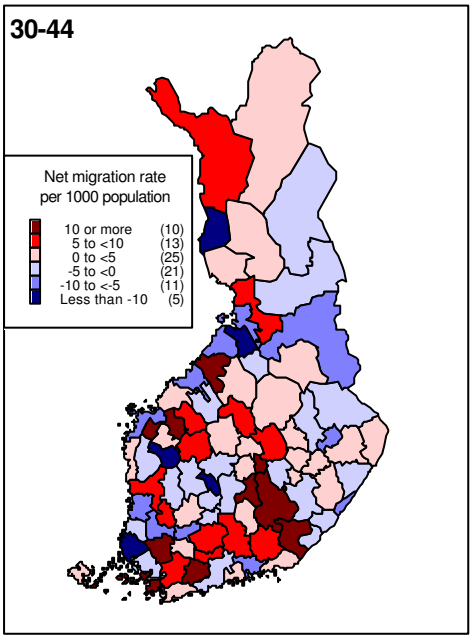
Figure 7 contains six maps plotting out-migration rates, one for each broad age group (Figure 7A (0-14), 7B (15-29), 7C (30-44), 7D (45-59), 7D (60-74) and 7F (75+). Figure 8 provides the equivalent maps for 1996. Table 3 summarises the distribution of municipalities across the migration bands and assesses the degree of stability versus change between the two years.

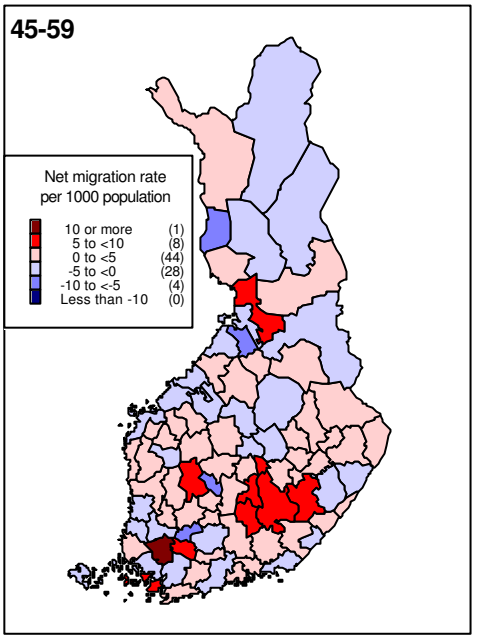
The net migration rate, measuring the balance between in-migration and out-migration, is the indicator which gives a clear view of which areas are losing population and which subregions are the winners.

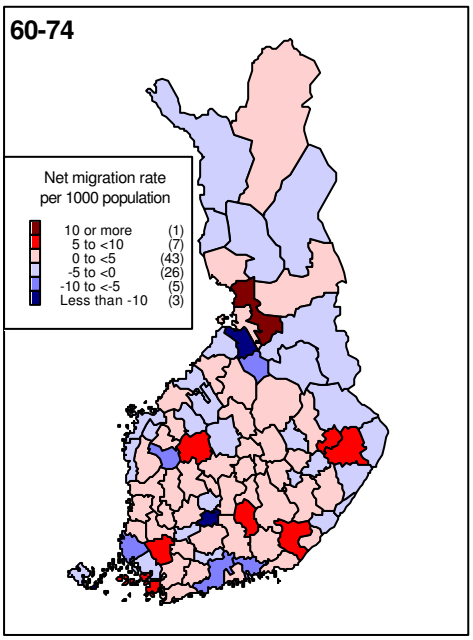
Figure 7: Net migration rates by sub-regions, Finland, 1984











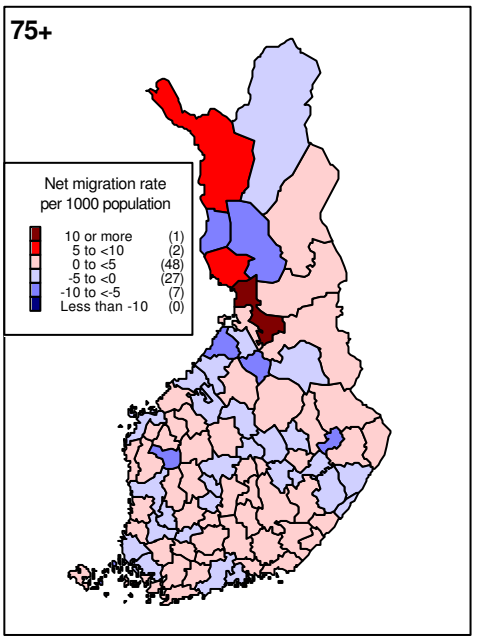
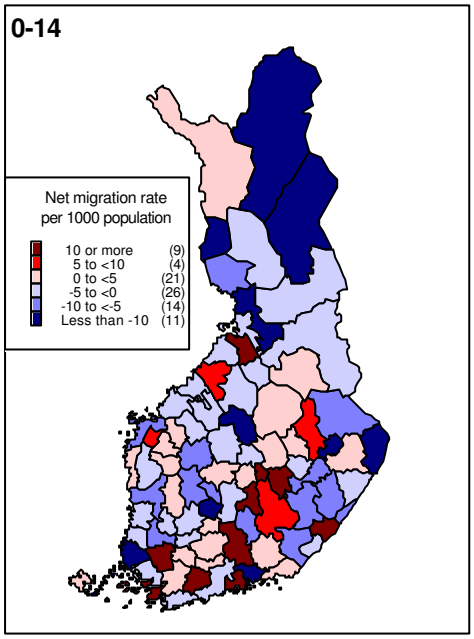
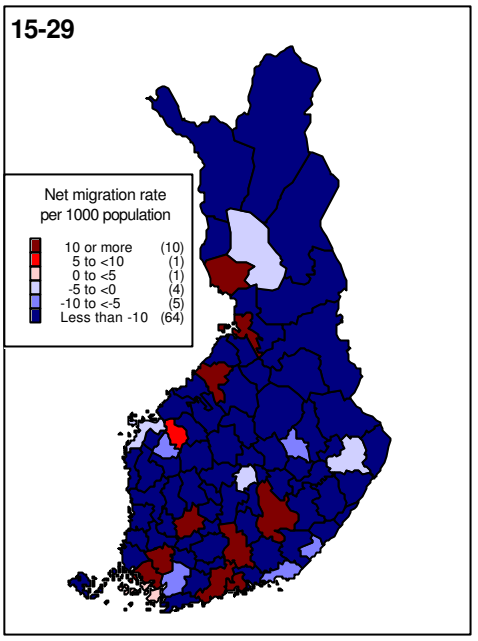
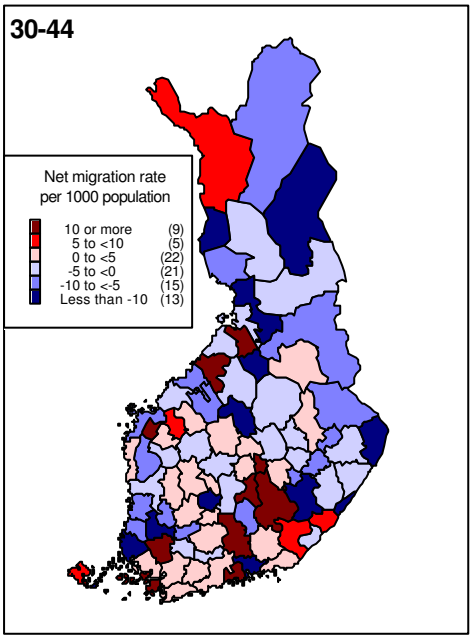
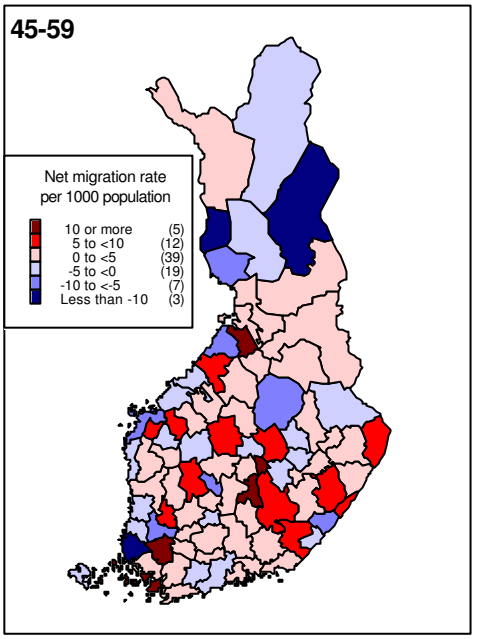


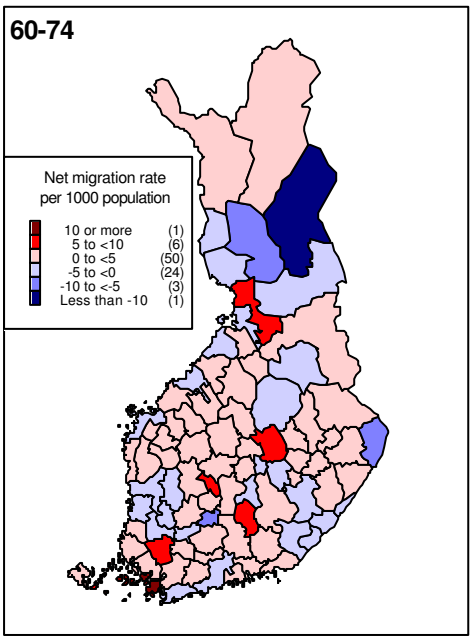
Figure 8: Net migration rates by sub-regions, Finland, 1996











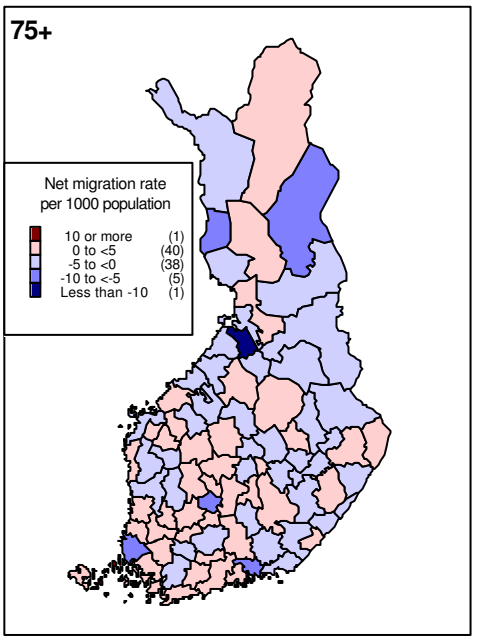


Table 3: The distribution of sub-regions by net migration rate band for broad ages, Finland, 1984 and 1996

Age group	Year	Net internal migration rate band per 1000 inhabitants									
		<-50	-50-<-20	-20-<-10	-10-<-5	-5-<0	0-<5	5-<10	10-<20	20-<50	50+
0-14	1984	0	3	4	9	18	13	24	7	7	0
	1996	0	6	5	14	26	21	4	4	4	1
15-29	1984	8	21	17	12	9	5	3	5	4	1
	1996	27	30	7	5	4	1	1	4	5	1
30-44	1984	0	2	3	11	21	25	13	7	3	0
	1996	1	5	7	15	21	22	5	5	3	1
45-59	1984	0	0	0	4	28	44	8	1	0	0
	1996	0	0	3	7	19	39	12	4	1	0
60-74	1984	0	0	3	5	26	43	7	1	0	0
	1996	0	0	1	3	24	50	6	1	0	0
75+	1984	0	0	0	7	27	48	2	1	0	0
	1996	0	0	1	5	38	40	1	0	0	0

4.3.1 Net migration in the adolescent and young adult ages

That the population is concentrating in the South of Finland can be seen when looking at the migration balance of young adults. In 1984 the whole of northern Finland lost population aged 15-29 years old and the gainers are found in the southern part of the country (Figure 7B). Among the gaining subregions are, for example, Loimaa situated close to the city of Turku and the Helsinki subregion. The net migration map showed in 1996 (Figure 8B) an even stronger concentration process than in 1984 and the net growth more clearly concentrates in major cities of Finland such as Helsinki, Tampere, Turku and Oulu (Figure 8B). Areas with net outflows increased their losses between 1984 and 1996.

4.3.2 Net migration in the family and older labour force ages

Net migration rate for the ages 0-14 divides Finland into two parts in 1984 (Figure 7A): the northern part of the country has been losing children and south-eastern part of Finland has been gaining. Negative net rates are also observed on the west coast. Regional patterns were very similar in 1996 (Figure 8A). The north has experienced net out-migration. Only the Mountain Lapp subregion moved from the losing to the gaining class. The number of subregions losing migrants has increased between 1984 and 1996 (Table 3). In 1984 40% of subregions lost migrants. The share increased to 60% in 1996.

The regional pattern of net migration rates for family age groups is more balanced than for young adults. Loser areas are located mainly in the western and eastern part of Finland. The gainer areas are spread all over the country. In 1996 the migration balance for ages 30-44 was positive in the southern part of Finland. Net out-migration characterises most of the other parts of the country (Figure 8C). In the north the Mountain Lapp subregion has a positive net migration rate.

In 1984 the older labour force ages had lower net migration rates than the younger age groups (Figure 7D). The regional pattern is thus more balanced and few subregions had extreme values of net migration. The highest positive balance is in the Loimaa subregion as well as in four areas in the South and the North. The regional pattern of rates became a little bit more varied 1996 (Figure 8D). The gainers are located in the south-east of central Finland and the highest losses have been in north-eastern Lapland, the Tornio Valley and Vakka-Finland.

4.3.3 Net migration in the retirement and elderly ages

Net migration rates for the retirement ages are quite close to balance because there are few extreme values in 1984 (Figure 7E). The highest positive rates are found in southern and

central part of Finland. The highest net migration gain was in the Ii subregion. The regional pattern of the migration balance for 60-74 aged people in 1996 (Figure 8E) is also quite balanced because 87% of the subregions belong to the categories where rate value is between 5 to –5 persons per 1000 inhabitants. The most negative value is found in north-eastern Lapland.

Elderly people who are 75 years old and over have also very balanced structure of net migration in 1984 (Figure 7F). Nearly 90 % of the subregions has net migration rate between 5 to -5. The Ii subregion has the highest rate and the lowest values are located mostly in the western part of the country. The migration balance in 1996 (Figure 8F) varies very little because of the low level of migration activity at advanced ages. The most negative rate is in Lakeus.

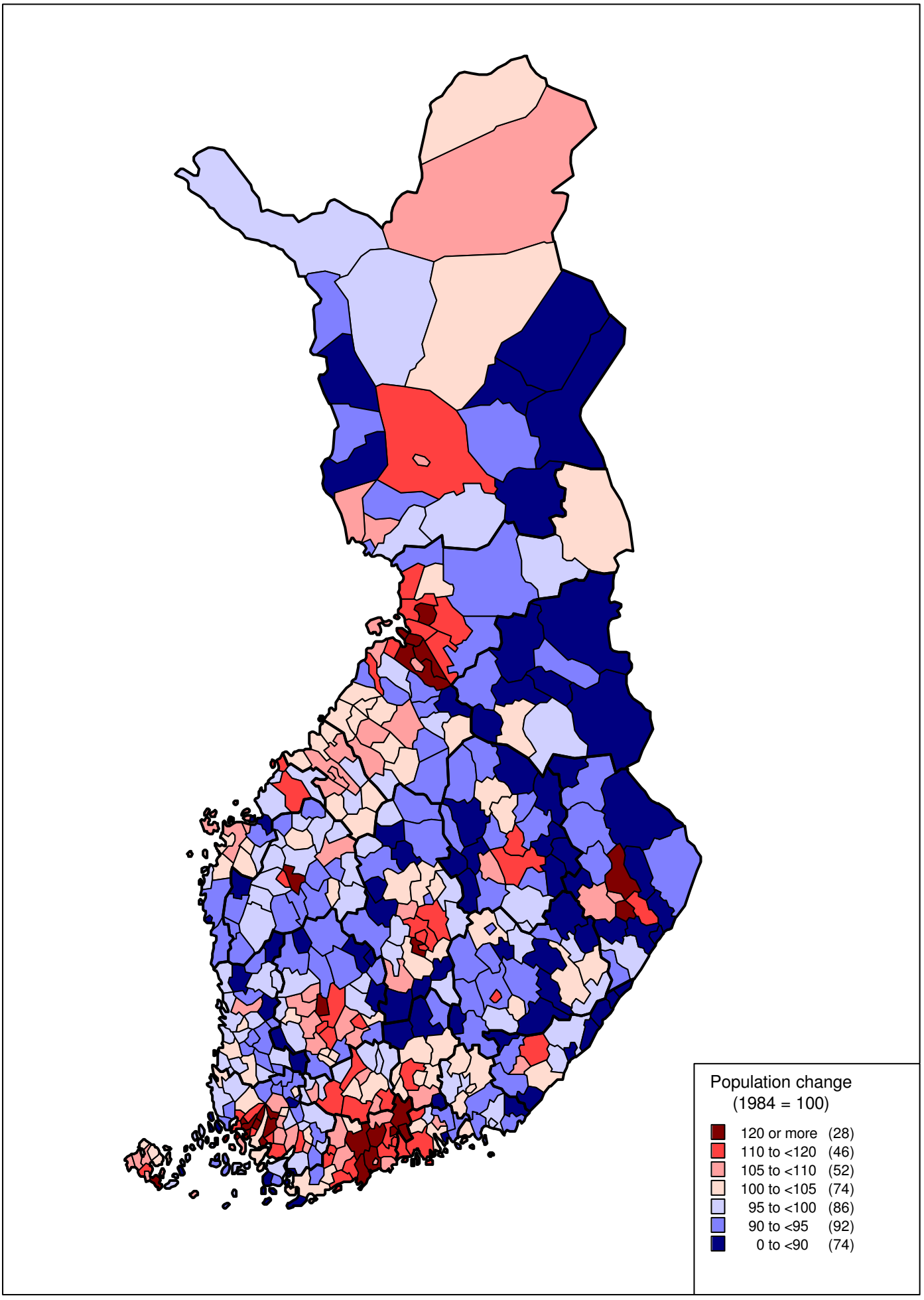
5. POPULATION CHANGE AND MIGRATION BY MUNICIPALITY 1984-1996

In the previous section, we reviewed internal migration patterns for six broad age groups linked to significant life course stages. In this section we examine both overall population change and in-, out- and net-migration at the municipality scale which provide a spatial frame closer to the functional spatial organisation of Finland than subregions. We concentrate, however, on presenting the all age patterns, which are an average concealing in particular the very different migration behaviour of young adults, family migrants and older ages.

5.1 Population change in Finland by communes 1984-1996

The Finnish population increased by 5%% over the 12 year-period 1984-1996. The geographical pattern of changes is shown on Figure 9. Out of 452 communes and municipalities, a minority of 200 increased their population in this period. The growth of large cities was about twice as fast as the growth of the entire country. Among cities with over 100000 inhabitants, the slowest growth was observed in Turku, Helsinki and Tampere which increased their populations by 3%, 10% and 11% respectively, but within these urban agglomerations some municipalities grew vigorously. Esboo in the Helsinki metropolitan area grew by amazing 28%. Esboo is the location for NOKIA's Headquarters and many divisions. The fastest growth of population occurred not in the large city cores but in their suburban rings. The Helsinki agglomeration's inner ring of suburban communes (the municipalities of Vantaa, Tuusula, Kerava, Sipoo) experienced growth between 10 and 20%. In the outer ring increases were even higher with Pornainen gaining 44%, and Järvenpää, Kirkkonummi, Nurmijärvi, and Mäntsälä all showed gains more than 20 percent of their 1984 populations. The entire region of Uusimaa constitutes a growth pole for population. An equally dynamic growth of population and a similar spatial pattern can be seen in the Turku agglomeration.

Figure 9: Population change by municipality, Finland, 1984-1996



The inner ring of municipalities surrounding Turku demonstrated faster growth than the inner ring of the Helsinki agglomeration. Around Turku exists a cluster of municipalities with remarkably high population increases: Merimasku with 42% increase and the communes of Velkua, Lemu, Masku and Vahto with increases exceeding 30 %.

The smaller urban centres show patterns of population growth and concentration similar to the large ones. Tampere, Jyväskylä and Oulu have all been growing themselves quite quickly as did their suburban rings. Small urban centres, around 50000 in population, show moderate growth with two exceptions – medium growth of Joensuu and decline of Kotka, typical of the entire Kymenlaakso region.

Population decline features mostly in sparsely populated municipalities, in central and northern parts of the country. Most affected were communes of western regions of Satakunta and Etelä-Pohjanmaa as well as those lying on the Russian border. Out of 24 such municipalities only 4 increased their populations over the period 1984-1996. In fact the Eastern part of Finland suffers the greatest depopulation in rural areas. All rural communes of the Pohjois-Karjala and Kainuu regions and substantial part of Etelä-Savo and Pohjois-Savo regions suffered population decrease.

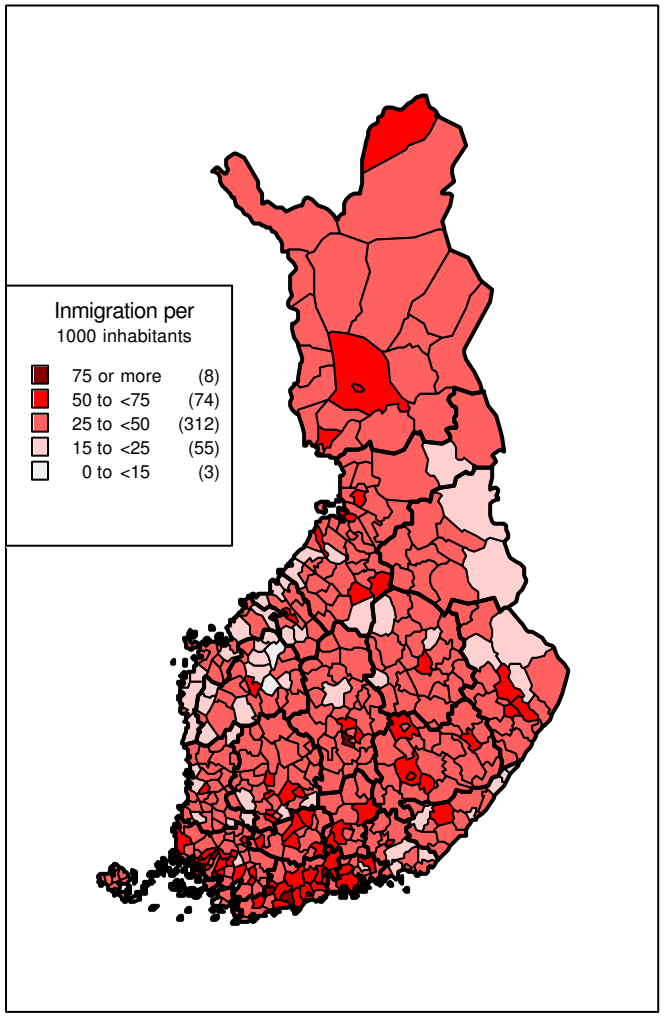
The picture of population change in Finland is pretty clear and uniform: very fast growing suburban rings, growing urban centres and depopulating countryside.

5.2 In-migration patterns by municipality 1984 and 1996

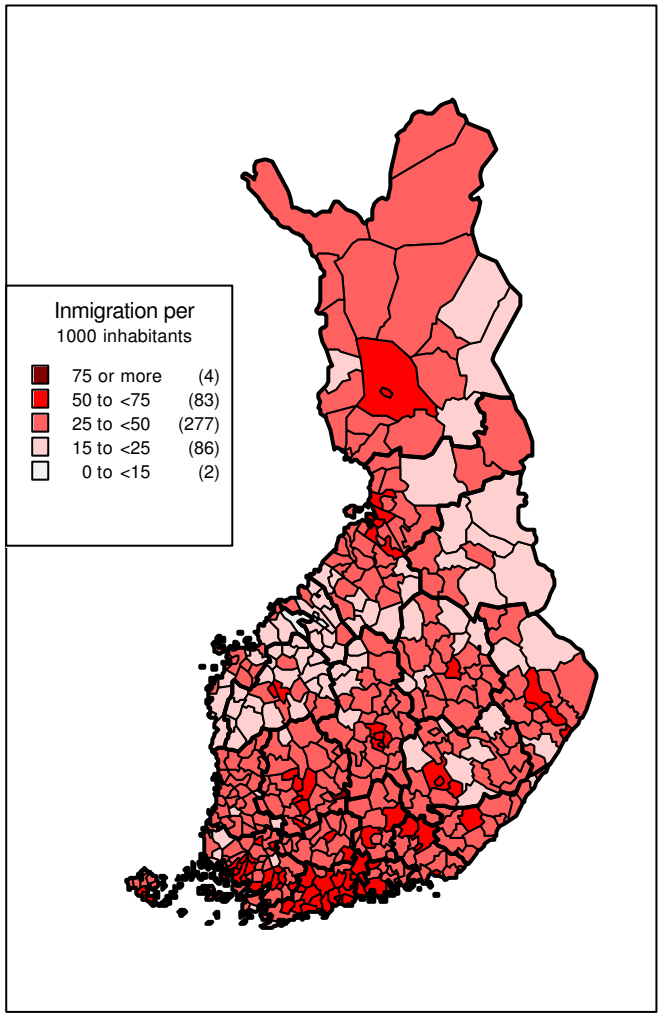
The in-migration pattern by municipalities in Finland (Figure 10) is relatively flat with majority of units (312 in 1984, 277 in 1994 and 283 in 1996) gaining between 25 and 50 persons per 1000 inhabitants. Lower in-migration ratios can be seen along eastern border and Vaasa–Kajaani axis, extending from the coast in the West to the state boundary in the East. This axis is more visible on the map representing in-migration ratios in 1994 and 1996.

Figure 10: In-migration rates by municipality, Finland 1984, 1994 and 1996

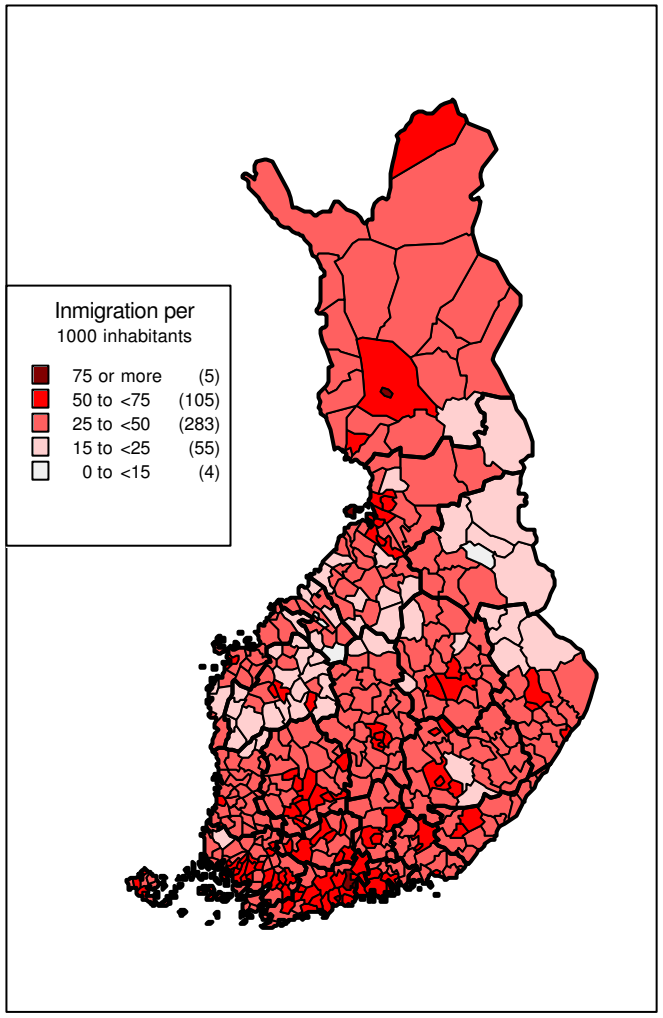
A: 1984



B: 1994



C: 1996



Higher than prevailing in-migration benefited cities and urban agglomerations, in particular Helsinki, Turku, Oulu, Jyväskylä and towns such as Rovaniemi or Mikkeli. The southern coastal part has higher than average rates of in-migration. In 1994 and 1996 the differences between areas were slightly higher than in 1984, but general pattern remained unaffected.

5.3 Out-migration patterns by municipality 1984 and 1996

Out-migration patterns (Figure 11) are even less varied than in-migration with majority of units (376 in 1984, 326 in 1994 and 295 in 1996) losing between 25 and 50 persons per 1000 inhabitants. Lower out-migration rates can be seen in scattered municipalities in the western part of the country, with higher rates along the south coast. In 1994 and 1996 the variation in migration intensities was slightly higher than in 1984.

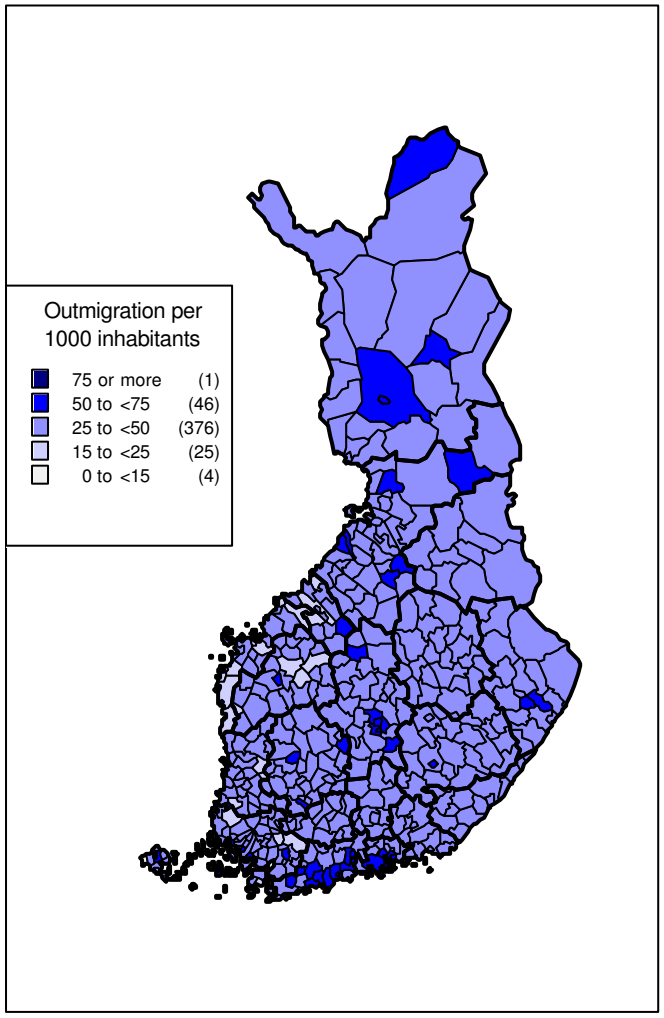
5.4 Net migration patterns by municipality 1984 and 1996

Net migration rates by municipalities in 1984 and 1996 are shown in Figure 12. In 1984 224 municipalities had positive net migration rate and 228 negative. A clear pattern of suburbanisation was visible with core cities (Helsinki, Turku, Oulu, Vaasa, Jyväskylä) all losing population due to migration and their suburban rings gaining population. Urban agglomerations have created large growth poles, extending in the south to almost entire regions. This is the case in the Varsinais-Suomi and Uusimaa regions. In the latter over a half of municipalities gained due to net migration over 1 percent of population.

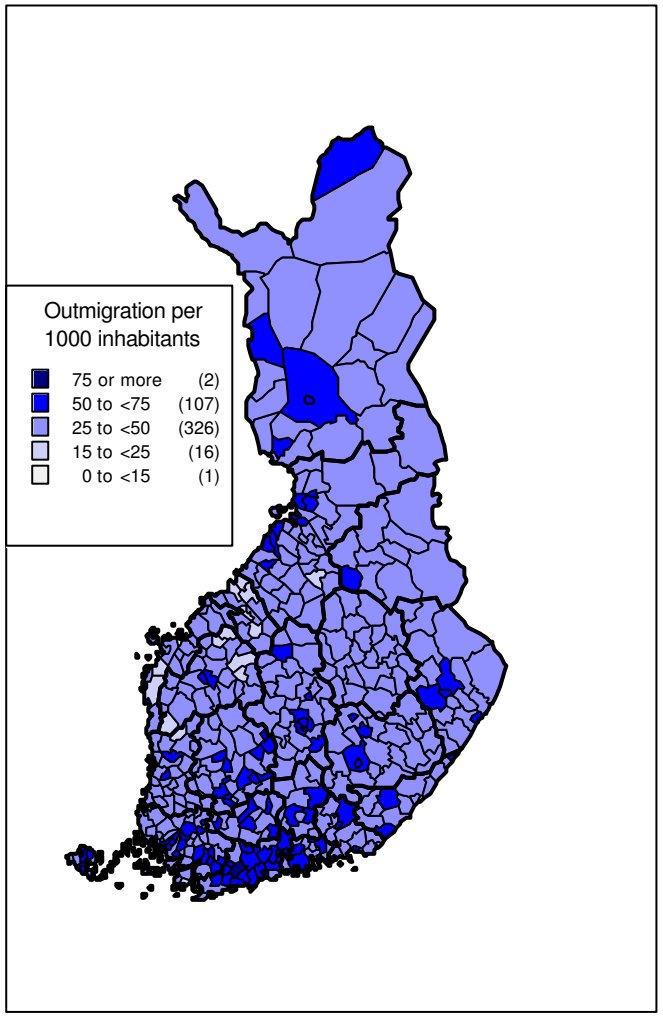
The largest net migration losses were suffered by municipalities in the North, along the Finnish-Russian boundary and in northern Pirkanmaa, Etelä-Pohjanmaa, Keski-Pohjanmaa or Pohjos-Pohjanmaa.

Figure 11: Out-migration rates by municipality, Finland 1984, 1994 and 1996

A: 1984



B: 1994



C: 1996

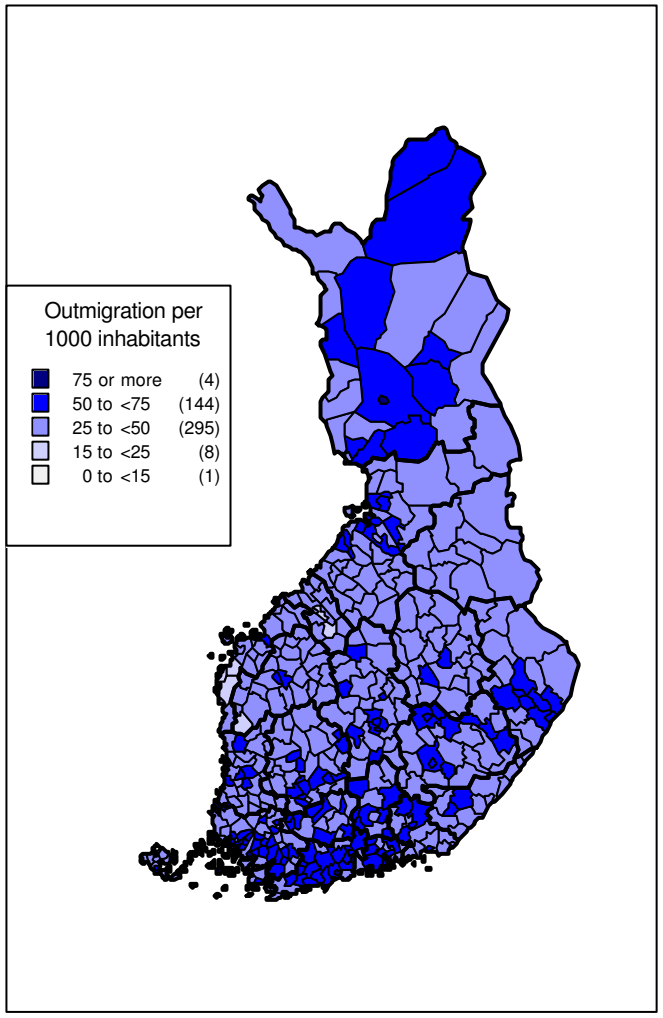
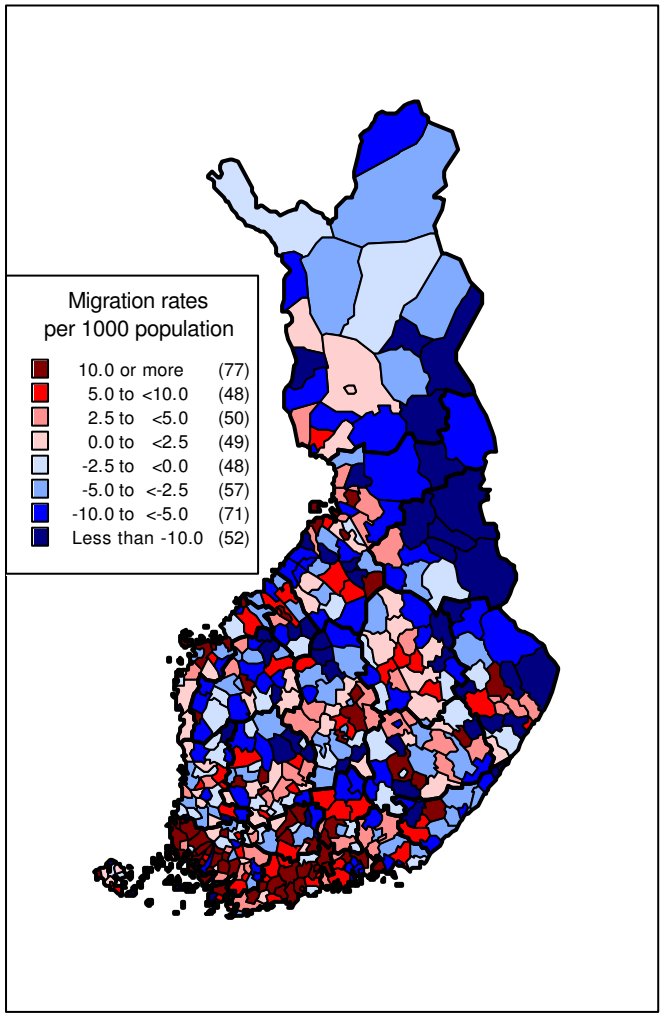
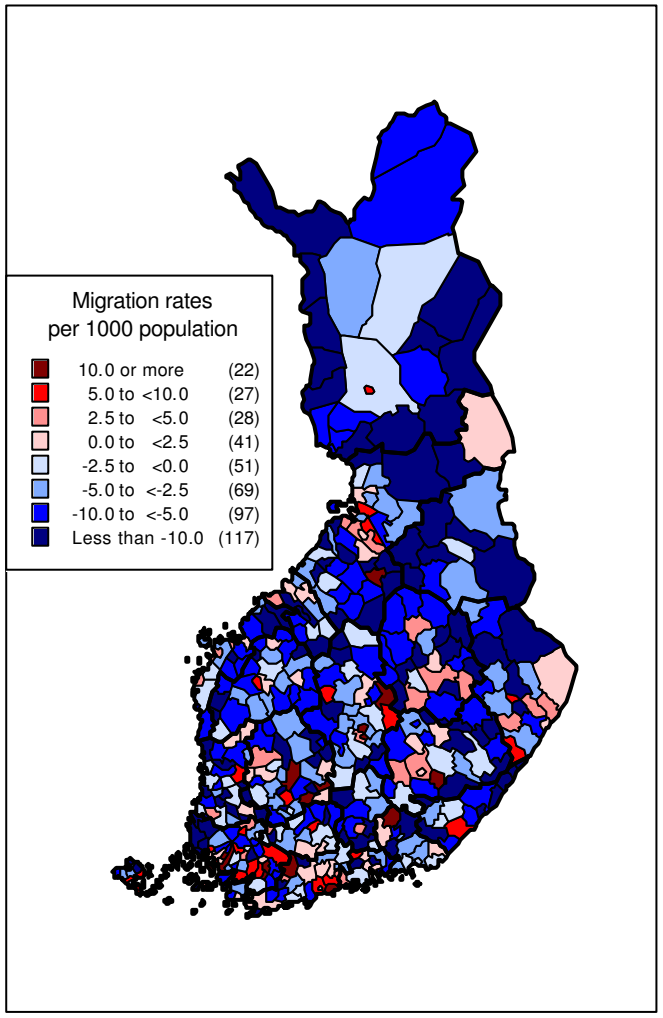


Figure 12: Net migration rates by municipality, Finland 1984, 1994 and 1996

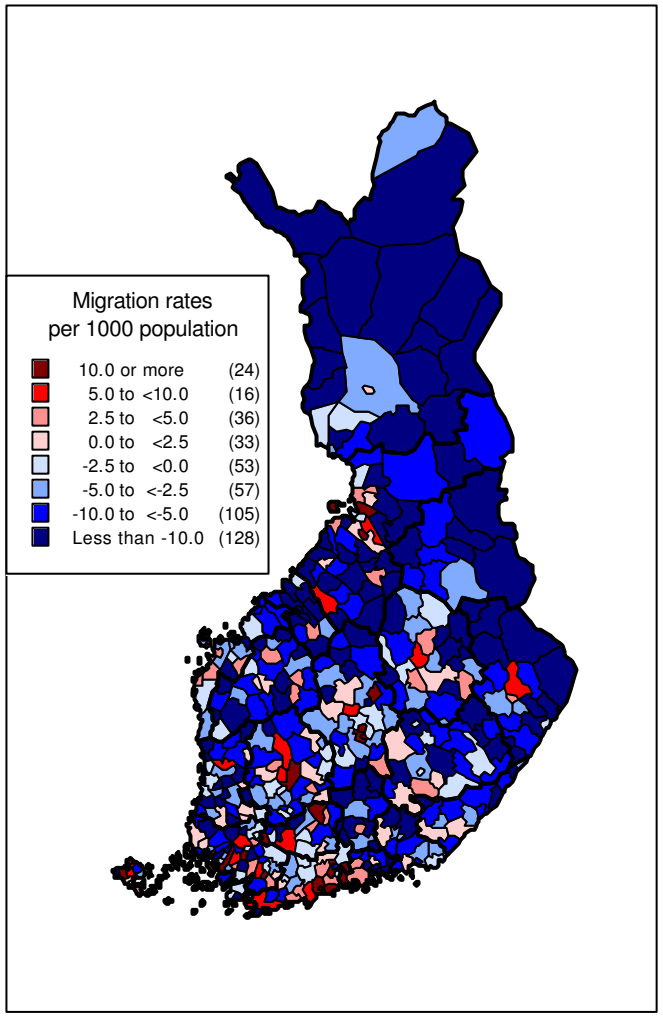
A: 1984



B: 1994



C: 1996



In 1996 109 municipalities had positive net migration and 343 negative. Comparison of these numbers with those for 1984 suggests that a process of concentration of population occurred in fewer municipalities in 1996. The largest cities (Helsinki, Turku, Tampere, Oulu, Vaasa, Kotka, Jyväskylä) all gained population due to migration. All these cities bar Vaasa and Kotka net migration gains exceeded, in one year, 1% of the resident population. Their suburban rings enjoyed varying fortunes: Helsinki's immediate suburbs grew, but more distant municipalities changed from high gains in 1984 to medium gains or medium loses in 1996. The suburbs of Turku, Tampere and Vaasa partly grew and partly declined, sending a mixed message, whereas Kotka's suburbs lost population.

The geographical distribution of net migration losses in rural areas and small towns remains unchanged from 1984 to 1994 and 1996, but the intensity of losses was in 1996 significantly higher than in 1984, with 128 units, more than a quarter, losing net more than 10 persons per 1000 inhabitants. The geographical extension of the negative net migration also increased substantially. Positive net migration could be found roughly south of Vaasa – Joensuu line and nearby Oulu.

Migration preferences of Finns have changed significantly between 1984 and 1996. In the year, 1984, we could observe clear process of rural depopulation coupled with suburbanisation. In 1996 rural depopulation continued at a faster pace, but the process of suburbanisation was clearly visible only in the Helsinki agglomeration and much weakened by very significant migration gains of the core city. In other smaller agglomerations urban concentration prevailed with high gains in core cities and mixture of gains and losses in suburban rings.

5.5 The demographic sources of population change

The demographic sources of population change stem from integrated effects of natural increase and net mobility in each municipality. The interplay of these factors will be examined in detail

based on 1996 data. An analysis of the interplay of natural growth and net migration on commune and municipality level has been conducted using a classification devised by John Webb in 1963 and applied to a study population change in England and Wales in the years 1921-1931. A more detailed summary of Webb's schema can be found in Table 4, in the original Webb (1963) paper and in Kupiszewski, Durham and Rees (1997).

Table 4: Types of population growth in Finland in 1996

Class code	Type of growth	Population change	Number of municipalities
A	natural increase exceeds migration loss	Positive	27
B	natural increase exceeds migration gain	Positive	25
C	migration gain exceeds natural increase	Positive	39
D	migration gain exceeds natural decrease	Positive	19
E	natural decrease exceeds migration gain	Negative	26
F	natural decrease exceeds migration loss	Negative	161
G	migration loss exceeds natural decrease	Negative	47
H	Migration loss exceeds natural increase	Negative	108

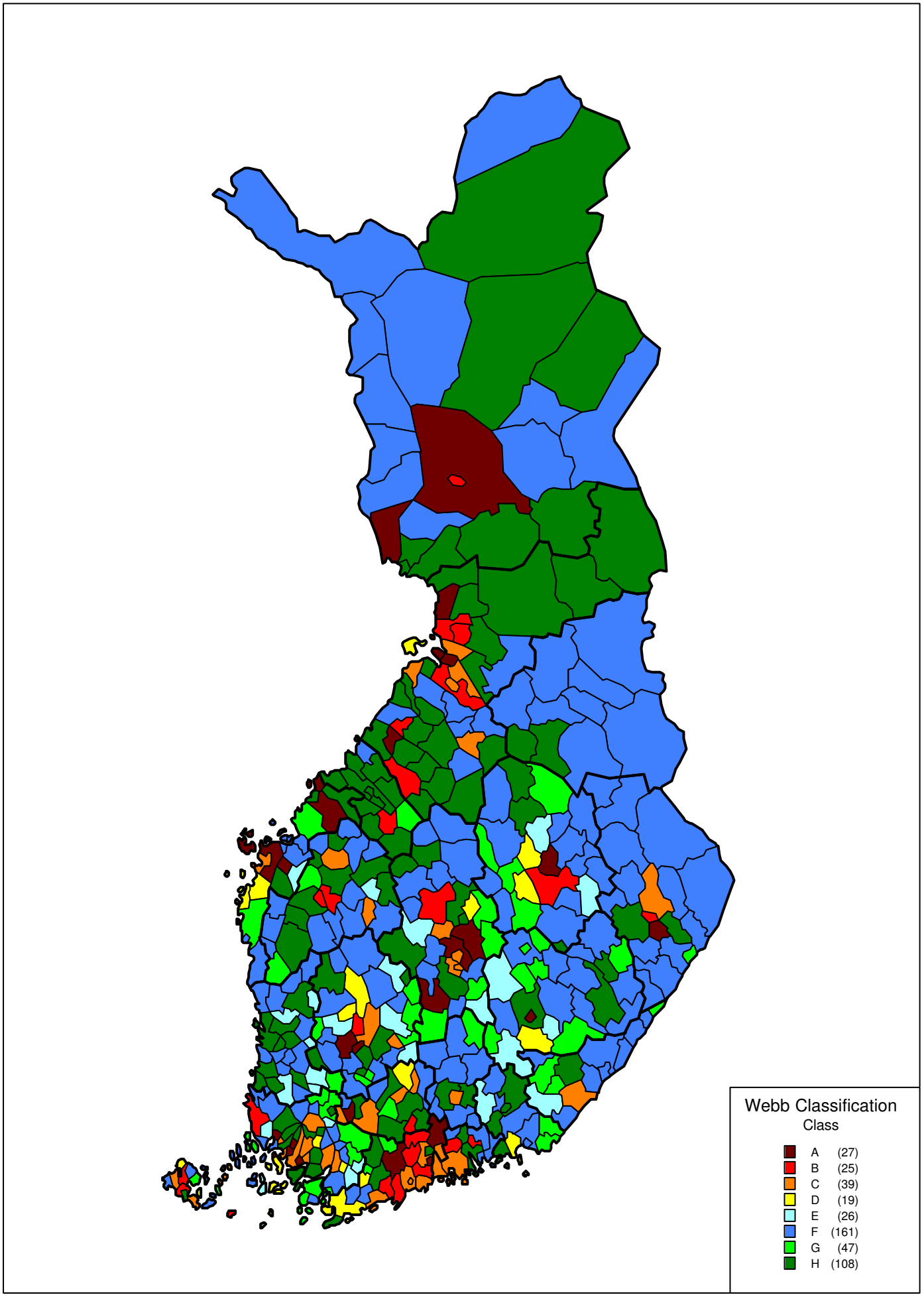
Source: Webb 1963 and computed from the data provided by the Statistics Finland and Research and Development Centre of Kajaani of the University of Oulu.

Notes:
- natural increase = absolute value of positive natural change
- natural decrease = absolute value of negative natural change
- migration gain = absolute value of positive net migration
- migration loss = absolute value of negative net migration
- natural change = births minus deaths
- net migration = in-migration minus out-migration

The Webb classification identifies the direction of population change, signs of net migration and natural growth and the leading force behind the population change. As Table 4 and Figure 13 show, 76% of municipalities in Finland declined in 1996.

The most worrying group of communes are those in which both components, net migration and natural growth are negative (type F and G). The most frequent reason for losing population was due to natural decrease exceeding migration loss (class F, 161 units). To this class belong mainly rural communes in the East Finland, some of communes of the Lappi

Figure 13: The Webb classification of Finnish municipalities, 1996



region, all communes of the Lahti region except the growing town itself and two surrounding municipalities, and a number of communes in central and eastern Finland. Type G where migration loss exceeds natural decrease is not very common in Finland (47 units) and forms a mosaic pattern in central, southern and western Finland. These two classes, with profound structural problems in the development of population, account for 46% of all municipalities in Finland.

Class E, to which belong units where natural decrease exceeds migration gain are not very numerous (26) and mostly located in southern part of the country. Class H (migration loss is greater than natural increase) with 108 units is typical for rural areas north of Vaasa. Class H is found adjacent to class F communes. The entire northern and eastern part of country, bar cities and their suburbs, demonstrated in 1996 poppulation losses.

Growing municipalities are mainly large cities and their suburbs, of which 27 grew due to natural increase higher than migration loss(type A).

The communes which have positive both natural increase and net migration (types B and C), and therefore sound demographic growth are quite few (64 altogether). Typically, municipalities with growing population are either cities (Helsinki, Tampere, Kotka, Joensuu, Vaasa, Jyväskylä, Oulu, Rovaniemi) or suburban municipalities surrounding these large cities or towns.

5.6 The consequences of migration – sex structure deformation

Long term migration from rural to urban areas may have an impact on population structures. This is the case of Poland (Kupiszewski, Durham, Rees 1997), where massive rural to urban migration in the family and labour force ages has left behind a population with an elderly age structure. As the population dynamics of Finland clearly show the process of depopulation of rural and remote areas, we examine whether there are any peculiarities in the sex structures of population. In order to investigate the phenomenon a set of sex ratios were prepared. These

ratios are the number of females per 100 males. Such indicators basically show the surplus or deficiency of females in comparison to males in a given administrative unit. Because the sex ratio for the all age population is influenced by the local population's age structure, sex ratios were also computed for specific ages.

There are two overlapping patterns of unequal spatial distribution of males and females. One is regional – relating the sex ratios to latitude and remoteness from urban centres. Figure 14 shows clearly that south from the Vaasa-Joensuu line there is a prevalence of municipalities in which number of females exceeds the number of males. In the eastern part of this area there are substantially fewer female-dominated communes than in the western. North of the Vaasa-Joensuu line there is a dominant pattern of male dominated rural communes. A second pattern is the attraction of urban agglomerations and suburban areas to female migrants. Particularly large proportions of females can be seen in cities and large towns. This is also the case in the northern cities of Oulu and Rovaniemi. Such a pattern prevails for both total population and for all age groups between 15 and 59 years (Figure 15). The map of the sex ratio for the age group 0-14 (Figure 15A) shows most communes falling in the 90 to 100 class, reflecting the male surplus at birth only marginally altered through migration. Communes with surplus of boys or girls do not constitute any particular pattern. This is mostly because the gender of offspring has very limited impact on the migration decisions of families. On the other hand, in the age groups 60-74 and 75+ the dominance of the female population is overwhelming and covers almost all territory with exception of some most Northern and North-Eastern communities. Such an imbalance is mostly due to higher male mortality. However, the spatial differentiation of the magnitude of female domination expresses migration preferences. In the oldest age group (75+) only two municipalities have more males than females. Migration induced distortion of sex structures observed in Finland is very similar to those observed in Poland and in a number of other post-socialist countries.

Figure 14: Females per 100 males by municipality, all ages, Finland, 1996

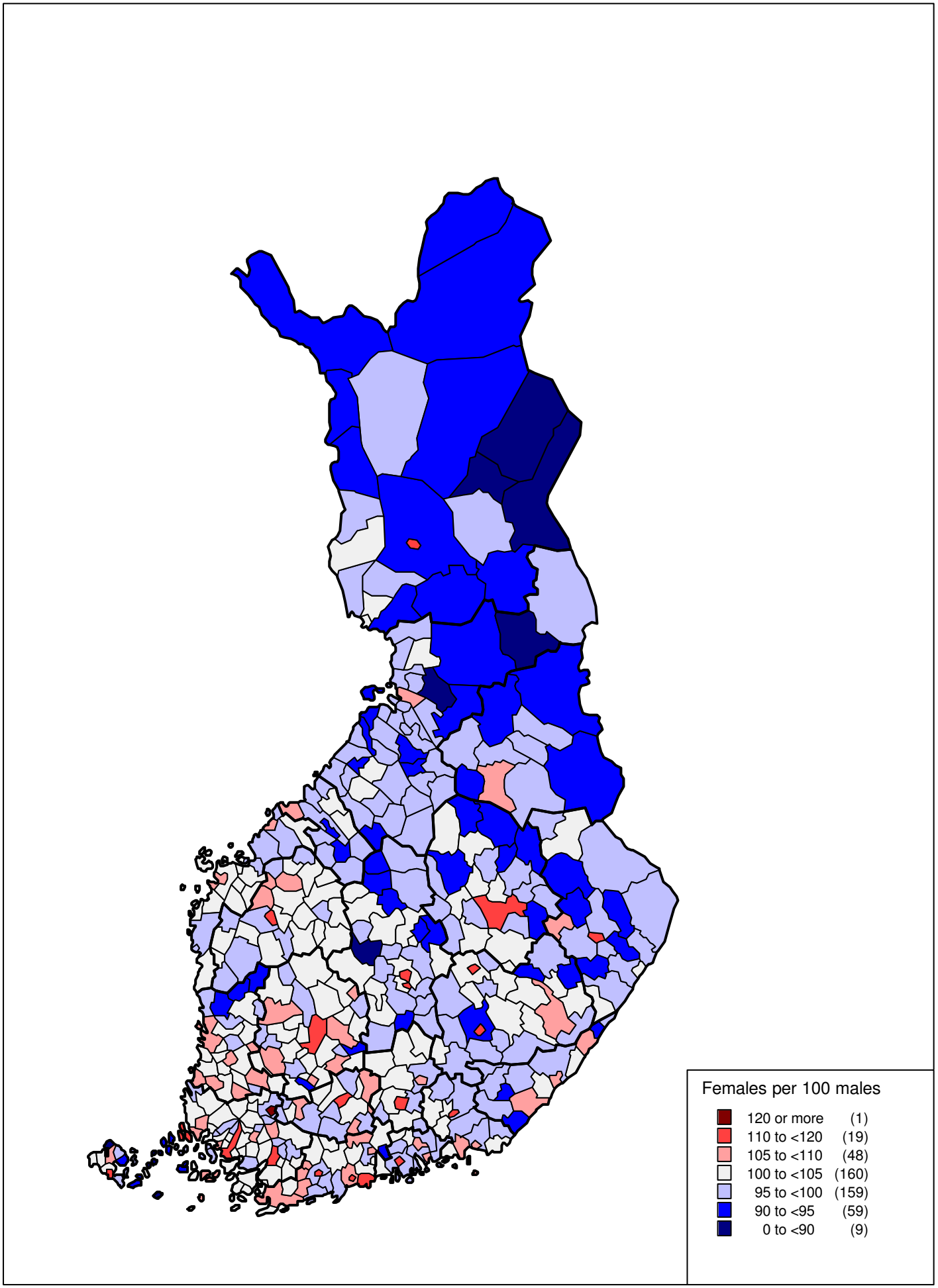
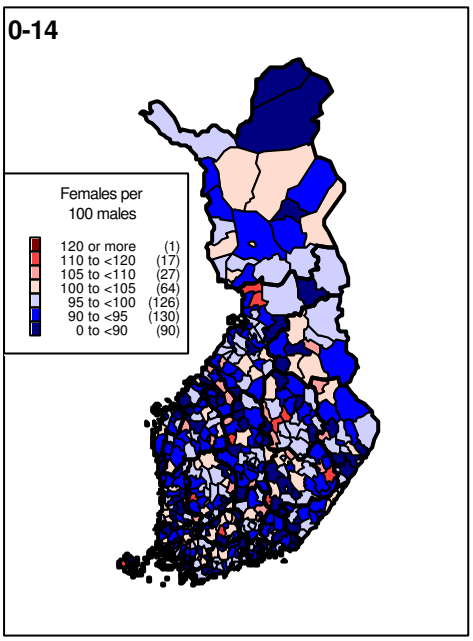
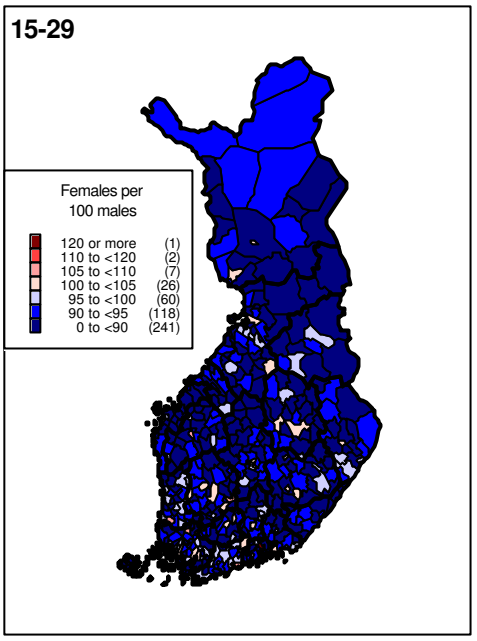
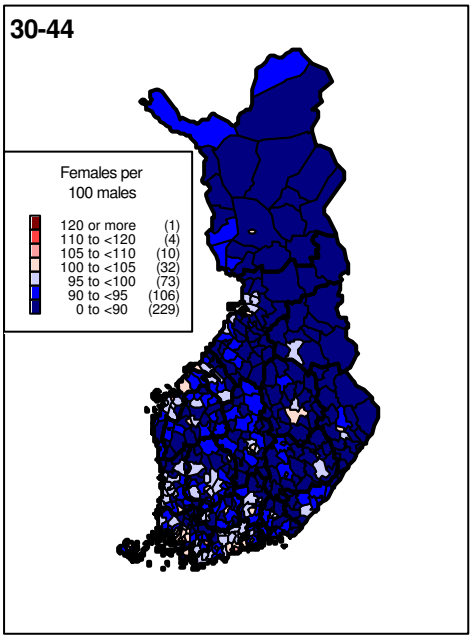
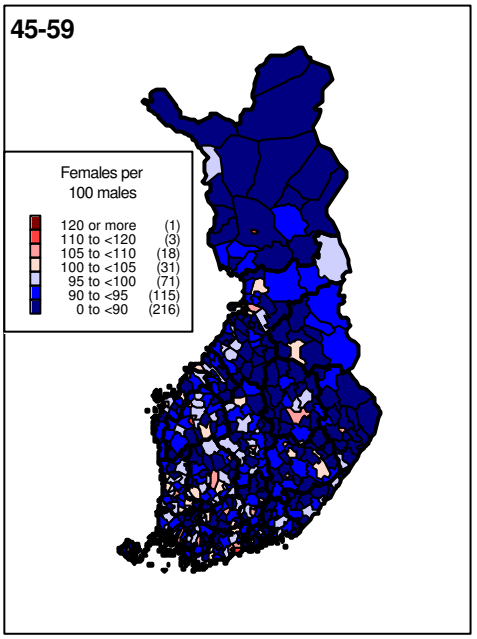


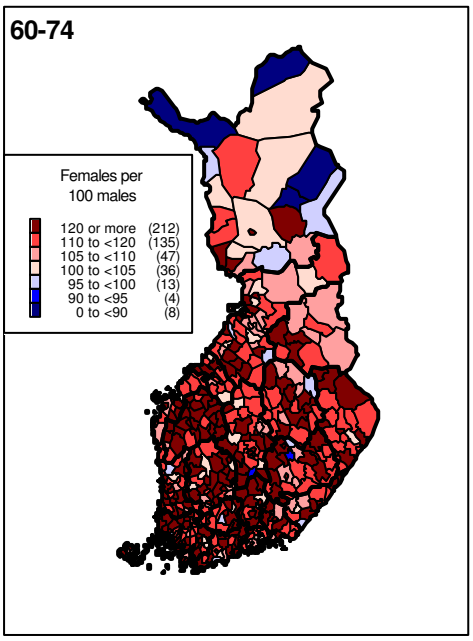
Figure 15: Females per 100 males by municipality, by broad ages, Finland, 1996

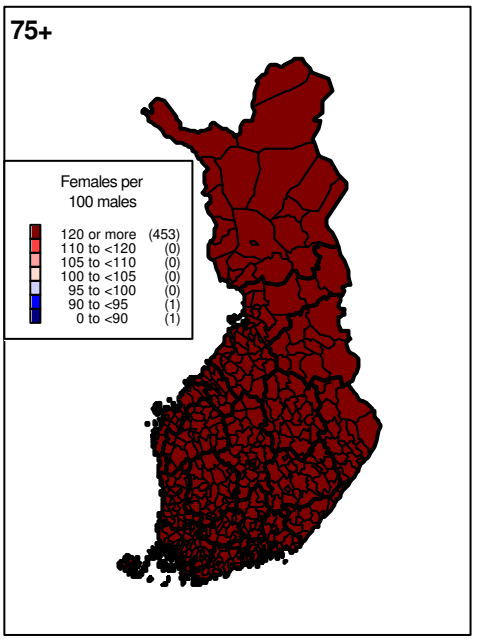












6. RELATIONSHIP TO THE URBAN SYSTEM

6.1 Relationship to settlement size

Unlike in countries with large populations and many large cities, migration between size bands of communes in Finland has to be analysed with some caution. Table 5 shows flows between six size band of municipalities. Note that in 1996 only one municipality – Helsinki – constituted the band with populations of 250000 or over and four towns, Tampere, Vantaa, Turku and Oulu form 100000 up to 250000 size band. At the same time 239 units, more than a half of all units considered, constituted the band with population size below 5000 inhabitants.

Table5: Net migration and migration effectiveness by population size class bands, Finland 1996

Origin size class	Destination size class						
	<5000	5000 – <10000	10000 – <25000	25000 – <50000	50000 – <100000	100000 – <250000	250000+
<5000		*1*	*3*	*7*	*12*	*18*	*18*
5000 – <10000	-59		*2*	*6*	*11*	*17*	*17*
10000 – <25000	-288	-280		*4*	*9*	*15*	*15*
25000 – <50000	-547	-674	-691		*4*	*11*	*11*
50000 – <100000	-599	-778	-951	-369		*7*	*7*
100000 – <250000	-1690	-2263	-3011	-1662	-680		*0*
250000+	-946	-1265	-1682	-925	-375	15	
Net total	-4129	-5201	-5767	-1044	1642	9321	5178.

Source: Computation from the data provided by the Statistics Finland and Research and Development Centre of Kajaani of the University of Oulu.
Notes: The figures above the principal diagonal are migration effectiveness measures (net migration as a percent of gross migration). The figures below the principal diagonal are the net migrations into destination class from origin class.

There is a flow from smaller to larger places with the two top bands having the largest gains and three bands with the smallest units having the largest losses. The 100000 to 250000 size

band gains marginally from Helsinki. This band is the real winner of the competition for migrants with net gains exceeding 9 thousand.

Effectiveness of migration is relatively high for exchanges between the three bands with smallest populations and the three bands with largest populations and diminishes as the difference between sizes reduces. The effectiveness of flows between bands of the smallest units and between neighbouring bands is small. Exchanges between the 100000-250000 band and the band with 250000 or more inhabitants bands cancel out.

6.2 Relationship to population density

With 15 persons per square kilometre Finland is the country with one of the lowest density of population in Europe. The geographical distribution of population density is shown in Figure 16. Some 48% of all municipalities in Finland have population densities below 10 persons per square kilometre. North of the line linking Rovaniemi with Joensuu there is no other town. South of this line there is a mixture of municipalities with densities below 10 persons per square kilometre and between 10 and 50 persons. The two more densely inhabited bands, 50-100 and 100-500 persons per square kilometre, consist of a mixture of suburban areas and towns. There are only six municipalities with population densities over 500 persons per square kilometre: four form the Helsinki agglomeration and the two others are the cities of Turku and Lahti. Tampere does not belong to this group as the territory of the municipality is very large and in consequence the population density relatively low. The most densely inhabited areas are located on the southern coast and there is a steep decline in population density towards the north and north-east.

As Table 6 demonstrates population density has a profound impact on migration patterns. Migrants flow from low to high density areas. The regularity of these flows is remarkable: all density bands gain population from all lower density bands and lose population to all higher density bands. Two highest density bands have positive net migration

and three lowest density bands have negative. The lower the density bands the less favourable the results of migration is. Effectiveness of migration increases with the difference in population density reaching 20% for migration between the highest and the lowest density bands.

Table 6: Net migration and migration effectiveness ratio by population density bands, Finland 1996

Origin population density band	Destination population density band <10	10 – <50	50 –<100	100 – < 500	5000+
<10		*6*	*11*	*15*	*20*
10 – <50	-921		*5*	*9*	*14*
50 – <100	-874	-625		*4*	*9*
100 – <500	-2646	-2616	-686		*5*
500+	-3498	-4049	-1467	-1694	
Net total	-7939	-6369	-654	4254	10708

Source and Notes: see Table 5.

6.3 Relationship to municipality type

The distribution of municipalities classified according to the Regional Classification Handbook (Statistics Finland 1998) into urban, semi-urban and all other municipalities is shown on Figure 17. All municipalities classified as urban are located south-west of the line linking Rovaniemi and Joensuu. The real concentration of urban units is south of Tampere, in particular on the southern coast, and in the agglomerations of Helsinki and Tampere.

Figure 16: Population density by municipality, Finland, 1996

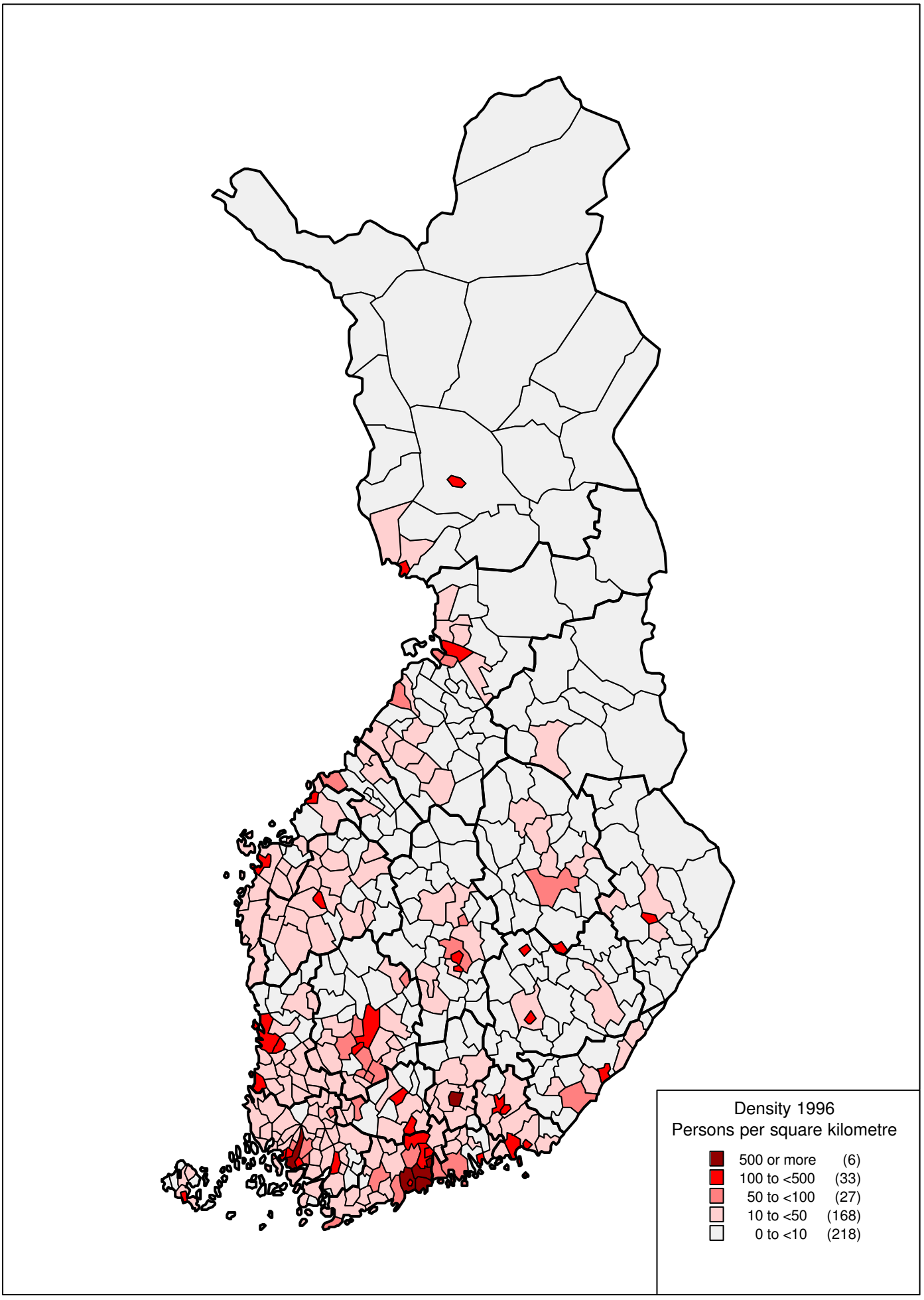


Figure 17: A classification of municipalities by the degree of urbanisation, Finland, 1998

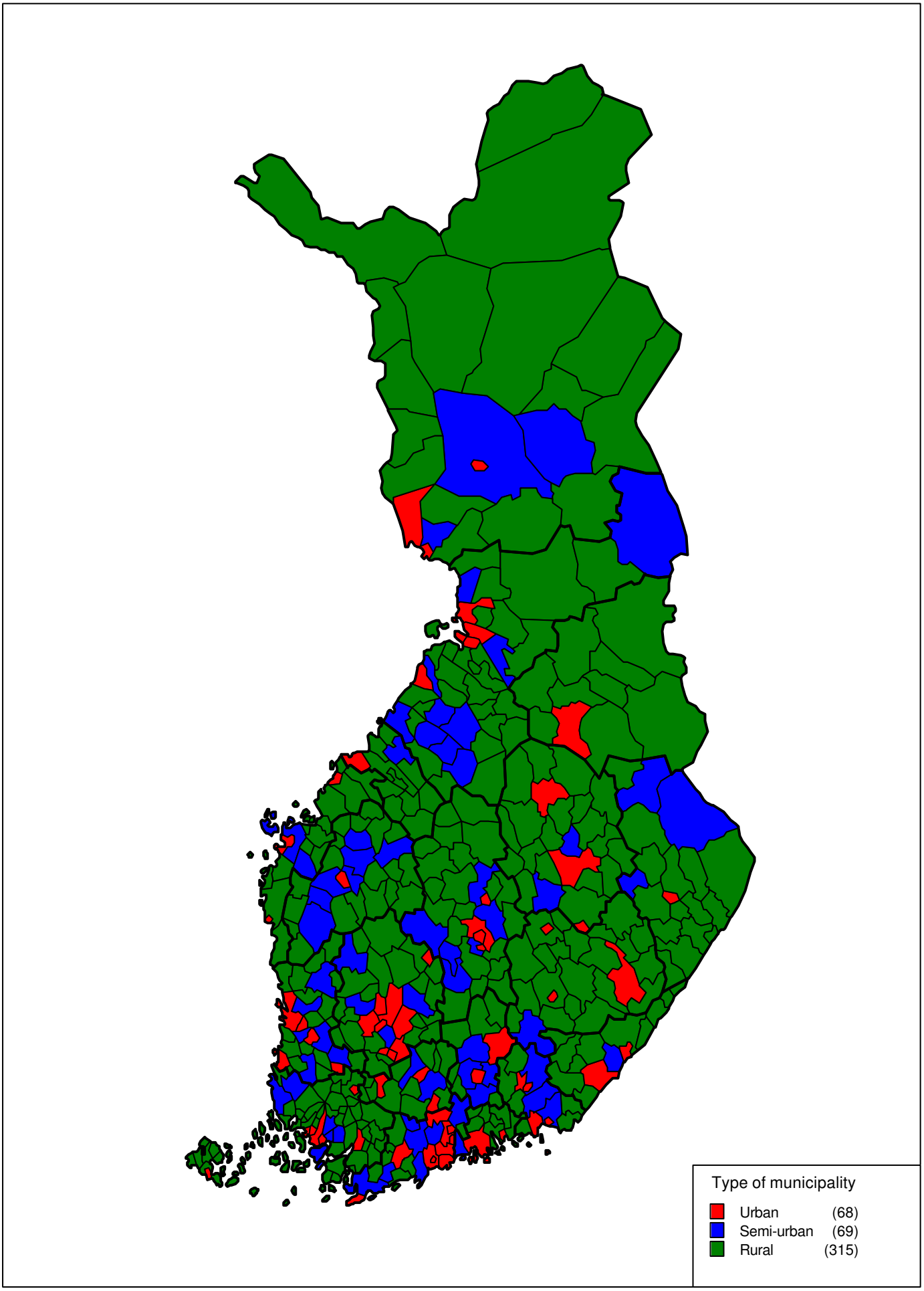


Table 7 shows the net migration and migration between various classes of municipalities. Urban units are big gainers in the migration process, with positive net migration in exchanges with both semi-urban and rural units. In turn semi-urban units gain migrants from rural units, showing the very low attractiveness of the latter. The effectiveness of migration is moderate, increasing with the degree of urbanisation.

Table 7: Net migration and migration effectiveness ratio by the degree of urbanisation, Finland 1998

Origin municipality type	Destination municipality type: Urban	Semi-urban	Rural
Urban		*9*	*13*
Semi-urban	4431		*4*
Rural	8425	579	
Net total	12856	-3852	-9003

Source and Notes: see Table 5.

6.4 Relationship of migration to the degree of rurality

The results of the classification developed by the University of Oulu are shown on Figure 18. Net migration and migration effectiveness by the type of rural areas are shown in Table 8. Two classes of municipalities have very clear patterns of migration: remote rural areas lose people to all other classes and urban areas gain people from all other classes. Islands, in fact a marginal class formed by several municipalities located on islands on Baltic Sea and five municipalities on Finnish Lakes have a relatively strong outflow towards towns and cities and rather weak interactions with other classes.

Figure 18: A classification of municipalities by the type of rural areas, Finland, 1998

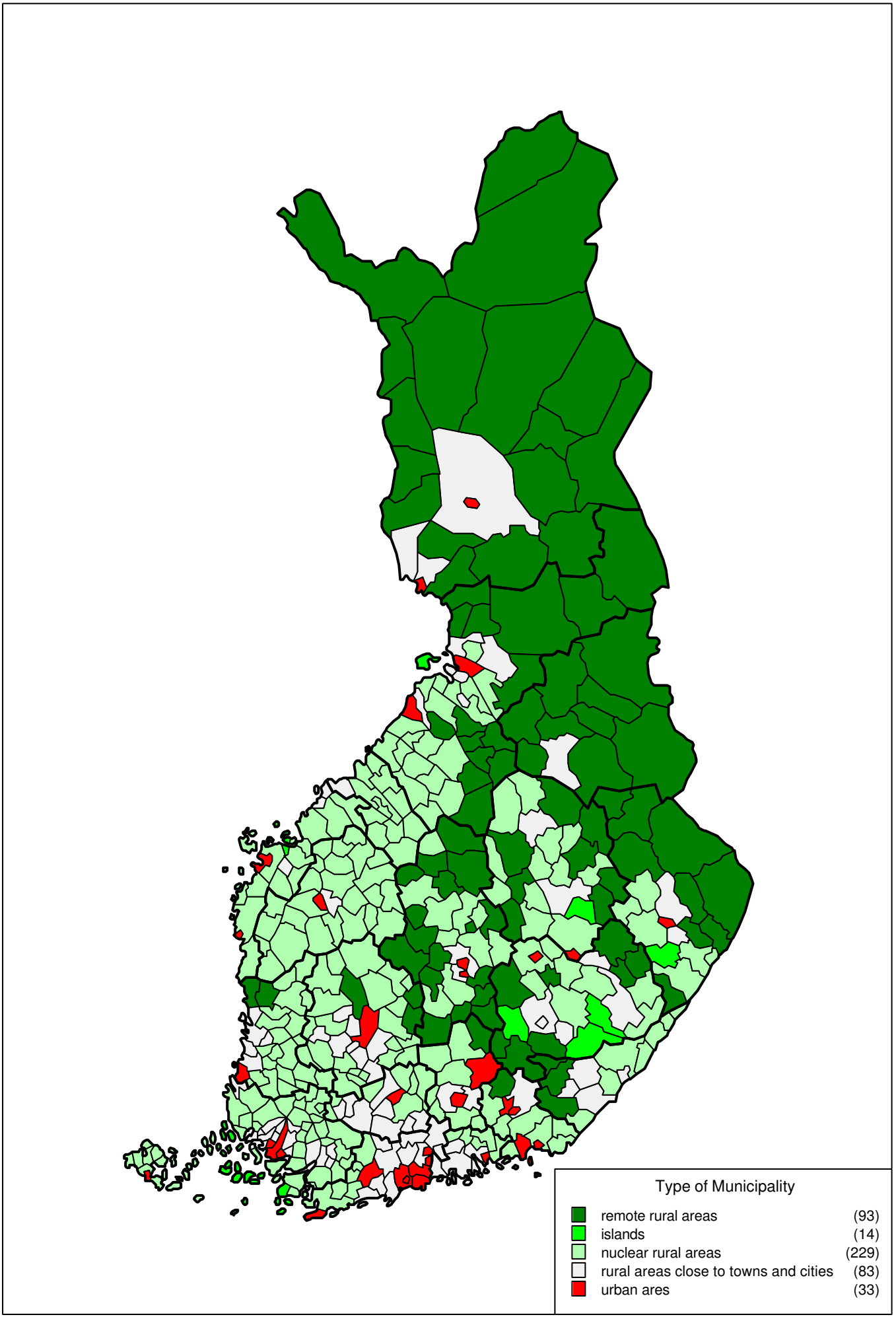


Table 8: Net migration and migration effectiveness ratio by the type of rural areas, Finland 1998

Origin by degree of rurality	Destination by degree of rurality: Remote rural areas	Islands	Nuclear rural areas	Rural areas close to urban settlements	Urban areas
Remote rural areas		*9*	*7*	*14*	*21*
Islands	-11		*2*	*5*	*12*
Nuclear rural areas	-441	6		*7*	*14*
Rural areas close to urban settlements	-1164	-24	-1656		*7*
Urban areas	-3268	-110	-6331	-4434	
Total	-4884	-117	-7553	-1590	14143

Source and Notes: See Table 5.

The negative balance of migration of rural areas close to urban areas with exchange with urban areas suggests that the process of counterurbanisation has not yet started in Finland. Rural areas close to urban areas are attractive to all other rural class and nuclear rural areas are attractive to inhabitants of remote rural areas. This observation, together with the high effectiveness ratios of migration, growing with the closeness to urban areas, suggest a very hierarchical migration patterns, very similar to those observed in former socialist states (Kupiszewski, Durham and Rees 1997; Kupiszewski, Berinde, Teodorescu, Durham and Rees 1997).

7. RELATIONSHIP OF MIGRATION TO UNEMPLOYMENT

The geographical distribution of unemployment (Figure 19) mirrors roughly speaking the distribution of population density. The distribution of municipalities with high unemployment (over 20%) is very similar to the distribution of areas with low population density (below 10 persons per square kilometre). Low unemployment, below 10%, occurred mainly on Ahvenanmaa Islands at the southern edge of the Gulf of Bothnia.

The relationship between unemployment and migration is inconsistent. Net migration gains of the lowest and the highest unemployment band are negative. Somewhat unexpected is positive net migration of the second lowest unemployment band (20-25% of unemployed). These results suggest that there is little or no relationship between migration and unemployment.

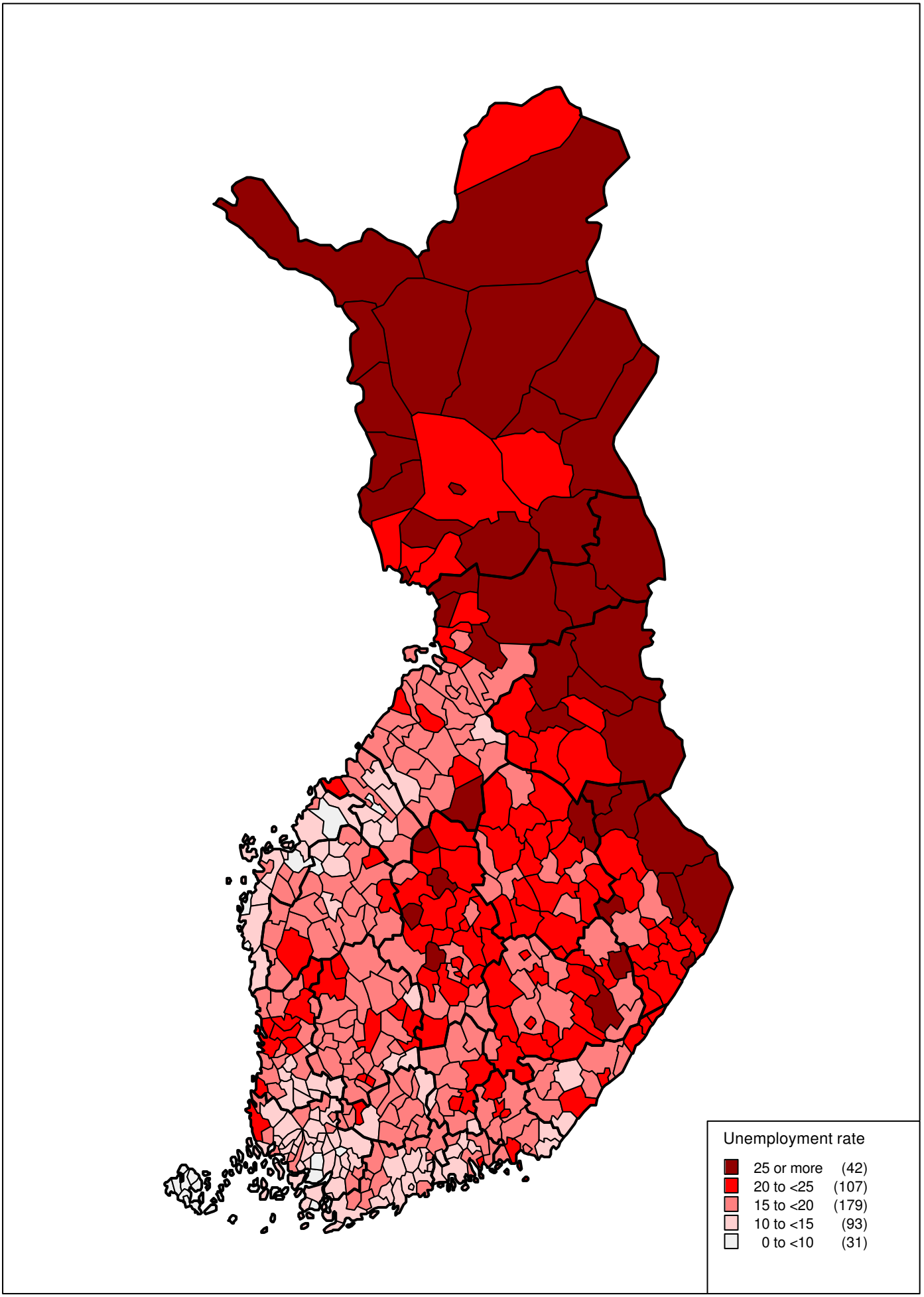
Table 9: Net migration and migration effectiveness by rate of unemployment bands, Finland 1996

	Destination band of the rates of unemployment				
	Less than 10	10 - 15	15 - 20	20 - 25	Greater than 25
Origin bands of rates of unemployment					
<10		*7*	*4*	*5*	*4*
10 – <15	-49		*4*	*2*	*12*
15 – <20	-64	1141		*1*	*8*
20 – <25	-73	648	-847		*9*
25+	15	756	1323	1312	
Net total	-171	2594	-601	1584	-3405

Source and Notes: See Table 5

This somewhat erratic and indecisive result confirms findings of other researchers. For example, Kettunen (1991) found that 90% of the unemployed will not move to get job. Tervo (1997) noted that high unemployment increases the probability of out-migration, but not among unemployed. The response to the unemployment variable was weak.

Figure 19: Unemployment rates by municipalities, Finland, 1996



8. SUMMARY AND CONCLUSIONS

Both natural increase and internal migration has played a role in the shaping of population distribution of Finland in the last century. Rapid and far reaching changes in the economy and employment have brought about massive shift of jobs from agriculture to manufacturing and services and in consequence population has relocated from rural to urban areas. Both natural change and net migration have distinct geographical patterns which are unfavourable, in terms of population dynamics, to the remote areas in the east and north of the country and favourable to the south and west, coastal areas, urban agglomerations and suburban areas. Depopulation of remote rural areas is a serious demographic problem.

Urban concentration is a dominant feature of the Finnish migration system. At the subregional level suburbanisation is visible, but is not as strong as in the overcrowded metropolises of Western Europe. We can confirm Tervamäki's (1987) conclusion that migration streams constitute a multi-level structure. The relationships between migration and size of municipality, migration and population density and migration and urban/rural class of municipalities in a very consistent way show that the process of concentration is probably the strongest force at work, shifting people to urban agglomerations and their suburban rings.

Regional patterns of migration show strong transfers of population from north and east to south and to lesser extent to west of the country. In particular, the Baltic coast with the Helsinki agglomeration and Turku has a strong attraction to migrants. Migration is sex-selective, with a much higher propensity of females to leave remote and rural areas and go to urban centres and the southern part of the country. The result of such a process are significant gender imbalances: a deficiency of females in rural areas in particular in North and East of the country and a surplus in urban and semi-urban areas.

Unemployment has a rather weak and imprecisely effect on migrants. This is in line with earlier research on relationship between unemployment and migration in Finland.

International migration is a marginal phenomenon in Finland and does not have any significant impact on population dynamics. Finnish emigrants tend to return and net migration losses in the past were offset by relatively high natural increase.

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