

## MIGRATION AND PERIODS OF RAPID INDUSTRIAL DEVELOP— MENT IN FINLAND



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There have been at least three important phases in the industrial development of Finland. The first was a period of awakening industrialization from the late nineteenth century to the Second World War. Industrialization commenced after the mid-1800s, but development was still slow up to the first decades of this century. The second phase might be called a leap into the industrial world, and this period covers about thirty years after the Second World War. The industrial structure of our country changed during those thirty years as much as during a hundred years in Norway and seventy years in Sweden. One reason for this extremely rapid industrialization was the payment of war reparations, which was possible only with the expansion of existing industries and the creation of new fields and products. The third phase started in the 70s entailing transformation of a mainly industrial and service society into an information society. Today the new technol-

ogy with its all microprocessors is coming into every sphere of life and the most marked change is still to come.

All these periods can be clearly discerned in the course of time and development. Figures 1-5 indicate changes of industries since the nineteenth century and Tables 1-3 describe migration streams. After the slow industrial development up to the 1940s both the manufacturing and service industries increased very strongly. The year 1960 is a kind of turning-point, the proportion of manufacturing and service industries then reaching that of the primary industry. Each of these sectors accounted for a third of the country's total labour force. The curves also indicate an interesting feature, namely that manufacturing industry never exceeded the two other curves. This means that in a sense Finland skipped directly from an agricultural society over the manufacturing phase into the service. Most clearly this can be seen in the less developed parts of the country, i.e. in northern and eastern Finland an Ahvenanmaa, and not at all in southern Finland. Of course, this is partly only a manner of speaking, because in fact the manufacturing industry was of greatest importance for the development of the society.

In the 1960s the courses of the curves diverged. The proportion of the service industries continued growing, reaching almost sixty per cent in 1983. Around the year 1970 this increase was due to the powerful growth of the public sector, but the end of the 1970s and the beginning of the 80s can be associated rather with the rapid development of new technology. In other words we stepped into a phase of the information society.

Each period is characterized by some particular features of migration streams. Tables 1-5 indicate that already in the nineteenth century urban communities gained many more migrants than they lost. The process went on in the twentieth century. The 60s was a period of strong migration, as was also the beginning of the 70s. This period has been nicknamed the mad years of migration in Finland. It can also be seen as the closing period of the leap into a real industrial society. In the mid-seventies the situation changed. The urban communities were on the average no longer the winners; the rural communities gained more movers than they lost (for regional variations see Table 2). The phenomenon is universal, sometimes called a counter-urbanization process indicating an increasing attraction to areas outside big centres. It should perhaps be mentioned that sparsely populated areas are still losers, though not as badly as earlier. The following figures describe the continuation of the concentration process: the proportion of people living in conurbations was 55.9 per cent in 1960, 64.1 per cent ten years later and 72.1 per cent in 1980.

In the following the three periods will be studied in greater detail.

Figure 1. Economically Active Population in Finland by Industry, 1820–1983

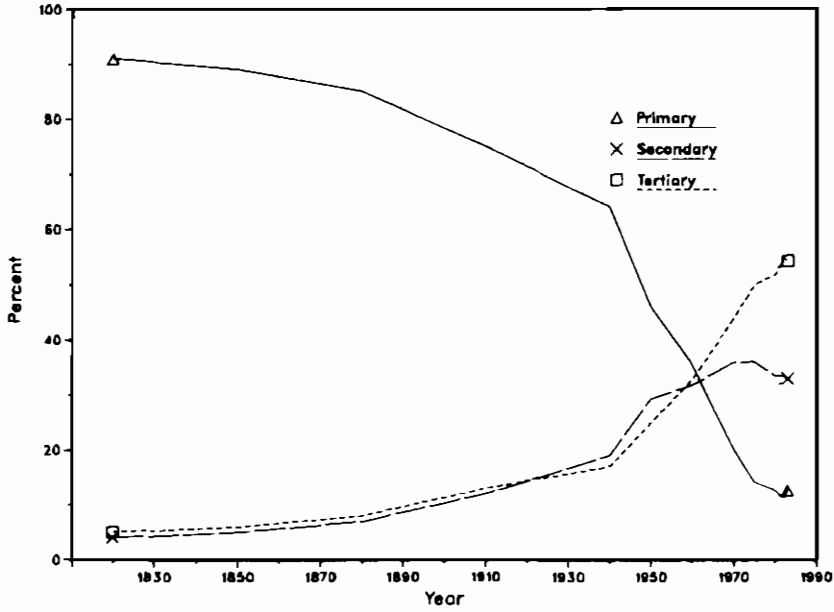


Figure 2. Economically Active Population in Southern Finland by Industry 1890–1983  
Provinces of Uusimaa, Turku–Pori, Häme and Kymi

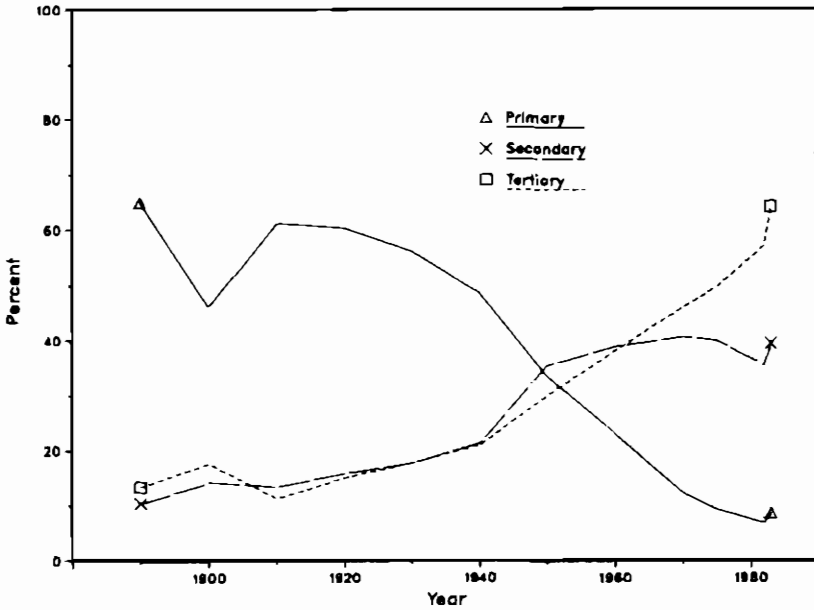


Figure 3. Economically Active Population in mid-Finland by Industry  
1890-1983  
Provinces of Vaasa, Keski-Suomi, Kuopio and Mikkeli

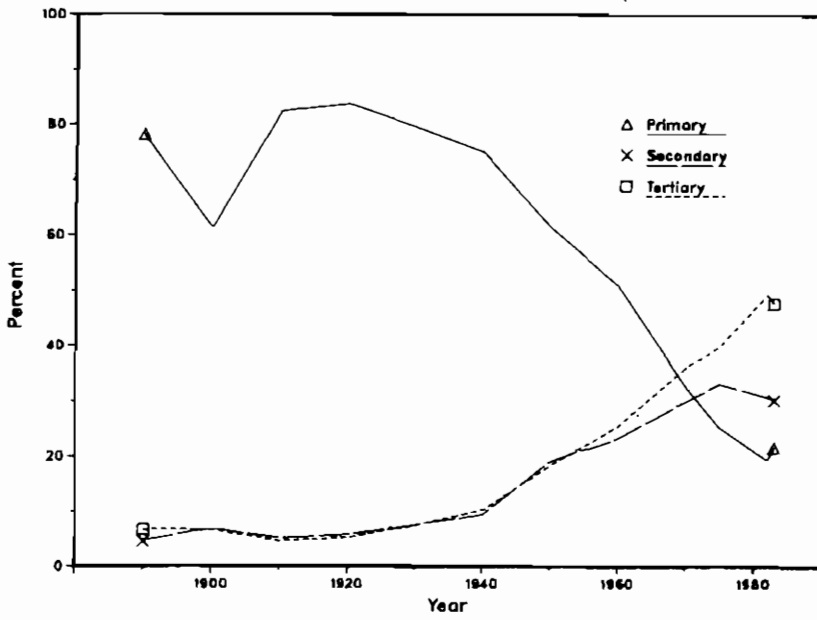


Figure 4.

Economically Active Population in Northern and Eastern Finland by Industry  
1890-1983  
Provinces of Lapland, Oulu and Pohjois-Karjala

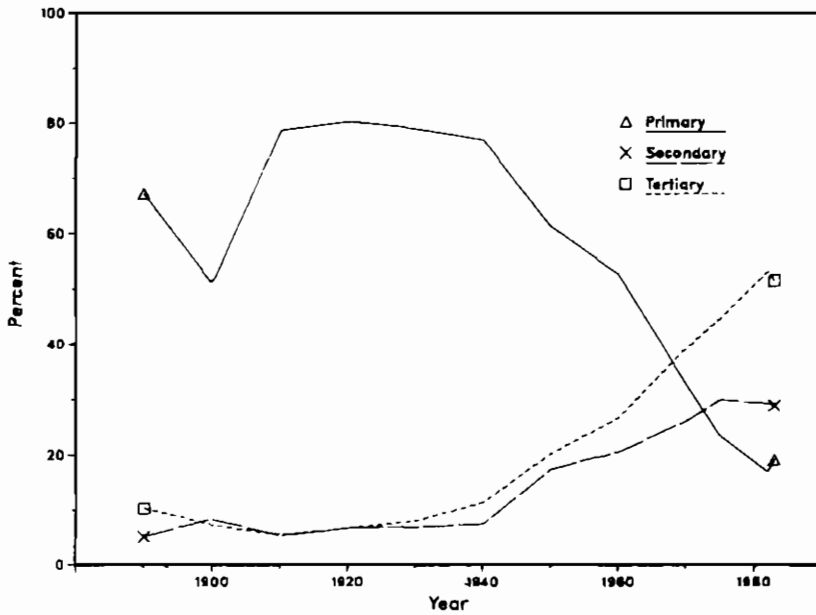
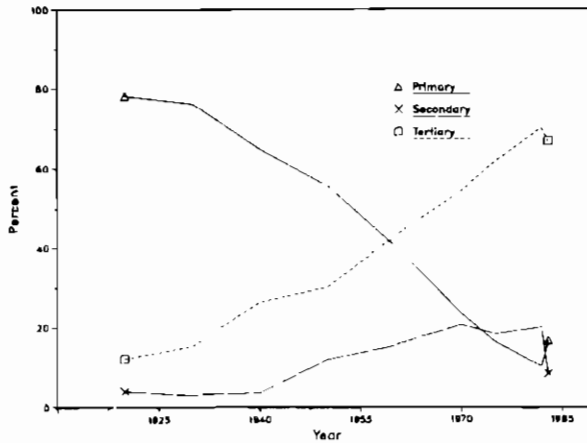


Figure 5.

Economically Active Population in Province of Ahvenanmaa  
by Industry, 1920-1983Table 1. Internal migration in Finland 1881-1980  
(annual average per 1000)<sup>1</sup>

Years	Migration to community		Migration from community		Net migration	
	urban	rural	urban	rural	urban	rural
1881-90	52	16	31	19	+21	-2
1891-00	57	20	35	22	+22	-2
1901-10	57	20	37	23	+19	-3
1911-20	47	22	35	24	+11	-2
1921-30	42	20	26	23	+15	-3
1931-40	64	35	47	39	+17	-4
1941-50	53	41	42	44	+10	-3
1951-60	51	34	38	41	+13	-7
1961-70	60	39	49	49	+11	-9
1971-75	58	40	51	48	+6	-7
1976-80	41	38	42	37	-1	+1

<sup>1</sup>The figures do not include movements from the areas ceded to the Soviet Union after the Second World War. Since 1951 small country towns are included in urban communes; previously they belonged in statistical terms to the rural communes. The figures for the 30s are so high because they partly reflect the tightening of penalties if movements were not promptly registered by the migrant; thus some who had moved in the 20s registered themselves in the 30s.

Table 2. Internal net migration in Finland 1955 - 1980 by province

	Uusimaa		Turku-Pori		Ahvenanmaa		Häme		Kymi		Mikkeli	
	urban	rural	urban	rural	urban	rural	urban	rural	urban	rural	urban	rural
1955-60	+15	+19	+13	-10	+40	-7	+14	-8	+12	-11	+11	-16
1961-65	+18	+16	+13	-11	+24	-10	+8	-9	+8	-9	+18	-20
1966-70	+11	+22	+11	-9	+23	+13	+10	-4	+5	-3	+9	-20
1971-75	+9	+17	+9	-5	+16	+4	+9	-1	+5	-10	+8	-19
1976-80	+2	+10	-2	+1	+4	+10	-2	+2	-4	+1	+3	-2
	North Karelia		Kuopio		Central Finland		Vaasa		Oulu		Lapland	
	urban	rural	urban	rural	urban	rural	urban	rural	urban	rural	urban	rural
1955-60	+11	-21	+9	-16	+22	-8	+12	-10	+18	-11	+14	-3
1961-65	+13	-25	+15	-21	+20	-15	+16	-12	+24	-15	+12	-9
1966-70	+12	-25	+6	-20	+10	-13	+7	-9	+8	-16	+3	-5
1971-75	+10	-27	+7	-21	+4	-12	+3	-10	+3	-15	+3	-16
1976-80	-1	-5	+2	-2	-4	-3	+2	+2	-3	-1	0	-3

Table 3. Emigration from Finland to North America 1880-1981  
(Source: Institute of Migration 1984)

1880-1899	83 048	emigrants
1900-1919	231 007	"
1920-1939	64 373	"
1940-1959	21 358	"
1960-1981	9 413	"

The nineteenth century brought process which started an accelerating migration in Finland. The natural growth of the landless worker population was rapid already in the early 1800s. This is partly due to legislation and a general custom to leave the farm to only one heir. In the middle of the century awakening industrialization involved changes causing increasing pressure towards a greater regional mobility. First, laws were passed lifting bans on migration, occupational mobility and industrial activity. Second, the existing system protecting the landless population without permanent employment was abolished. Up till then anybody without permanent work had to be under protection of an economically independent person. In other words the dependant was obliged to work for somebody in order to earn his living. The system guaranteed a necessary but low level of living conditions and at the same time tied the person in question to a certain place. Now everybody was free to move, but the incipient industrialization brought with it obstacles for the landless population to make a living in the countryside. Industrialization increased the demand for wood, resulting in higher prices of this rawmaterial. As a consequence landowners were not willing to let cottages with a right to use timber to the landless population. At the same time wages were gradually going up, while on the other hand the number of machines increased, decreasing the demand for workers on the farms. Manufactured products were also worsening the earning possibilities of craftsmen.

As a result of these and other processes the amount of the so-called relative overpopulation - defined as a population without land or permanent work - started to move from the countryside to towns and cities and abroad, this especially in the late 1800s. The two biggest southern cities, Viipuri and Helsinki, gained movers mainly from eastern parts of Finland, while the emigration streams to North America came mainly from western and northern parts of the country.

Rural areas lost 400 000 of their population in the period 1881 - 1939 - only the rural areas of the province of Viipuri gained more migrants than they lost. The real losers were the rural areas of the provinces of Kuopio, Turku-Pori (including Ahvenanmaa), Vaasa, Häme and Kymi (in this order). At the same time (1894-1930) about 250 000 emigrants left the provinces of Vaasa, Turku-Pori and Oulu (incl. Lapland) mainly for the United States - most of them from rural areas. Altogether during this period the number of emigrants was more than 320 000, only 43 000 returning to Finland (Virtanen 1979, 66). The provinces of Vaasa and Turku-Pori, i.e. the provinces on

the western coast, lost population more than the other areas in Finland both as internal outmigration and emigration. For example in some communities of the province of Vaasa the annual percentage of emigrants was even more than 1.5 percent out of the whole population (Kero 1974).

An interesting question is why so many people emigrated to North America and especially from the western coast, the province of Vaasa, and northern Finland. A good explanation is given by Anna-Leena Toivonen (1963) concerning the emigration from southern Ostrobothnia (Etelä-Pohjanmaa). In the late 1800s the channelling of water routes and construction of the railway network transferred the main economic activity from west to south, from the Gulf of Bothnia to the Gulf of Finland. The river valleys of Bothnia, which used to be in an excellent economic position during the old period of agriculture and manufacture, were left outside the main economic development and had to watch from the periphery the establishment of new industrial centres and the increasing prosperity of those inland who were able to use their timber. In Ostrobothnia tar production had reduced the forests and with them opportunities to take advantage of the expanding timberindustry. Tar production, shipbuilding and shipping had rendered the people of Ostrobothnia vital, ready for initiative and cooperation. When they now heard of the country in the West with all its opportunities to make money, they were, under these frustrating circumstances, more than ready to go. This element of frustration is especially emphasized by Ylikangas (1981, 225-237), who points out that because of tar production and the shipping industry a strong enterprising spirit was already created in the area before the period of industrialization. The level of prosperity was also above the average of the country. In these circumstances the collapse of economic opportunity did indeed bring intense frustration, and it was this, together with the traditional readiness to act if needed, which made so many move far away over the sea.

### **Leap into a real industrial society**

The reparations payable after the Second World War set industrial activity moving very quickly. Expansion of existing industries was needed, as well as the creation of new fields and products. The change in industrial structure was already indicated in Figures 1-5. However, not only the industrial structure underwent marked changes; also the whole society developed rapidly, emerging as a service society in



the 60s (see Figures 1-5). This development involved a kind of innovation wave resulting in many important renewals such as the reform of the school system, university degree courses, housing programs, the health care system, regional planning and policy.

Along with these innovative reforms other material changes were under way. Mass communication became more effective - for example TV sets were spread all over the country, the transportation network developed rapidly, general prosperity increased etc.

Both innovative and material aspects of development were concentrated in urban centres. A surfaced road network leading to these centres was in fact constructed in a very short period. The rural areas of the country were now faced with the threat of attraction to industrial and urban society. In these circumstances they were not able to compete with the urban areas in supplying jobs, education and other means of promoting economic and social living conditions. A mass movement from the countryside, especially from sparsely populated parts, to urban centres commenced. In some communities ten more than half of people living outside the densely populated areas moved away. For example in the municipality of Rautavaara in eastern Finland the number of such people decreased from 4673 in 1960 to 2248 in 1980. It is also significant that while the total population of this municipality declined by two thousand (from 5457 to 3481) in these twenty years, the agglomeration increased its population by four hundred people, in other words by fifty per cent.

Surprisingly enough the migration streams led not only to urban centres in Finland but also abroad, mainly to Sweden. Altogether since the Second World War about 600 000 persons have emigrated, some half of them returned. About eighty per cent of these emigrants moved to Sweden, respectively seventy per cent of those who came back were from Sweden. Three phases can be seen in this emigration after the Second World War: 1) emigration increased steadily with only little return (till the year 1951), 2) emigration varied according to economic fluctuations in the 1950s, accelerating in the 60s, and the number of those returning was steady, and 3) the level of emigration evened out in the 70s, and at the beginning of the decade the number of those coming back exceeded the number of emigrants (Majava 1979). The peak of emigration was 1969 - 1970, about 80 000 Finns migrating to Sweden and only some 17 000 returning. How bad the situation really was is well described by the following figures: during these two years six per cent of the population in the province of Lapland emigrated to Sweden, four per cent from the other northern province, that of Oulu, and two per cent of the whole population in Finland. However, better years were to come in the early 70s, when

the number of returnees exceeded that of emigrants. The situation soon changed, but again at the beginning of the 80s there were more returning than leaving the country. Figures 6 and 7 indicate that the peak of emigration fell on the year 1970, that of internal migration respectively on 1974.

Figure 6. Intermunicipal Migration in Finland 1961–1980

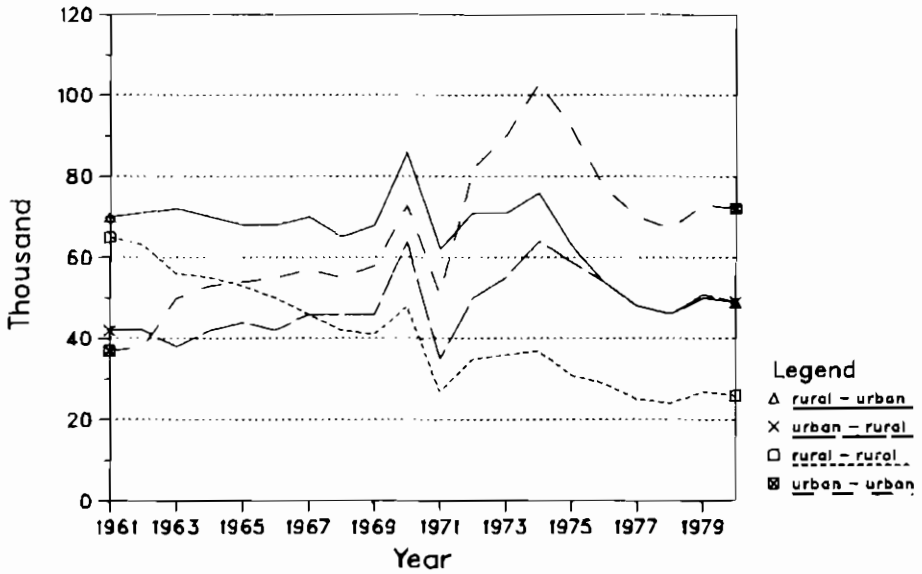


Figure 7. Migration between Finland and Sweden 1946 - 1982 (according to Swedish statistics, source: Korkiasaari 1983)



In the mid-seventies the proportion of tertiary industries involved over fifty per cent of the economically active population in the country. That of secondary industries started to decline and primary industries reached their minimum level, somewhat above ten per cent. We came to the stage of an information society with rapid growth of sectors concerned in one way or another with producing and mediating information. Knowhow became a keyword, meaning an ability to make use of the new technology. From the point of view of migration the crucial question was - and still is - how the new technology affects the distribution of jobs between different regions.

There are some perspectives as to future prospects (VNK 1983). The growth of production has been predicted to slow down somewhat in all sectors in the 80s. The same tendency seems to apply to productivity, but the use of new technology, as well as increasing investments in machines and other technical facilities, will have the opposite effect. The increased productivity and decreased demand for labour caused by these technological changes are expected to manifest themselves more markedly in the 90s. It is also estimated that the new technology will remove about 100 000 jobs in manufacturing in the 80s but at the same time create at least 70 000 new jobs. A balance between this demand for and supply of labour can be reached only by training and education and/or by migration.

Though the number of jobs in developing areas have increased in recent years, the unemployment rate has gone up due to the increased supply of young labour. The situation will be further worsened by the fact that labour-intensive industries will not move as much as earlier to developing areas. This is likely to add to the pressure towards outmigration. Other trends seem to be working in the same direction. Among the most important of these are perhaps development trends in the service industries and in working time. As we saw in Figures 1-5, service industries grew quickly in developing areas (northern, eastern and central parts of Finland). However, the 'traditional' service industries are not expected to continue their growth at the same rate. The most rapid growth is anticipated in more modern industries such as information communication, financing and insurance activity and in sectors serving commercial activity, especially Automatic Data Processing. These industries tend to concentrate in urban centres.

The shortening of working time is one possible means of alleviating unemployment. However, its regional influences depend on the nature and diversity of the industrial structure. The eventual increase

in employment would fall mainly in the manufacturing and service industries, especially the public sector (VNK 1983). The supplementation of shorter working time by increasing productivity could be most effectively achieved in industrialized areas. From the regional point of view the demand for labour would grow most in urban centres and in the agglomerations of municipalities, as well as in the province of Uusimaa (southern Finland) and the Helsinki Metropolitan Area. In these areas the labour available would not be able to meet a greater demand. A solution would be a more intensive migration to these areas.

The new technology makes it possible to process and transfer information quite independently of the location of jobs, and offices can be decentralized into smaller units connected with each other by information transfer linkages. In principle a regional deconcentration of jobs should be possible. The level of education and the ability to accept innovations are fairly high in the developing areas of the country, even from an international point of view. The proportion of young labour is relatively high, transportation and communication linkages are good throughout the country, as is the technical and social infrastructure. In the developing areas there are many small and medium size enterprises which are flexible in adopting new means of production and new products. On the negative side, however, there are also many difficulties such as poor resources for education and retraining, a certain inflexibility of the education system, retraining problems in the case of older members of the labour force, organizational difficulties to make the most of the new technology, outdated technical facilities of enterprises, insufficient research work, poor financial opportunities (especially scarce risky money) and so on.

All these and many other things bring questions of future migration down to the following points:

- 1) will migration streams go on at the same low level as they have done in recent years,
- 2) will migration to urban centres and the southern parts of the country accelerate again as a consequence of development and use of the new technology, and
- 3) will migration accelerate in the future but mainly in the form of increased occupational and regional mobility of more educated workers and professionals, not only to centres and the south but also in reciprocal circles. This alternative could be seen among other things in the growing number of return migrants and re-migrants in general.

There follow some empirical results concerning migration in Finland in 1981 (For internal migration 1977-78 see e.g. Söderling

1983). The empirical data comprise in that year intermunicipal migrants (193 847) immigration (15 768) and emigration (10 041). The data were collected by the Central Statistical Office of Finland. There are also data on the same persons as to their migrating or not migrating in the following year. On this basis it is possible to study return migrants and other re-migrants during these two years. The years 1981 and 1982 can be regarded as an example period of the initial phase in the transfer to the era of information technology.

In absolute terms the main migration streams are between urban centres, but if compared with the proportions of the total population living in rural and urban areas the trend is not so obvious (see Table 4). Most clearly this can be seen in urban-rural streams, which are stronger than those in the opposite direction. Emigration to the Nordic countries was greatest from urban centres.

The figures indicating the proportions of 1982 return migrants out of 1981 migrants are of most interest (Table 4). As to internal

Table 4. Internal migration 1981, emigration and immigration 1981 and proportion of 1982 return migrants and other re-migrants<sup>1</sup>

Migration 1981	1981 migrants (%)	of whom 1982		
		return migrants (%)	other re-migrants (%)	
rural - rural	(26 350)	12.0	4.0	9.2
rural - urban	(48 098)	21.9	4.3	7.4
rural - Nordic countries	(2 406)	1.1	14.0	6.0
rural - other countries	( 434)	0.2	2.6	6.3
urban - rural	(49 334)	22.4	4.6	6.6
urban - urban	(70 065)	31.9	4.8	7.2
urban - Nordic countries	( 5 046)	2.3	15.6	4.7
urban - other countries	( 2 158)	1.0	7.1	3.8
foreign countries - rural	( 6 107)	2.8	7.4	10.5
foreign countries - urban	( 9 661)	4.4	9.7	10.7
total	(219 656)	100.0	5.3 (11 689)	7.5 (16 573)

<sup>1</sup>Return migrants are defined as those who returned in 1982 to the commune of origin 1981. Other re-migrants are those who re-migrated somewhere else in 1982.

migration, urban migrants were most likely to return to their commune of origin in 1982, the percentages being 4.8 (urban - urban) and 4.6 (urban - rural). However, the differences between all internal figures are not so great. In emigration, on the other hand, the situation is different. About fifteen per cent of the emigrants to the Nordic countries (mainly to Sweden) came back during the next year. This percentage is higher than that of internal migrants. On the average one out of twenty out-migrants (internal migrants, immigrants and emigrants) returned to their former home commune or country after a short stay.

Table 4 affords an opportunity to construct the migration patterns of returnees. In relative terms the hierarchy of popularity is as follows:

Internal return migration patterns:

	origin 1981		Commune of arrival 1981		return 1982	
						(Returnees 4.8 per cent of the migrants in this group)
1.	'urban	-	rural	-	urban'	
2.	'rural	-	urban	-	rural'	(4.6 per cent)
3.	'rural	-	urban	-	rural'	(4.3 per cent)
4.	'rural	-	rural	-	rural'	(4.0 per cent)

More marked differences are however seen in the international migration chains:

	Commune of origin 1981		Country of of arrival 1981		Commune of return 1982	
1.	'rural	-	Nordic countries	-	rural'	(Returnees 14.0 per cent of the emigrants in this group)
2.	'rural	-	other countries	-	rural'	( 2.6 per cent)
3.	'urban	-	Nordic countries	-	urban'	(15.6 per cent)
4.	'urban	-	other countries	-	urban'	(7.1 per cent)

These two lists indicate that emigration in 1981 was much more a matter of 'visiting' than was internal migration. The figures are very similar to those describing return migrants from Sweden (e.g. Heikkinen 1974; Korkiasaari 1983). According to Heikkinen 23 per cent of returnees had stayed less than a year in Sweden in 1980, the corresponding percentage in 1981 being 17.

As to internal migration Table 4 indicates that in terms of total re-migration rural migrants were as active as urban. Although they

did not come to their former home commune as often, they did migrate further in 1982, especially those moving between rural communes. The average re-migration percentage was about thirteen.

Table 5. Average commune percentage of 1982 return migrants (internal and international) by province and type of commune

Province	Type of commune		
	urban	rural	total
Uusimaa	4.1	4.5	4.4
Turku-Pori	4.4	4.4	4.4
Ahvenanmaa	6.2	5.0	5.0
Häme	5.1	3.9	4.2
Kymi	4.9	3.5	3.9
Mikkeli	4.4	3.1	3.3
North Karelia	5.6	5.2	5.3
Kuopio	4.2	4.9	4.8
Central Finland	3.9	5.3	5.1
Vaasa	5.3	5.7	5.6
Oulu	6.1	5.3	5.4
Lapland	7.2	7.1	7.2
Total	4.9	4.8	4.8

All return migration (internal and international) was most lively to the provinces of Lapland (7.2 per cent of out-migrants as a commune average), Vaasa (5.6), Oulu (5.4), North Karelia (5.3) and Ahvenanmaa (5.0) (Table 5). All the provinces are traditional areas of out-migration as also of emigration (excl. North Karelia). Both urban centres and rural areas have been attractive in these provinces. Map 1 shows the level of return migration by commune. The most attractive communes seem to be concentrated in certain areas, indicating some kind of larger fields of attraction.

Tables 6 and 7 reflect the duration of unemployment a year before migrating (1980) and the socioeconomic status of the migrant population. As a general feature particularly return migrants have suffered most from unemployment. In the migration chain 'rural - rural - rural -' the situation has been worst, as many as 17.5 per cent of all return migrants in the group being unemployed for at least one month in 1980, five per cent even more than half a year. The unemployment rate among all migrants was about ten per cent, being higher than that among all re-migrants. It should be noticed that Tables 6 and 7 include also economically inactive migrants. If they were excluded

Map 1. Percentages of 1982 return migrants out of all 1981 migrants by commune

Legend

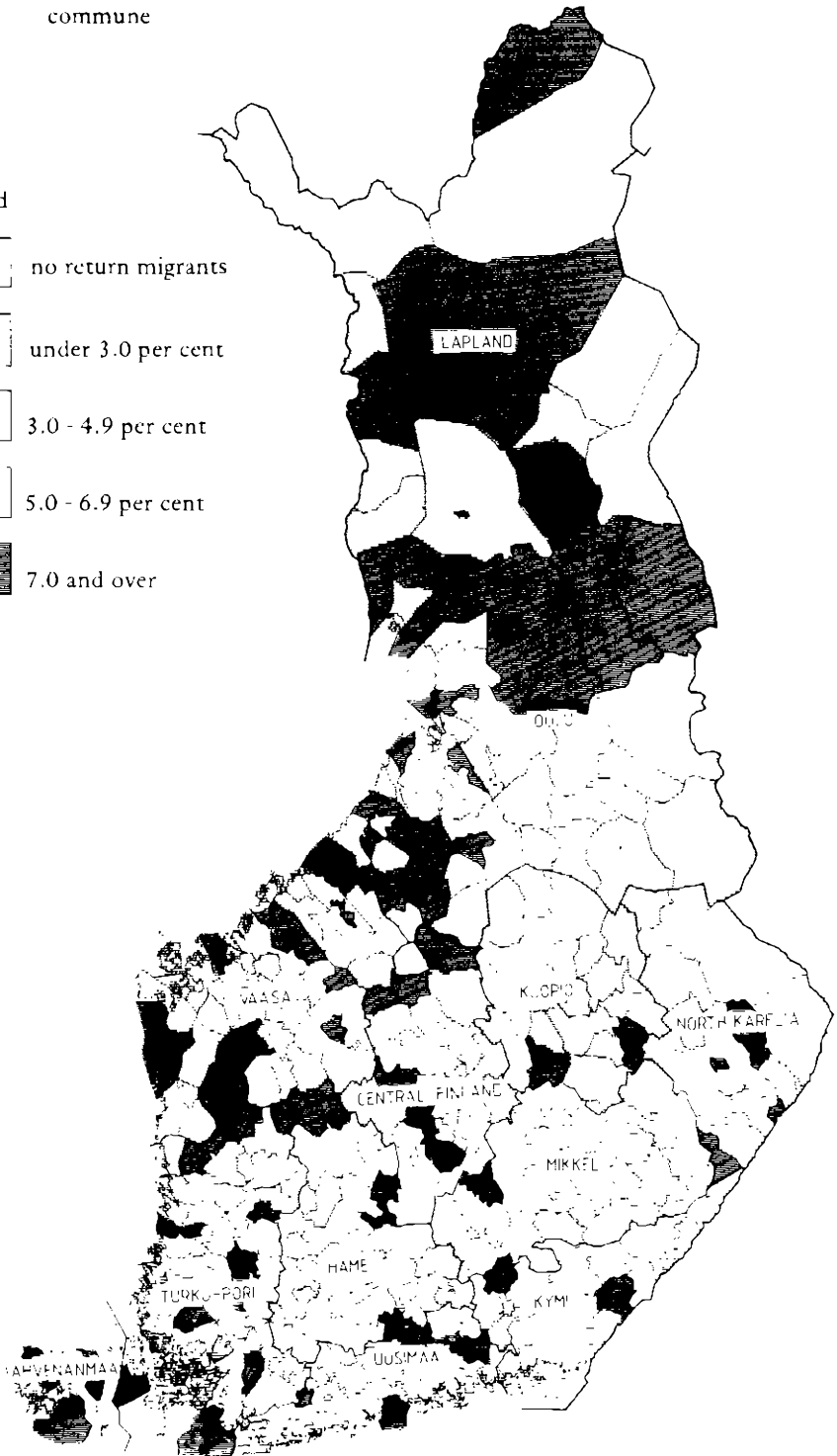
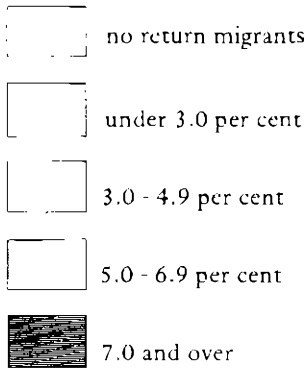




Table 6. Migrants' socioeconomic status and duration of unemployment by migration pattern

Migrants' socioeconomic status	Migration from rural commune					
	to rural	of whom		to urban	of whom	
	in 1981	return migrants	other re-migrants	in 1981	return migrants	other re-migrants
	(26 350)	(1043)	(2514)	(48 098)	(2083)	(3557)
Employers, farmer	0.1	0.0	0.0	0.1	0.0	0.1
"    , other	0.9	1.0	0.7	0.9	0.8	0.5
Own-account workers,						
agriculture	1.7	1.9	1.2	0.9	0.9	0.8
"    , other	1.7	1.9	1.7	1.3	1.3	1.0
Upper-level employees						
Senior officials and upper management	2.1	0.7	2.1	1.8	1.2	1.9
Senior officials and employees in research and planning	1.7	0.4	1.3	1.9	0.9	2.7
Senior officials and employees in education and training	3.1	3.0	5.1	2.3	1.3	3.1
Other	3.1	1.0	3.1	2.9	2.3	2.9
Lower-level employees						
Supervisors	4.6	1.8	4.1	3.6	2.2	3.2
Clerical and sales workers working independently	5.1	4.4	5.0	5.8	5.5	5.2
Clerical and sales workers in routine work	2.0	1.2	1.5	2.7	1.8	2.3
Other	6.3	6.6	5.4	5.2	4.5	5.5
Manual workers						
Workers in agriculture etc.	4.2	7.1	4.8	1.5	2.6	1.8
Manufacturing workers	14.4	17.5	13.9	12.8	15.9	10.5
Other industrial workers	4.6	6.3	4.4	4.8	6.2	4.4
Workers in delivery and services	4.6	6.4	4.4	4.8	6.3	4.4
"    "    "    "	6.1	5.9	6.6	6.6	9.3	6.4
Pensioners	4.8	3.6	2.7	5.3	4.8	2.8
Students and pupils	11.2	19.0	18.1	17.2	22.8	25.3
Miscellaneous	22.3	16.9	18.3	22.4	15.7	19.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Duration of unemployment in 1980						
Not unemployed	90.1	82.1	86.3	89.5	85.6	86.8
Unemployed, 1-2 months	3.0	6.2	4.5	3.6	4.5	4.9
"    "    , 3-4 "	2.5	3.3	3.4	2.6	3.7	3.0
"    "    , 5-6 "	1.5	2.7	2.2	1.6	2.1	2.3
"    "    , 7-12 "	2.6	5.2	3.3	2.4	3.9	2.8
Unknown	0.1	0.4	0.3	0.3	0.2	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 7. Migrants' socioeconomic status and duration of unemployment by migration pattern

Migrants' socioeconomic status	Migration from urban commune					
	to rural	of whom		to urban	of whom	
	in 1981	return migrants in 1982	other re-migrants in 1982	in 1981	return migrants in 1982	other re-migrants in 1982
	(49 334)	(2270)	(3275)	(70 065)	(3363)	(5059)
Employers, farmer	0.1	0.0	0.0	0.0	0.0	0.0
"    , other	1.0	1.0	1.3	0.6	0.2	0.7
Own-account workers, agriculture	0.3	0.4	0.2	0.1	0.1	0.1
"    , other	1.5	1.8	1.5	1.0	1.0	1.1
Upper-level employees						
Senior officials and upper management	2.3	1.1	2.0	4.3	2.9	2.5
Senior officials and employees in research and planning	2.6	1.4	1.5	4.5	2.2	3.6
Senior officials and employees in education and training	2.1	2.3	1.9	2.2	1.1	2.3
Other	3.1	2.1	3.7	5.3	4.2	5.0
Lower-level employees						
Supervisors	5.3	3.4	4.5	4.5	3.4	4.4
Clerical and sales workers working independently	7.6	7.6	7.0	8.9	9.3	8.8
Clerical and sales workers in routine work	3.0	2.7	2.2	4.1	4.0	3.3
Other	6.3	5.0	6.8	5.8	6.0	7.0
Manual workers						
Workers in agriculture etc.	1.0	1.0	1.6	0.3	0.9	0.5
Manufacturing workers	16.4	15.8	13.8	8.5	10.2	8.4
Other industrial workers	6.0	7.2	4.5	4.2	6.0	4.5
Workers in delivery and services	8.9	11.2	7.5	7.5	10.3	7.8
Pensioners	4.2	4.1	2.9	3.7	2.9	2.0
Students and pupils	7.7	13.3	14.2	12.3	16.8	18.8
Miscellaneous	20.6	18.6	23.1	22.2	18.5	19.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Duration of unemployment in 1980						
Not unemployed	92.6	87.5	87.8	92.8	87.9	90.3
Unemployed, 1-2 months	2.5	4.0	4.2	2.7	4.6	4.1
"    , 3-4 "	1.7	2.7	3.0	1.3	2.8	2.3
"    , 5-6 "	1.2	1.9	1.9	1.1	1.9	1.2
"    , 7-12 "	1.8	3.6	2.8	1.5	2.4	1.8
Unknown	0.2	0.2	0.3	0.2	0.4	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

the unemployment rate would be much higher. Thus unemployment can be to a great extent seen as an impulse to migration, especially to re-migration. Earlier empirical results concerning effects of economic difficulties on return migration seem also to be confirmed (cf. e.g. Lee 1969).

Transfer from a rapidly industrializing phase to a postindustrial society leads to changes in migration streams, as was shown earlier in this paper. The greatest change may probably be seen in the direction of urban-rural; the main migration streams are no longer from rural to urban. Thinking of future prospects structural changes in migration streams are of greatest importance. Tables 6-7 shed light on a few aspects of the question. The following trends can be clearly discerned:

1. Upper-level employees with administrative, managerial, professional and other occupations are fairly mobile if their proportion among migrants is compared with that in the total population. Especially this can be seen among the migrants from urban to rural communes. Only a minor proportion of these returned the next year to their former home commune but there are more of them among other re-migrants.
2. Lower-level employees with administrative and clerical occupations are well represented among the migrants from urban communes.
3. Manual workers are, more than others, return migrants. This applies to all migrant groups. They, together with students and pupils, constitute more than half of all returnees, the migrants between urban communes being the only exceptions. The manual workers form a larger group than students and pupils.

Table 8. Selected 'innovative' occupations<sup>1</sup> and industries<sup>2</sup> 1980, and education by migration pattern 1981.

	rural commune		Migration from urban commune		Whole economically active population 1980
	to rural	to urban	to rural	to urban	
	(17 681)	(31 504)	(34 928)	(48 205)	(2 222 139)
'Innovative' occupation (percentage of all migrants with known occupation)	18.9	19.6	20.1	28.2	15.0
'Innovative' industries (percentage of all migrants with known occupation)	4.6	6.8	7.9	12.5	7.0
Education in technology and natural sciences (percentage of all migrants with known education)	(12 622)(22 546)		(25 155)(39 306)		
lower level of upper secondary education	24.2	26.5	25.7	16.1	13.5
upper level of upper secondary education	4.3	4.8	5.4	4.9	2.6
higher education	4.0	5.9	5.5	9.0	2.5

- 1 Planning, administrative and research work in the technical fields; supervision and executive work in the technical field; chemical, physical and biological work; pedagogic work; artistic and literary work and entertainment; other technical, physical science, social science, humanistic and artistic work; administration of private enterprises and organizations; ADP operators
- 2 Communication, financial institutions, insurance, real estate and business services

In Table 8 there are percentages indicating the proportion of selected occupations and industries which can be characterized as innovative. The term 'innovative' refers to the new effects which people in a certain occupation or industry may develop in the social and economic life of an area. The selected occupations and industries should be seen only as examples.

It is interesting to see that rural areas are gaining these innovative elements rather than losing them (see Table 8). The percentages of migrants from urban to rural communes are higher than those of the migrants in the opposite direction. The proportion of more educated migrants is also fairly high in this migrant group. Probably the migrants from urban to rural communes are often heading to neighbouring conurbation areas rather than to a real periphery. However, the figures indicate some spreading effects of development. If compared with the percentages of the whole economically active population of the country, the migrants are relatively often working in innovative occupations and industries, and are well educated.

Thinking of future prospects the tables presented above afford some encouraging hints. Labour with occupations calling for more innovative activity is mobile, and what is important is that this part of labour seems to be prepared to migrate in many directions. From the point of view of regional policy this is essential because use of the new technology demands a high level of skill. If this skill can not be achieved by training labour in less developed areas the only way is to promote spatial mobility of those already possessing such skill. Although it may not be possible to induce these persons to settle down permanently in less developed areas it might be worth considering regional policy measures to support them for a shorter stay. This type of 'period use of labour' might be most suitable for young persons entering work life after their schooling. This way enterprises might be able more easily to recruit workers having skill or at least an ability to obtain it in a short time. The migration process would also involve spreading innovative resources spatially.

The results presented in the tables above are only preliminary but the data afford an opportunity to study the question in greater detail. The migrating patterns of certain strategic professional and educational groups with regard to the structure and location of the communes of origin and arrival are one of the most important questions to be studied.

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