

# Differentiation of Rural Areas in Kainuu, Finland

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## Introduction

Finnish society has undergone vast structural changes since the Second World War, the impact of which has been reflected in the nature of the regional development that has taken place. Technological and economic development have strongly affected the structural change of society and the processes of urbanization and industrialization have been active in society.

Urbanization began relatively late in Finland compared with other European countries, but was all the more rapid: while 38% of the population lived in cities and towns in 1960, the corresponding proportion in 1985 was around 60%. Although the growth of the cities and towns themselves has now slowed down considerably, and even come to a stop in some cases, urbanization may still be said to be going on in the form of a concentration of population in built-up areas, which regardless of the administrative status of boundaries, accounted for 56% of the population in 1960 and 76% in 1985.

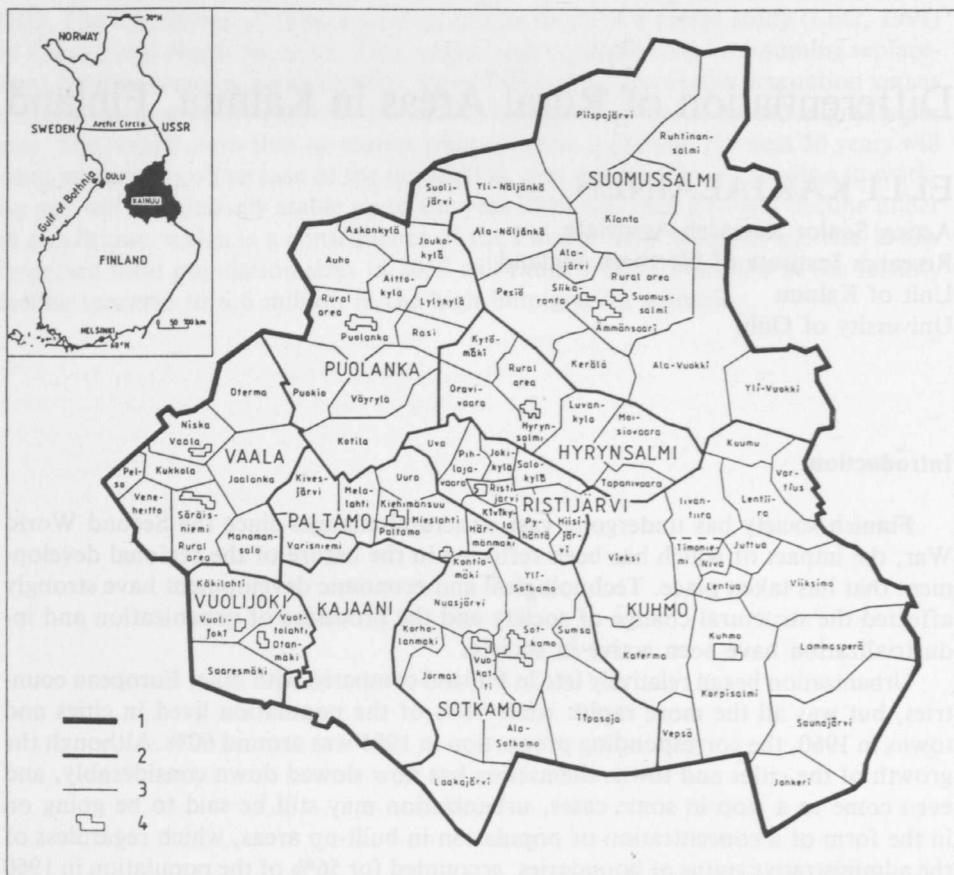
Occupational structures in Finland have also undergone extremely marked changes, with the proportion of the population employed in the primary sector declining from 64% to 13% in just four decades. The corresponding change was spread over 70 years in Sweden and 100 years in Norway (Maaseudun kehittämistoimikunnan mietintö 1983, 8).

This article deals with migration and differentiation of rural areas in the rural municipalities of Kainuu in 1980—85. The basic material consists of migration data of permanent movement (54,606 moves) gathered from notices of change of address and population registers. A body of data on structural factors in the small-scale areas was gathered on a coordinate system from grid maps, the principal emphasis being on demographic and occupational distribution variables. The location of Kainuu and the areal division used in this work are depicted in Figure 1.

## Development of migration

Migration has been a significant factor in the structural change of society. The main streams of migration have been from the countryside to the towns and cities

Figure 1. Land register villages and built-up areas of the rural municipalities of Kainuu and location of Kainuu. (1) Region, (2) municipality, (3) land register village, (4) built-up area.



and from the rural districts to the built-up areas. The trend also manifested itself in a retraction of population towards southern and southwestern Finland and often emigration to Sweden. The focus of emigration to Sweden was in the late 1960s and early 1970s.

There have been signs in recent years of a new wave of migration, again from the north to the south and from the peripheries of various provinces towards their centers, which will result in an exaggeration of the regional differences in development. The same development has been noted also in the rural municipalities of Kainuu. Migration has been toward Kajaani at the regional level, to the Oulu area at the provincial level and to the Helsinki conurbation at the national level (Figure 2).

Migration, and thus also the new wave of migration, is a product of differences in the level of development between different areas of the country. Areal differences in unemployment continue to be large, and figures are very much higher in the development regions, including Kainuu, than the average for the country as a whole.

Moreover, the proportion of the labor force employed in primary production is high in these development regions, which will increase the labor supply as the change in the structure of agriculture progresses. Industrialization has been quite slow and in many rural areas there have been no signs of it. A new manifestation of regional inequality has arisen in recent times with the location of the majority of high technology jobs in the province of Uusimaa, and it has been estimated that this province alone accounted for two-thirds of all new employment created over the period 1983—1986 (Vuoristo 1988, B1).

Migration within the municipalities is also an important factor shaping the areal structure. The strength of this trend is illustrated well by the fact that two-thirds of all migration nowadays takes place within the municipality. The second major flow next to migration within the built-up areas has again been into the built-up areas

Figure 2. Migration into and out of the rural municipalities of Kainuu in 1980—85. (1) Helsinki conurbation, (2) other parts of Uusimaa, (3) Åland Islands, (4) provinces of Turku and Pori, (5) Häme, (6) Kymi, (7) Mikkeli, (8) Central Finland, (9) Vaasa, (10) Kuopio and (11) Northern Karelia, (12) town of Kajaani, (13) Oulu area (14) other parts of Northern Ostrobothnia, (15) province of Lapland, (16) Sweden, (17) other foreign countries.

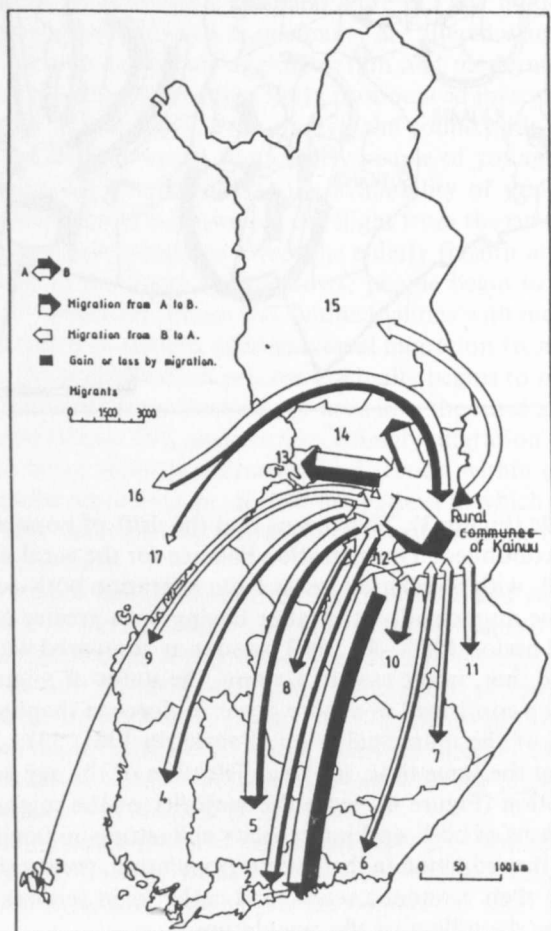
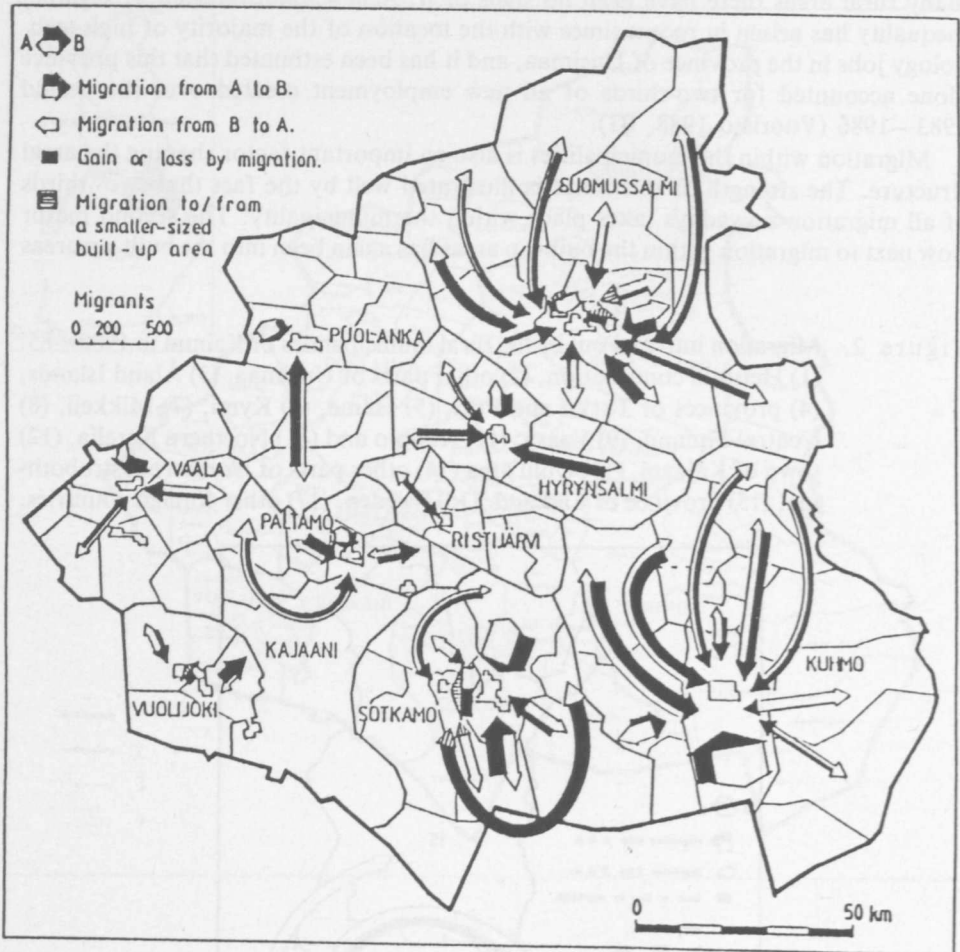


Figure 3. Migration within the municipality between built-up areas and rural areas in the rural municipalities of Kainuu in 1980—85 (minimum 40 moves into or out of an area).



from the countryside (Figure 3). This means that the drift of population away from the rural areas has continued. The migration balance for the rural districts has been negative throughout, with population losses from migration both out of the municipality and within the municipality, the latter having been greater numerically than the former over the period 1980—85, 3063 persons as compared with 1819 persons. Thus, it may be said that, in the case of Kainuu, the status of migration within the municipality has been confirmed as a more powerful force in shaping areal structure than migration out of the municipality (cf. Paasivirta 1981, 13).

Migration has, at the same time, led to a distortion of the age and sex structure of the rural population (Figure 4), since the majority of the migrants are at their most active age in terms of both working capacity and setting up families, and women predominate. With the reduction in their active population, the rural areas have also seen a narrowing of their economic scope, and cutbacks in services have had to be made because of the dwindling of the population.

Although the population development has been negative in the rural areas, Hautamäki (1984, 86—89) perceives the seeds of a »new upsurge» for the countryside, alluding to changes in people's attitudes where questions concerning the quality of life are being valued more, with respect to which the rural areas in many ways have much more to offer than the cities and towns. Environmental factors, in particular, have taken a quite a new significance (see Lewis 1982, 177—178; Cloke and Park 1985, 233).

In spite of the imbalance in areal demographic trends in the rural municipalities of Kainuu, some signs do emerge of increased migration towards rural environments. The new trend of migration into the countryside has not meant the repopulation of vast rural areas, however, for it has remained confined to areas within easy access to the main built-up areas. So as far as the expansive influence of migration is concerned, it may be said that it extends at most into the areas immediately adjacent to the main built-up areas, while the peripheral areas are the natural focus of its contractive effects (see Lloyd and Dicken 1977, 414—415).

### **Regional differences in level of development**

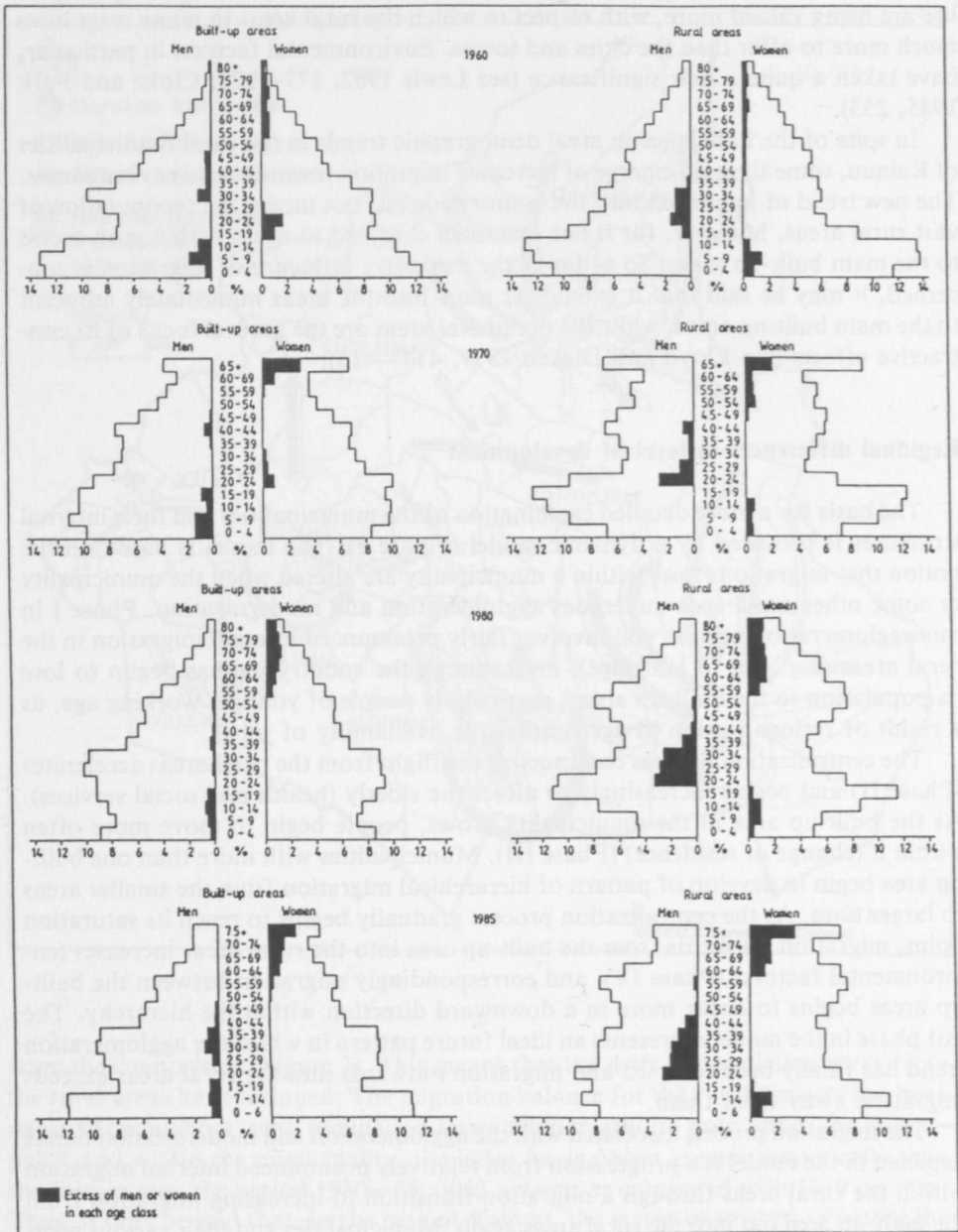
The basis for a more detailed examination of the municipalities and their internal structures is provided by a dynamic model (Figure 5). The model is based on the notion that migration flows within a municipality are altered when the municipality or some other small area undergoes agglomeration and modernization. Phase I in this agglomeration process still involves fairly pronounced internal migration in the rural areas (e.g. due to marriage), even though the countryside has begun to lose its population to the built-up areas, particularly people of younger working age, as a result of rationalization in agriculture (the availability of jobs).

The centralization process continues as the flight from the rural areas accelerates (Phase II) and begins increasingly to affect the elderly (health and social services). As the built-up area in the municipality grows, people begin to move more often within it (change of residence) (Phase III). Municipalities with more than one built-up area begin to develop a pattern of hierarchical migration from the smaller areas to larger ones. As the centralization process gradually begins to reach its saturation point, migration outwards from the built-up area into the rural areas increases (environmental factors) (Phase IV), and correspondingly migration between the built-up areas begins to occur more in a downward direction within the hierarchy. The last phase in the model represents an ideal future pattern in which the agglomeration trend has finally been reversed and migration outwards into the rural areas exceeds migration away from them.

The migration process associated with the agglomeration and modernization trends depicted in the model is a progression from relatively pronounced internal migration within the rural areas through a migration transition to increasing migration from the built-up area out into the rural areas again. Municipalities and their various areas can be expected to go through these phases at different speeds as their processes of agglomeration and modernization advance. Thus the internal differences in levels of development manifest themselves in accordance with the phase in the migration process which the area has reached at the time.

This more detailed examination of the region takes the form of a grouping analysis based on the proportions of flows of migration within a municipality over the interval 1980—85 (6 variables). This procedure enables the total set of observations to be grouped into subsets differing from each other to the maximum possible extent

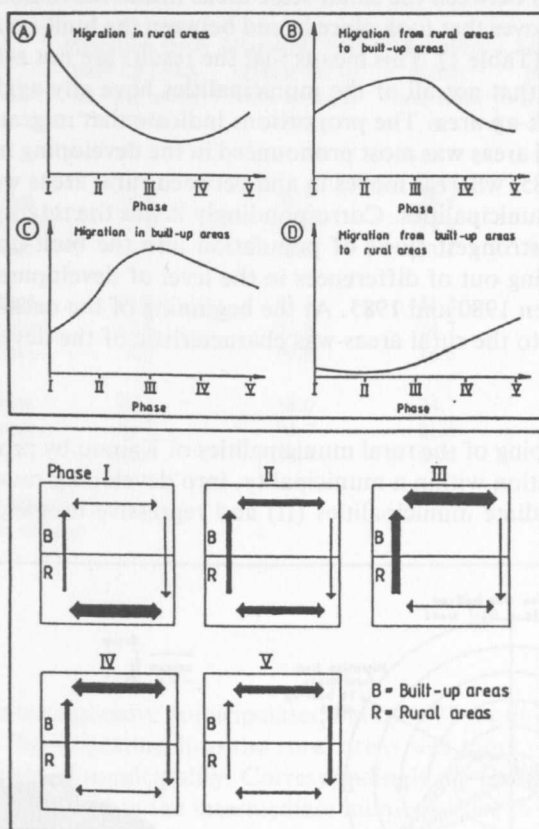
Figure 4. Age and sex structure of the population of the built-up and rural areas of Kainuu in 1960, 1970, 1980 and 1985.



while still being internally as homogeneous as possible (see Sänkiäho 1974, 96—98). The levels of development of the rural municipalities of Kainuu and their small-scale areas are also examined from the viewpoint of other measures of development, in order to test the applicability of the theoretical migration model to the description of areal differences in development.



Figure 5. Model for intra-municipal migration (Karjalainen 1989, 13). For explanations, see text.



### *Classification of the municipalities*

An examination of the level of development in the rural municipalities of Kainuu from the point of view of the migration process (Figure 6) shows Suomussalmi, Sotkamo and Vuolijoki fall into the category of developing municipalities, their predominant migration flow being within the built-up areas. They also stand out from the other groups in having a substantial volume of migration between their built-up areas, but this may be attributed simply to the fact that the group contains precisely those municipalities that possess smaller agglomerations of population in addition to their main built-up areas. It is also noticeable in this group that a considerable flow of migration took place from the main built-up areas to the built-up areas of smaller size, the opposite trend from that found in the other groups.

The accent in migration within the intermediate municipalities is on both migration inside the built-up areas and migration to these areas from the rural areas, while the regressive municipalities, Ristijärvi and Vaala, stand out from the others in having the least internal migration within the built-up areas, and the most migration between and within the rural areas (the land register villages). These regressive municipalities, and also the others, show clear evidence of a continuing process of agglomeration

in the built-up areas. Migration from the built-up areas into the rural areas was running at approximately 10% in all three groups.

The differences between the small-scale areas inside the municipalities are more evident once the moves that took place in and between the built-up areas are excluded from the material (Table 1). This means that the results are not affected to the same extent by the fact that not all of the municipalities have any agglomerations other than the main built-up area. The proportions indicate that migration from built-up areas into the rural areas was most pronounced in the developing municipalities over the period 1980—85, whereas moves in and between rural areas were most common in the regressive municipalities. Correspondingly it was the intermediate municipalities that had the strongest flows of population into the built-up areas.

A certain evening out of differences in the level of development is seen to have taken place between 1980 and 1985. At the beginning of the decade migration from the built-up areas to the rural areas was characteristic of the developing municipal-

Figure 6. Grouping of the rural municipalities of Kainuu by processes concerning migration within a municipality, into developing municipalities (I), intermediate municipalities (II) and regressive municipalities (III).

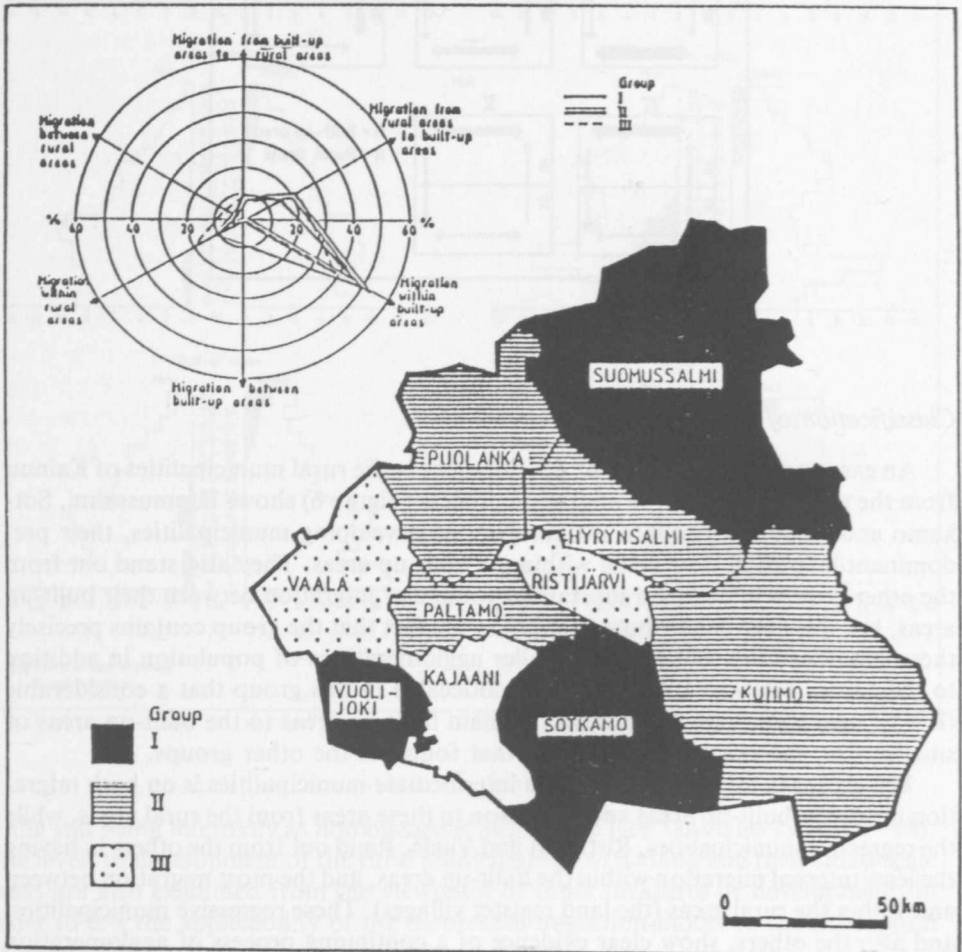




Table 1. Flows concerning migration within a municipality in rural municipalities of different types in Kainuu over the period 1980—85 and in the years 1980 and 1985.

Group	Migration from	Migration from	Migration	Migration	Total	
	built-up areas to rural areas %	rural areas to built-up areas %	within rural areas <sup>1</sup> %	between rural areas <sup>2</sup> %	abs.	%
1980—85						
Developing municipalities	24.1	38.5	28.4	9.0	6,164	100.0
Intermediate municipalities	17.3	43.6	29.4	9.7	6,828	100.0
Regressive municipalities	16.5	38.6	33.1	11.8	1,817	100.0
1980						
Developing municipalities	18.2	51.5	21.2	9.1	1,030	100.0
Intermediate municipalities	11.6	52.6	24.7	11.1	1,090	100.0
Regressive municipalities	4.2	59.9	16.6	19.3	216	100.0
1985						
Developing municipalities	23.3	38.0	24.7	14.0	965	100.0
Intermediate municipalities	22.7	44.7	21.8	10.8	1,082	100.0
Regressive municipalities	22.3	38.4	29.6	9.7	407	100.0

<sup>1</sup> within land register villages

<sup>2</sup> between land register villages

ities and weakest in the regressive municipalities, but by 1985 the direction had changed to the extent that this migration into the rural areas was more or less of the same magnitude in all types of municipality. Correspondingly movement into the built-up areas was most pronounced in the intermediate municipalities in 1985 but in the regressive ones in 1980.

Each type of municipality in the above classification is seen to have been going through a different phase in the developmental pattern for migration within a municipality during the period 1980—85. The actual developing municipalities were characteristically at the fourth phase in the theoretical model, with migration within the built-up areas, and under closer scrutiny also migration from the built-up areas into the rural areas, more pronounced than in the other groups. Even so, the developing municipalities were still losing their rural population to the built-up areas. In the case of migration between built-up areas, some evidence is now seen of the migration downwards in the areal hierarchy characteristic of phase four in the migration model, contrary to the situation in the other groups. The intermediate group of municipalities was in the process of a phase three trend, in which migration from the rural areas to the built-up areas was at least as pronounced as in the previous group, while fairly significant amounts of migration between and within the rural areas were found in the regressive municipalities compared with the other groups, pointing to the second phase in the model.

A comparison of the classification of municipalities according to features of migration within the municipalities with the distribution of other variables indicates that migration indeed served to highlight the areal differences in development very well (Table 2). The developing municipalities in migration terms had a more favorable demographic trend, a more balanced age structure, a more diverse occupational structure, lower unemployment and a better income level than the others, and similar differ-

Table 2. Principal demographic characteristics among the categories of rural municipality in Kainuu (%).

Characteristics	Types of municipality		
	Developing municipalities	Intermediate municipalities	Regressive municipalities
Demographic trends			
1960—80	-20.3	-18.2	-36.2
1980—85	-0.2	-3.5	-4.4
Regional population distribution 1985			
Age structure 1985			
0—14	50.1 <sup>1</sup>	49.7 <sup>1</sup>	36.0 <sup>1</sup>
15—24	19.4	17.3	16.7
25—64	16.7	17.5	15.7
65—	52.6	53.0	53.7
Occupational structure 1985			
Primary sector	11.3	12.2	13.9
Manufacturing sector	23.7	29.8	37.0
Service sector	31.3	20.0	15.5
Unemployment 1985	45.0	50.2	47.5
	13.2	17.5	13.6

<sup>1</sup> % of population in built-up areas

ences are observable between the intermediate and regressive municipalities, in favor of the former.

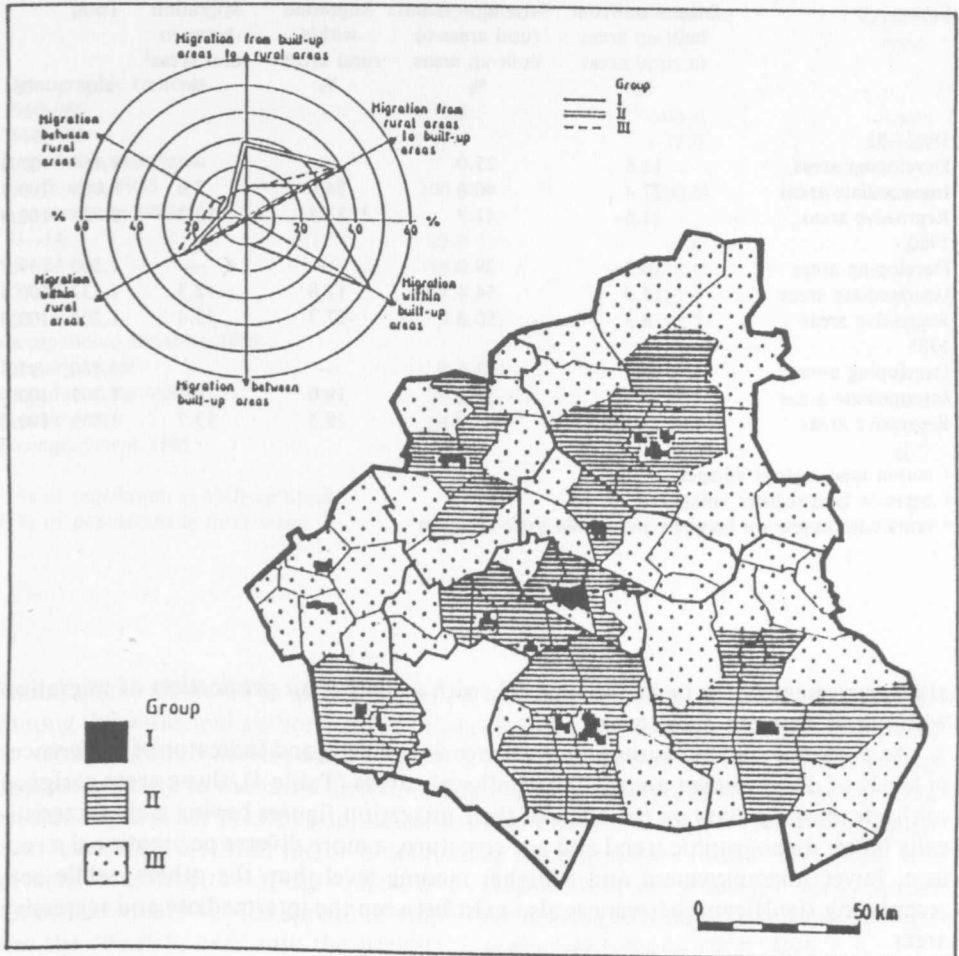
#### *Classification of the internal structure of the municipalities*

The group of developing areas distinguished in the classification of the small-scale areas of the rural municipalities of Kainuu (Figure 7) contains all the built-up areas, so that the dominant flow type is obviously migration within a built-up area. Migration between built-up areas in a downwards direction in the areal hierarchy took place precisely in this group of developing areas, whereas the trend in the other groups was in the reverse direction.

The rural areas are thus divided into two distinct zones, those located close to built-up areas, forming an intermediate zone in which the dominant flow is from the rural areas into the built-up areas, and a group of more remote rural areas, constituting regressive areas in which the main direction is the same. A significant difference between these two groups exists in migration from the built-up areas to the rural areas, which is considerably less frequent in the regressive areas, 12% as compared with 27%. Moves are very common within and between the regressive rural areas.

A separate examination of migration within the municipality was also made for the small-scale areas (Table 3), again excluding moves within and between built-up areas. These moves did not give rise to the same discrepancies in interpretation in the case of the classification of the small-scale areas as they did at the municipal level, however, since the built-up areas fell into a clearly defined group of their own, defined precisely by the prominence of migration within them. Thus migration from the built-up areas to the rural areas and the reverse is relatively insignificant as far as these

Figure 7. Grouping of the small-scale areas in the rural municipalities of Kainuu by processes concerning migration within a municipality, into developing areas (I), intermediate areas (II) and regressive areas (III).



developing areas are concerned. One essential trend is discernible in this group, however, and that is an increase in the proportion of moves from the built-up areas to the rural areas, especially to the intermediate areas, between 1980 and 1985.

The developing areas are thus seen to be characterized by phase four in the model for migration within the municipality, with the drift of population towards the built-up areas still in progress but the dominant flows during the period 1980–85 operating within these built-up areas. Contrary to the situation in the other groups, the dominant trend within migration between built-up areas was downwards in the areal hierarchy. The trend in the intermediate areas corresponded to phase three in the model, with a considerable movement of population from the built-up areas to the rural areas, while the regressive areas, which lost more of their population to the built-up areas in relative terms over the period examined than did the intermediate

Table 3. Flows concerning migration within a municipality by small-scale area types in the rural municipalities of Kainuu over the period 1980—85 and in the years 1980 and 1985.

Group	Migration from built-up areas to rural areas	Migration from rural areas to built-up areas	Migration within rural areas <sup>1</sup>	Migration between rural areas <sup>2</sup>	Total	
	%	%	%	%	abs.	%
1980—85						
Developing areas	12.6	25.0	—	—	9,164	37.6 <sup>3</sup>
Intermediate areas	27.4	40.4	24.6	7.6	8,084	100.0
Regressive areas	11.6	41.9	33.3	13.2	6,725	100.0
1980						
Developing areas	10.2	29.0	—	—	1,500	39.2 <sup>3</sup>
Intermediate areas	15.5	54.4	17.8	12.3	1,132	100.0
Regressive areas	8.3	50.6	27.7	13.4	1,204	100.0
1985						
Developing areas	13.7	23.6	—	—	1,586	37.3 <sup>3</sup>
Intermediate areas	33.9	38.0	19.0	9.1	1,303	100.0
Regressive areas	13.1	44.9	28.3	13.7	1,151	100.0

<sup>1</sup> within land register villages

<sup>2</sup> between land register villages

<sup>3</sup> remainder migration between and within built-up areas

areas, represent phase two in the model, with a significant proportion of migration within and between rural areas.

As a whole, the migration process serves as a fairly good indicator of differences in levels of development among the small-scale areas (Table 4), those areas assigned to the developing class on the basis of their migration figures having a characteristically better demographic trend and age structure, a more diverse occupational structure, lower unemployment and a higher income level than the others, while corresponding significant differences also exist between the intermediate and regressive areas.

## Conclusion

In recent years there has been a growing concern for the development of rural areas. The Council of Europe started a campaign named »Europe needs a living countryside» in 1988. Finland took part in the campaign with the theme »A living countryside». The targets of the campaign were, for example, the raising of general appreciation for the countryside and the creation of a new identity for the rural areas.

Ideas have been put forward on the need for each area to approach development in the way most suited to it. Regional development is characteristically administered from above, whereas this new approach would mean development from below (Kavonius 1984, 16; Papunen 1986, 128). Thus areas should not all be developed according to the same model, but rather attempts should be made to take account of their differences at different areal levels. The initiative of the rural people themselves is harnessed for development purposes by the »village activities» movement,

Table 4. Principal demographic characteristics among the categories of internal structure of the rural municipalities in Kainuu (%).

Characteristics	Developing areas	Types of areas Intermediate areas	Regressive areas
Demographic trends			
1960—80	+79.5	-44.4	-46.8
1980—85	+27.6	-12.0	-14.7
Regional population distribution 1985	100.0 <sup>1</sup>	100.0 <sup>2</sup>	100.0 <sup>2</sup>
Age structure 1985			
0—14	23.8	17.6	16.1
15—24	16.0	16.8	17.5
25—64	51.4	52.9	53.8
65—	8.8	12.7	12.6
Occupational structure 1985			
Primary sector	9.2	51.4	60.4
Manufacturing sector	26.1	18.8	14.5
Service sector	64.7	29.8	25.1
Unemployment 1985	10.0	17.0	20.7

<sup>1</sup> % of population in built-up areas

<sup>2</sup> % of population in rural areas

which above all serves to attract attention to the problems of rural areas, especially among the municipal authorities (see Aluepolitiikkatoimikunnan mietintö 1986, 125).

The integrated development of rural areas is possible only with effective enough measures acting in the same direction. Maintaining functional systems in the countryside requires the present population size and sometimes an increase in the population level. One essential factor in increasing the population in the rural areas is to diversify the structure of the sources of livelihood. It is important to create the conditions necessary for the spread of employment using telecommunications throughout the country, even into the peripheral areas (see Selwyn 1979, 40).

A solution has been developed for the decentralization of teleinformatics in the Nordic countries: telecommuting and tele houses (Oksman 1989, 10—11). These allow a person to choose more freely where he or she will live with distance no longer constituting the barrier it has been. Also the conditions for return migration are better, because, according to studies, people value the places where they were born and would like to live there, if only sources of livelihood were available. Return migrants have been shown to be well-educated and possess high levels of professional skills. They also have certain advantages when setting up in business on their return, in that they possess a wide range of professional contacts elsewhere (Sundin and Wiberg 1989).

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## Abstract

The aim is to examine areal differences in development at the regional and local levels employing migration as the chief indicator. In order to obtain a classification of the municipalities and their internal structure a model for migration within a municipality is constructed, based on the notion that the relations between migration flows alter with time as the municipality or area concerned undergoes the processes of agglomeration of population and modernization.

The material on which the survey is based consists of change of address registration data for those moving permanently, a total of 54,606 events applying to the rural municipalities of Kainuu in 1980—85. Areal units at a lower level are obtained by considering the land register villages and the built-up area — rural area dimension. Grouping analysis is used as the multivariate method for processing the data.