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CONFERENCE PAPERS 8

THE PROCESSES OF DEPOPULATION OF RURAL AREAS IN CENTRAL AND EASTERN EUROPE

Proceedings of the International Seminar
on Rural Depopulation
Szymbark, Poland, September 1989

Edited by
ANDRZEJ STASIAK and WŁODZIMIERZ MIROWSKI

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INTRODUCTION

The contents of the present volume is the result of the international seminar on "Processes of Depopulation of Rural Areas in Poland and other Central and East-European Countries", organized and run by the Institute of Geography and Spatial Organization of the Polish Academy of Sciences on September 11-16, 1989 in Szymbark, Poland.

When preparing the seminar we decided to:

1/ present the results of the first stage of broader studies conducted in Poland within the framework of the research program of the Polish Academy of Sciences, RPBP 03.5, entitled "Depopulation of rural areas in Poland", and concerning both Poland as a whole and particular regions,

2/ to discuss the question of the degree to which the rural-urban migration processes in Poland after 1945 are similar to and to which they differ from those taking place in the so called socialist countries of Central and Eastern Europe and in certain capitalist countries, a discussion based upon the papers presented by the guests invited,

3/ bring about a closer cooperation among the interested scholars and scientific institutions of the Central and Eastern Europe.

The substantial basis for the Seminar was constituted by the results of broader studies conducted in Poland and triggered off by the analysis prepared by the Academy, and terminated in 1987, commissioned by Polish government, concerning the consequences of rural-urban migrations in Poland.*

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* The study of the Polish Academy of Sciences, entitled "The Analysis of Conditions and Consequences of Population Migrations from Rural to Urban Areas with Particular Consideration of the Influence of These Migrations upon the Demographic Structure", Warsaw, February 1987, mimeograph, 336 pp., elaborated collectively under the leadership of Professor Andrzej Stasiak.

The analysis mentioned made it apparent that overly rural-urban migrations in Poland, especially in the period 1971-1980 have led to disturbances in the age and sex structure of rural population and to excessive depopulation of some regions, especially of North-Eastern Poland. Conclusions drawn from the analysis were so significant that a special research program of the Polish Academy of Sciences, RPBP 03.5, mentioned under (1), was created and is coordinated by the Institute of Geography and Spatial Organization and the Institute of Rural and Agricultural Development, both of the Polish Academy of Sciences. These two institutes have conducted research for the scale of the country as a whole and in 9 selected regions, assisted by the regional study groups. Papers presenting results of this research are contained in parts I, II and III of the volume.

We are perfectly aware that the rural-urban migrations have their general regularities, and that they touch practically all the modern societies. There are, certainly, some specific features and peculiarities in each country, and within them - in individual regions (just as it is in Poland) and that is why we have invited the representatives of scientific communities dealing with these problems, asking them to provide reports concerning their respective countries. We have met with almost completely positive response, and that is how we obtained the images of migration and depopulation of rural areas in selected republics of the USSR (part IV of the volume) and in some countries of Central and Eastern Europe (part V of the volume). Then, for comparison, we included reports on rural-urban migration processes in England and Wales, where, in principle, the division into rural and urban areas disappears (an extreme example in European scale), and Finland, where an acceleration of processes of urbanization and rural-urban migration took place after the World War II (part VI of the volume).

Animated discussion during the Seminar and vivid interest of its participants in the scientific problems considered and their socio-economic importance have resulted in a resolution to create an International Centre for Rural-Urban Migration Studies, having its seat in Poland, organizationally affiliated with the Institute of Geography and Spatial Organization of the Polish Academy of Sciences. The purpose of the International Centre would be to initiate studies, conferences, and publications of international as well as national significance, devoted to the discussed problems (see the "resolution").

I do consider publication of the present volume a first step towards practical implementation of the resolution accepted at the Seminar and a first symptom of activity of the International Centre for Rural-Urban Migration Studies.

Professor Andrzej Stasiak

Chairman, International Centre for
Rural-Urban Migration Studies

Head, Basic Research Program
of the Polish Academy of Sciences,
RPBP 03.5: "Depopulation of Rural
Areas in Poland"

Warsaw, June 1990

PROBLEMS OF DEPOPULATION OF RURAL AREAS IN POLAND AFTER 1950

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1. Introductory remarks

In spite of significant decrease of net migrations losses in rural areas (from some 200 thousand persons a year in the decade of the 1970s to approximately 120-140 thousand persons a year currently), spatial concentration of this phenomenon in definite areas, as well as selective nature of migrations (persons migrating are usually young, and very often they are women in marrying age) already had and will yet lead to serious disturbances in socio-economic development of these areas. I shall concentrate on these problems which I deem the essential ones. It is therefore my personal conviction and my personal choice of subject. I am presenting in this paper:

(1) The course of rural-to-urban migration processes in Poland in the years 1950-1988, against the background of general demographic transformations in our country.

(2) Changes in population of particular voivodships (provinces) and gminas (communes) over the period of 1979-1985 with an attempt at indication of spatial concentration of the phenomena presented.

(3) A look into future until 2000.

(4) An attempt of synthesis.

I should mention that it would not be possible to undertake such a large research program, encompassing all provinces (voivodships), communes and towns, without a significant assistance of the Central Statistical Office, and especially its Census Bureau and Department of Demography, as well as the exsperts from the Polish Townplanners Association, Office of Social Activity of the Polish Academy of Sciences, and the Secretariate of the VIIth Department of the Academy. I would like to express in this place my cordial gratitude to all these persons and institutions.

2. The course of rural-to-urban migrational processes in Poland 1950-1988

Before we pass over to presentation of migrational processes on the line of rural-to-urban flows in Poland, let us turn attention to general changes in proportions of population distribution in villages and towns, to the characteristics of the urban and rural settlement system, and to transformations of occupational structures in villages. Population distribution in Poland and changes with that respect are illustrated by the figures below, given in million persons:

	1946	1988	Changes over 1946-1988
Polish totals	23.6	37.8	+14.2
Urban areas	8.0	23.2	+15.2
Rural areas	15.6	14.6	- 1.0

Thus, while the total population number increased by some 14.2 million people, i.e. by more than 60%, this whole increase being absorbed by towns, population of rural areas oscillates around the almost unchanged level of approximately 15 million. There is also a process of concentration of urban population in large towns, i.e. in towns having more than 100 thousand inhabitants, and especially in those above 200 thousand inhabitants (although medium-sized towns, below 100 thousand inhabitants, grow quicker in relative terms). Thus, for instance, in 1970 the total urban population in Poland accounted for 52% of national population. Large towns accounted for 22.6% of total population and for 43% of urban population. Towns were inhabited in 1988 by 61.2% of the total national population, while larger towns - by more than 30% of national population, that is - about a half of urban population. (Mały Rocznik..., 1989). There were, it should be added, only 41 such towns out of the total of 822 towns in Poland. It is characteristic for the Polish urban network that there is relatively high number of towns, of which more than half are small towns, with up to 10 thousand inhabitants, closely connected with rural settlement system.

That is how we have touched the problems of rural settlement system in Poland. There are some 43 thousand villages in Poland, where approximately 15 million people, i.e. 40% of national population, live. Villages in Poland are generally small. Average village population is at 360 persons. This fact

hinders to a large extent provision of technical and social infrastructure to rural areas, which in turn, directly or indirectly, influences migrational motivations of rural population. Villages considered in Poland as medium-sized (200-500 inhabitants) dominate in the rural settlement system (some 40% of villages and 1/3 of rural population). There are only 2.4 thousand large villages (1.0 thousand and more inhabitants), which means that a bit more than 5% of villages, and 1/4 of rural population live in these villages. Such villages are certainly current of potential local centers. Still, concentration of villages of this type is very differentiated according to regions. Thus, there are more of them in Southern Poland and in the vicinity of larger towns. On the other hand, in North-Eastern and Central Poland communal centers are often located out of necessity in medium-sized villages (200-500 inhabitants), since there are no bigger ones in this area. Within these territories there are also numerous small and very small villages i.e. inhabited by less than 200 or even 100 persons. As will be seen further on, there is a correlation with rural-to-urban migration processes, since most people outmigrate from small villages.

There were altogether 1432 villages - commune centers in Poland in 1987. Out of these as many as 206 centers of communes (gminas) were located in villages having less than 500 inhabitants. In 1987 out of 2121 communes there were 572 such in which local councils and commune managers acted simultaneously for the commune and town (usually a small town of less than 10 thousand inhabitants); then there were 117 communes having their seat in towns, but with separate councils and management. It should be mentioned at this point that from among some 250 small towns inhabited in 1978 by less than 5 thousand people each, more than 100 have shown a population decrease in the period of 1971-1978, which would indicate disruptions in socio-economic development of such towns. (A.Stasiak, H.Rucz-Pruszyńska, 1986).

It should be also remembered that while there has been a large degree of stability in total rural population numbers between 1950 and 1978, essential changes occurred in occupational structure of rural population (and this process still goes on). In 1950 the share of non-agricultural population in rural areas was at around 22%, by 1978 this share increased to over 50%, and remains presently at more or less the same level. In 1978 only Łomża voivodship had mere 23% of non-agricultural population, while, for instance, in Bielsko-Biała and Katowice voivodships this share attained over 80% . According to studies of the Central Statistical Office, performed in

1982, only 25% of country's population (and 63% of rural population) lived in households related to private farming. In 1978 there were approximately 8 million working people living in rural areas, out of whom 3.3 million worked outside agriculture. Still, one should very clearly distinguish residence location from job location. This divergence is made explicit by the data of 1982, which indicate that employment outside agriculture in rural areas was 1226 thousand (in socialized economy) plus 140 thousand in private crafts, that is - together some 1.4 million people (Statystyka Gmin, 1984). Thus, the conclusion is that daily migrations - job commuting - from rural to urban areas and back - accounted for approximately 1.8 million people (K.Dziewoński, P.Korcelli, 1981). Great regional differentiation is observed also with that respect.

2.1. Migrations 1950-1985

Causes which contribute in Poland to rural-to-urban migrations are composed in a way of two great groups, which are, though, quite difficult to discern, and whose weight changes over time. First cause was enormous overpopulation of Polish countryside before 1944, only partly resolved by the land reform of 1944/45 and by the resettlement into the Regained Territories in the years 1945-1948. Thus, migrational outflows to towns were caused in the first periods of socialist industrialization by economic reasons (this regards primarily the 1950s). Later, sociologico-psychological motivations started to play ever increasing role at the side of economic ones, the new motivations including the possibility of acquiring additional leisure time in town, this leisure time being hard to find in private farming, an easier access to education, culture and all types of service, a possibility of relatively quick professional and social career (parallelly to a decline of prestige and status of a peasant - farm-owner). With accelerated economic development of the 1970s these motivations became for rural youth, and especially for young women, the main engine behind the great migrational flows of the decade of 1971-1980. Economic disturbances of the 1980s, handicapped housing construction in towns in 1980-1985, and uncertainty as to the future have together certainly contributed to curbing of the rural-to-urban migrations after 1980.

The main period of great migrational losses of rural areas were the years 1971-1980 (Fig. 1), when the negative net migration on the rural-urban line was higher than natural increase in the countryside, this natural in-

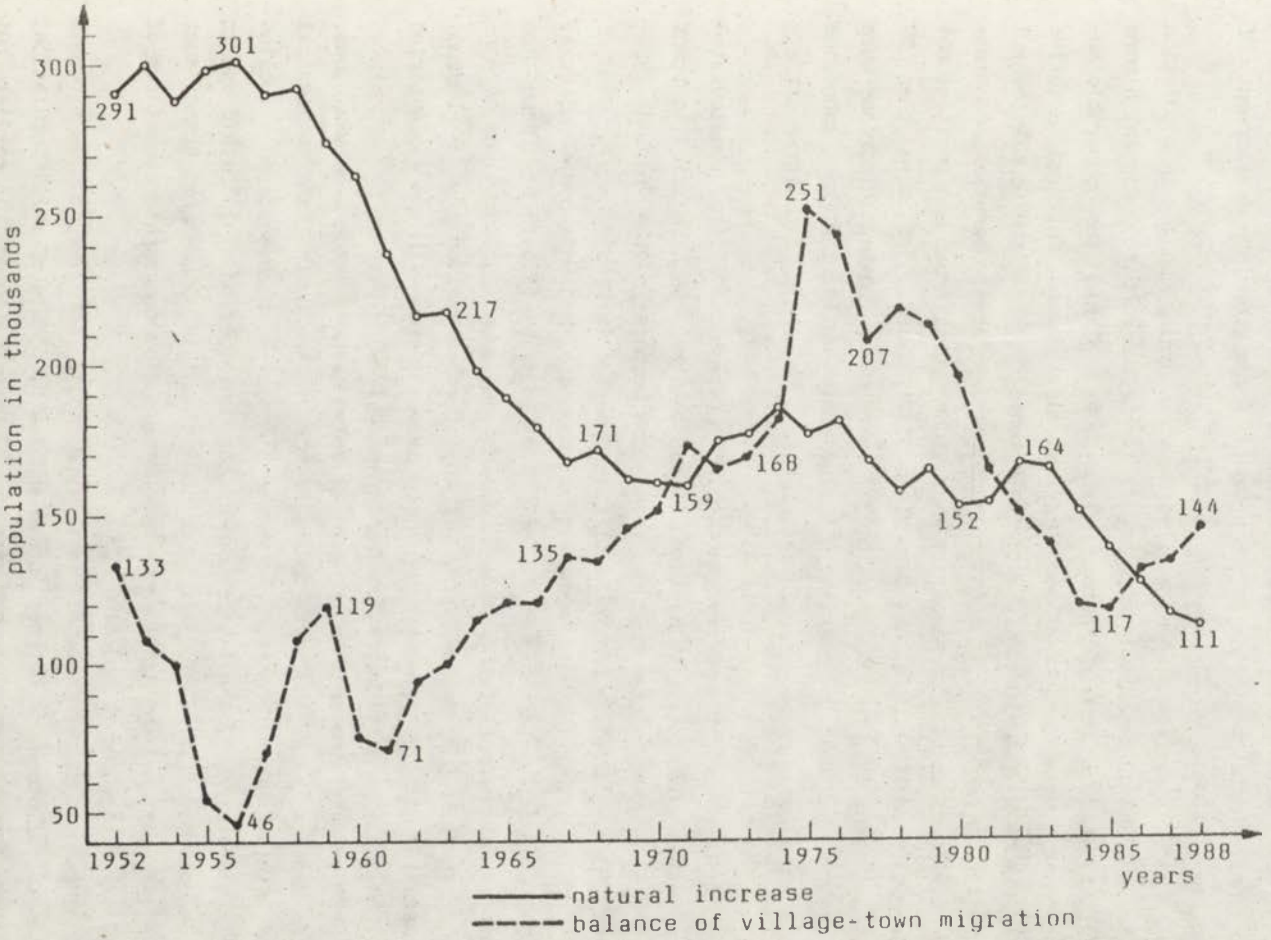

Fig. 1. Balance of village-town migration and the natural incease in the countryside in 1952 - 1988

crease being significantly lower than in the 1950s and 1960s. Certainly, the phenomenon mentioned started to deform the age structure of rural population, and, with selective outflow of young women - also the sex structure. This shall constitute in the future a threat for appropriate development of demographic structures in the areas of more intensive outmigration.

Table 1 presents more detailed data concerning changes in population of Poland, and of rural and urban areas, during the subperiod for which more detailed studies were performed (1979-1985). Within the comparable administrative boundaries of 31 December 1985 rural areas suffered negative net permanent migration of altogether some 1.1 million people (over 7 years), slightly greater than natural increase. A formal operation, consisting in consideration of temporary migrations (rural areas had positive net temporary migrations, in the subperiod of 1982-1985, of more than 80 thousand persons) caused that over 7 years sums of natural increase were slightly higher than the negative net migration, while for the subperiod 1982-1985 already without the formal operation mentioned, a positive net effect of natural increase and migration was observed.

On the basis of data from the Central Statistical Office, recalculated for the new administrative division of the country, we have tried to track the tendencies of changes in rural population numbers in the period 1950-1978, with the separate treatment of the subperiod 1970-1978.

These data indicate that 11 voivodships had an increase of rural population numbers in the period 1950-1978 and in 1970-1978. These are southern voivodships, from Krosno to Bielsko and such agglomerations as Warsaw, Katowice, Cracow and Poznań. Three further voivodships - Leszno, Szczecin, and Zielona Góra - had a population increase in the whole period of 1950-1978 and a stabilization in the years 1970-1978.

There was also another group of 11 voivodships - the eastern ones, from Białystok in the North to Zamość more to the South, and the central ones (Kielce, Radom, Piotrków, Konin and Sieradz) - which suffered a decline in numbers of rural population both in the whole period of 1950-1978 and in the subperiod of 1970-1978. It is obvious that this long-term trend must have already had an influence upon the socio-demographic structures of population in these voivodships.

Migrational processes of this type could not, of course, remain without influence on changes in age and sex structure of rural population, causing, in many cases, its deformations. I have mentioned this earlier, but

Table 1. Changes in population numbers in 1979-1985 according to Central Statistical Office (comparable administrative boundaries of 31 Dec. 1985)

Items	Poland		Urban areas		Rural areas	
	thousand	%	thousand	%	thousand	%
Population numbers on:						
- 31 XII 1978	35081	100.0	20262	100.0	14819	100.0
- 31 XII 1981	36062		21375		14687	
Changes in the subperiod 1978-1981:						
- totals	+981		+1112		-131	
- natural increase	+1057		+590		+467	
- net permanent migration	-76		+518		-594	
- net temporary migration			+4		-4	
Population number on 31 XII 1985	37340	106.4	22485	111.0	14855	100.2
Changes in the subperiod 1982-1985:						
- totals	+1278		+1111		+167	
- natural increase	+1369		+753		+616	
- net permanent migration	-91		+445		-536	
- net temporary migration			-87		+87	
Changes in the years 1979-1985:						
- totals	+2259		+2223		+36	
- natural increase	+2426		+1343		+1083	
- net permanent migration	-167		+963		-1130	
- net temporary migration			-83		+83	

would like to remind here the most important effects. Thus, there has occurred a distinct ageing of rural population. The share of population group in post-productive age has been, over time, as follows: 1970 - 11.8%, 1980 - 13.6%, 1985 - 14.0% (Rocznik Statystyczny, 1986). The impact of the decade of accelerated migrational processes (1970-1980) can be seen very clearly. Ageing of rural population means not only a decrease of the potential of labour force, but also a significant increase of demand for health care and social assistance in villages.

The shares of population of 60 and more years of age were, naturally higher in voivodships featuring constant outflow of population. According to practically almost comparable data, this share for the rural areas of outmigration voivodships was in 1978 at 17-20%, attaining the maximum for Białystok voivodship - approximately 20.4%, while the national average was at 15% (A.Stasiak, 1983). There was also a significant worsening of the sex structure of population in the marrying age groups. This fact is reflected through the following data:

Years	Number of men per 100 women in a given age group (rural areas)		
	20-24	25-29	30-34
1970	110	107	104
1978	116	117	109
1985	115	124	119

Thus, proportions are often far from equilibrium. Again, quite distinct regional differences appear. There is especially important shortage of young women in the voivodships of the so-called "Eastern wall" where, for instance, in 1978 in the age group of 20-24 years there were, per 100 women of this age group, 144 men in Białystok voivodship and 131 men in Biała Podlaska voivodship (Rocznik Statystyczny, 1986; A.Stasiak, 1983). Since private farming dominates in a decisive way in these voivodships, the problem of the "wife for a farmer" has become a common one there. *Lack of candidates for farmers' wifes may in future threaten the very fundaments of private agricultural economy*, founded on family work.

2.2. Tendencies of changes in population numbers in the voivodships in 1979-1985

During this period population of Poland has been increasing, on the average, by 1% per annum, urban population - by 1.5%, and rural population numbers behaved in a stable manner. Taking the state as of 31 December 1978 for 100, the increase was - in total population 6.4%, in urban population 11%, and in rural population 0.2% . The image accounting for disaggregation into voivodships (rural areas) is shown in Fig. 2.

The division of the country into Regained and Old Territories and urban agglomeration voivodships persists in the dynamics of population, though certain divergencies from this scheme are also visible. Thus out of the western voivodships Wałbrzych, Jelenia Góra (Sudety Mts), as well as Opole, and even Wrocław, have population increase rates lower than the average. Voivodships with traditionally high outmigration - central Poland and the so-called "Eastern wall" - show slow increase; this concerns in particular śAde region, where Łódź agglomeration does not play a bigger role in population attraction, but is also applicable to two other agglomerations: Cracow and Wrocław. On the other hand, because of a very quick increase of population in the town of Białystok, which draws mainly upon population resources of the voivodship area, contributing to the buildup of the quarter-million town, the total population increase of Białystok voivodship is at the level of the national average. A somewhat surprising spatial phenomenon appeared in terms of quick growth of urban population in voivodships of the "Eastern wall". This is related to the accelerated growth of newly created voivodship centers after 1975. Such a phenomenon, were it not connected with an overly decline of rural population numbers in these voivodships, could be positively evaluated, since these areas are deprived of towns of medium size. On the other hand it is not positive that urban population of Wałbrzych and Łódź voivodships grow so slowly. Still, even more negative should be the evaluation of the fact of persisting tendency towards decrease of rural population in regional differentiation. This concerns first of all Białystok and Łomża voivodships (within the "Eastern wall") and the voivodships of central Poland. Of the voivodships of the Regained Territories it is surprising how low are positions of Legnica and Olsztyn voivodships (Fig. 2). Densely populated voivodships and these where "semiurbanization" is taking place, from Bielsko-Biała to Krosno, and the Northern voivodships, especially Gdańsk, still feature significant rural population growth.

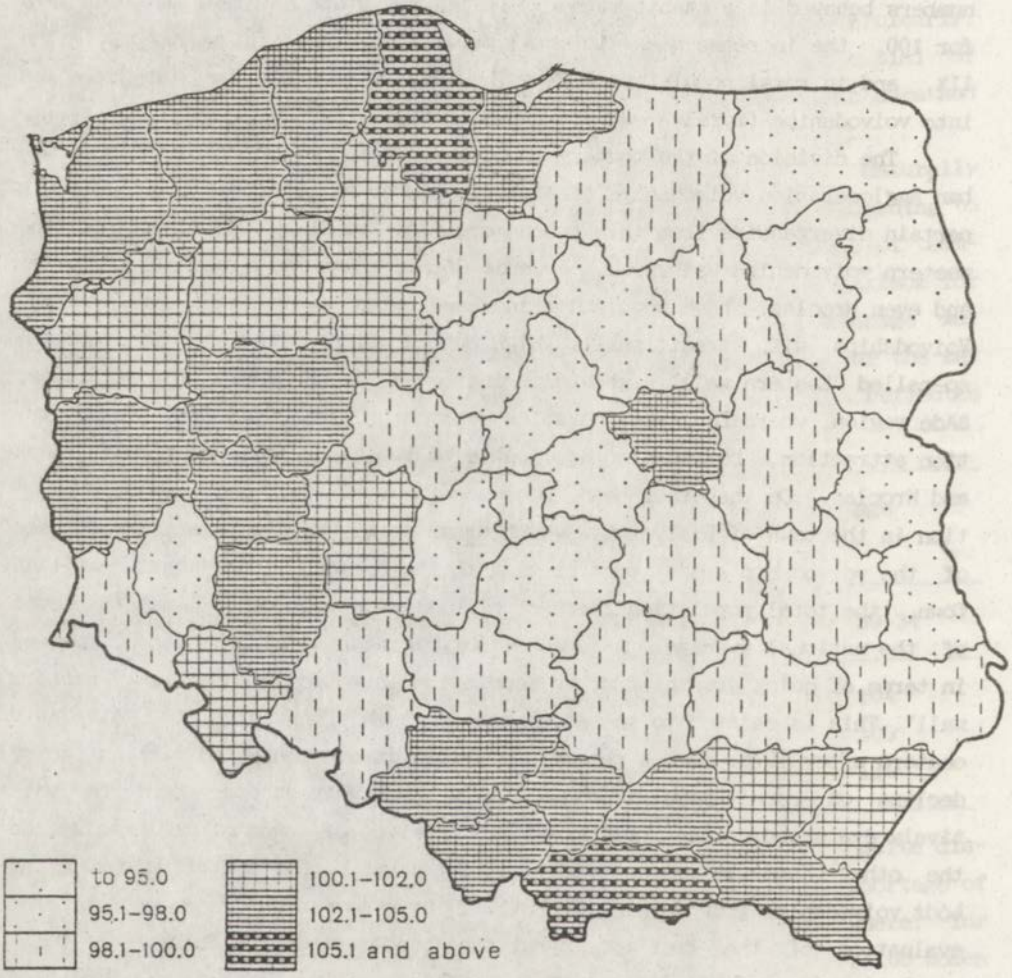

Fig.2. The index of change in the total population of the rural areas of Poland by voivodships (Poland total = 100.2; 1978 = 100)

From the point of view of migrational processes we have tried to trace the regional differentiation in two aspects. One of them is delimitation of areas with positive net migration in general and net positive permanent migration to rural and urban areas. In the period 1979-1985 there were only nine voivodships with positive net migration in general. These viovodships were: capital Warsaw, Bielsko-Biała, Gdańsk, Katowice, Cracow, Lublin, Łódź, Legnica and Poznań. All of them are in principle urban agglomeration regions, with exception of quickly industrializing Legnica voivodship, featuring anyway the highest rate of total population increase. It is somewhat surprising that Wrocław voivodship is not contained in this group. As far as net permanent migration to towns is concerned all the voivodships, excepting those of Sudety Mts. (Wałbrzych and Jelenia Góra), have positive values of these migrations. On the other hand all (with no exceptions) the rural areas of the 49 voivodships have negative net permanent migrations. That is why we have tried to look into the relations between natural increase and net permanent migrations in rural areas (Table 2).

It turned out that in 26 voivodships these relations are negative. Here the voivodships of the "Eastern wall" come forth - in negative terms, of course - very distinctly, together with the voivodships of central Poland. This, in particular, concerns the rural areas of Białystok and Łomża voivodships, but also of Płock, Piotrków, Sieradz and Skierniewice voivodships. Because of its peripheral location the presence of Suwałki voivodship is not surprising in this group. On the other hand the situation of rural areas of Legnica voivodship is somewhat particular (see also general population dynamics). Legnica voivodship is still an area of high natural increase, but the rate of permanent outmigration from rural areas there has dimensions which cause true anxiety.

3. Changes in population distribution in the scale of communes, 1979-1985

The first opportunity of analysing various demographic problems for a more detailed aggregation, i.e. for some 2000 basic administrative units, arose in 1978 with the data of the National Census, prepared for each commune by the Central Statistical Office (A.Stasiak, 1982). These data confirmed my conviction that such analyses could be performed country-wide and that they shall give much greater possibilities of interpreting phenomena in space, since voivodship-level data wipe away many regional specificities and do not present the opportunity for delimiting certain areas having common

Table 2. Voivodships with negative balance of the natural increase and permanent migrations in rural areas, 1979-1985 (population numbers for 31 Dec. 1978 = 100)

Voivodships (rural areas)	Totals thousand	1978=100	Natural increase thousand	1978=100	Net permanent migration thousand	1978=100
Białystok	-22.5	92.5	7.6	102.5	-32.7	89.1
Łomża	-11.4	95.0	11.5	105.1	-25.0	89.0
Płock	-10.2	96.4	14.9	105.2	-25.8	90.9
Piotrków	-11.8	96.7	17.1	104.8	-30.9	91.3
Sieradz	-9.1	96.7	10.1	103.7	-21.2	92.2
Skierniewice	-7.6	96.8	10.5	104.4	-19.8	91.6
Suwałki	-6.2	97.2	20.8	109.1	-28.0	87.7
Ciechanów	-6.7	97.6	18.4	106.5	-25.4	91.1
Legnica	-3.8	97.7	15.5	109.4	-19.5	88.2
Włocławek	-5.4	97.7	16.2	106.8	-22.5	90.6
Biała Podlaska	-4.1	98.0	9.9	104.8	-15.9	92.2
Chełm	-3.0	98.0	8.4	105.7	-12.5	91.5
Kielce	-11.7	98.1	35.4	105.7	-51.2	91.8
Lublin	-8.3	98.1	21.9	105.0	-32.7	92.6
Ostrołęka	-4.6	98.3	19.4	107.2	-25.3	90.6
Częstochowa	-5.9	98.4	18.6	104.9	-26.9	92.9
Siedlce	-6.7	98.5	27.7	106.1	-35.7	92.2
Zamość	-5.2	98.6	18.2	104.9	-26.9	92.7
Olsztyn	-4.2	98.7	37.1	111.7	-41.5	86.9
Konin	-3.5	98.8	19.5	106.9	-24.9	91.2
Jelenia Góra	-1.6	99.1	15.5	108.8	-18.0	89.8
Łódź	-0.9	99.1	4.5	104.5	-6.0	94.0
Opole	-3.1	99.4	36.0	107.2	-40.7	91.8
Radom	-2.3	99.4	27.8	106.9	-31.4	92.2
Tarnobrzeg	-2.4	99.4	22.9	106.4	-27.0	92.9
Toruń	-0.7	99.7	22.3	109.0	-23.6	90.5
Poland - rural areas together[x]	36.2	100.2	1083.1	107.3	-1129.7	92.4

x - A slight increase of the total rural population results from the positive net temporary migration in the subperiod of 1982-1985 - amounting to some 87 thousand persons. For the whole period 1979-1985 this value is at approximately 84 thousand.

characteristics. It would of course be best to perform analysis accounting for a number of characteristics simultaneously, but this is, as a rule, very difficult to implement. It is my personal opinion that presentation of problems here selected on the basis of analysis of just one feature - if this feature is appropriately chosen - and of course there is always a room of subjective evaluations here, does also allow a broader interpretation of phenomena. Such a possibility is admitted by J.Z. Holzer as well, in the following words: "delimitation may, though, be performed also on the basis of just one feature, e.g. age structure, migrational increase or decrease (...). In case of abandonment of a set of typological variables in order to use divisions based upon just one variable, in accordance with the terminology adopted by geographers one is not speaking of regionalization, but of district definition" (J.Z. Holzer, 1980). In agreement with this general principle, I have applied it in the country-wide studies performed for the commune level data for the years 1978-1985. As I indicated at the start, the data base was prepared by the team of specialists from the Central Statistical Office.

3.1. Changes in demographic situation

The first of features enabling a general discrimination of areas with decreasing, stable or increasing population, was obtained from the comparison of population numbers in communes according to the administrative division of 31 December 1985. Population numbers for the period 1979-1985 were compared. (Data as of 31 December 1978 were taken to be 100). The work aiming at comparability of geographic units was very difficult in view of boundary changes. Its execution was necessary, though, for the results to be senseful. Thus, it seems that with a relatively simple instrument we have acquired a possibility of forming a general picture of Polish countryside with regard to changes in population distribution. Such a general picture was obtained through mapping of the statistical data on the map of Poland. These pictures are contained in the original text of the expertise mentioned. Detailed data concerning particular communes in voivodships are contained in source materials, from which they were plotted on the diagrams. Changes in population of communes in the period of 1979-1985 (assuming the state as of 31 December 1978 to be equal 100) were as follows:

Total number of communes	Communes with decreasing population numbers: together	90.0 and less	90.1-95.0	95.1-97.5	97.6-100.0
2121	1141	34	301	366	440
100.0	53.8	1.6	14.2	17.3	20.7

Communes with increasing population numbers: together	100.1-102.5	102.6-105.0	105.1-110.0	110.1 and more
980	434	275	214	57
46.1	20.4	13.0	10.1	2.7

There was a slight majority of communes with decreasing population numbers: they constituted some 54% of all. Extremal values, concerning both communes with decreasing (more than 10%) and increasing (above 10%) population numbers are relatively small. It can be assumed that communes with population increases and decreases of up to 2.5% are in fact areas of population number stabilization. There were almost 900 such communes, constituting more than 40% of total number of communes. On the other hand the areas threatened with overly population outflow are those with population decrease of more than 2.5% . There were approximately 700 such communes, constituting about 1/3 of all rural communes. Their spatial concentration is quite definite: they are located in North-Eastern Poland, as well as in central Poland, with exception of the Warsaw and Old Polish (Kielce - Radom) agglomerations. There are such communes also in Opole voivodship, in Sudety Mts. region, in Legnica, Gorzów, Szczecin, Koszalin and Słupsk voivodships. The phenomenon in question is almost entirely absent in the South of Poland, from Katowice to Krosno. Similar is the situation in Greater Poland and in Gdańsk Pomerania. Depopulation is to a large extent connected with neglected rural economy and service sector and with scattered settlement system. Rural areas where small

villages dominate are getting depopulated very quickly. This is confirmed by the results of detailed studies and by data for the years 1970-1986 (E. Stasiak, 1983; R. Horodeński, 1983; M. Jasiulewicz et al., 1983; A. Zagożdżon, 1986; P. Eberhardt, 1986; W. Mirowski, 1985), (Figs. 3 and 4).

3.2. Rural areas according to differentiation of net permanent migration values over the years 1979-1985

The general trend finds its distinct reflection in spatial distribution. Only 40 communes had positive net migration, and out of this number for merely 25 this value was higher than 5% of population number as of 31 December 1978. On the other hand there were more than 600 communes, i.e. some 30% of them, that had very clear migration losses, attaining 10% of population number as of 31 December 1978. These are certainly serious symptoms. The majority of communes - more than 1100 of them, approximately 53% - had migration losses of 5-10% of population level of 1978. The corresponding spatial image was as follows: most communes of Poland outside of the southern part of the country had high migrational losses. Even communes located in Warsaw, Upper Silesian, Poznań and Gdańsk voivodships had migrational losses, though lower than in other rural areas.

3.3. Natural increase levels in rural areas in the years 1979-1985

The picture obtained for this feature is in a way a reverse of the previous one. Some 99% of communes have shown positive natural increase. There were only 24 communes (9 of them in Białystok voivodship) which had negative natural increase. In as many as 400 communes - i.e. 20% of the total - the level of natural increase was quite high and with respect to population number of 31 December 1978 it exceeded 10% . These communes form a relatively coherent belt stretching through Northern Poland from Szczecin to Ełk. Attention, though, should be paid to the fact that some 500 communes, i.e. almost 1/4 of all of them, had rather low level of natural increase - more or less 5% of population as of 31 December 1978. There were, in this group, 120 communes with very low natural increase: up to 2.5% of population number at the end of 1978. These communes are usually located in eastern and central voivodships. Relatively good is the situation with this respect in Greater Poland and Subcarpathian region.

Fig.3.

CHANGES IN THE NUMBER OF RURAL POPULATION IN COMMUNES 1978-1986

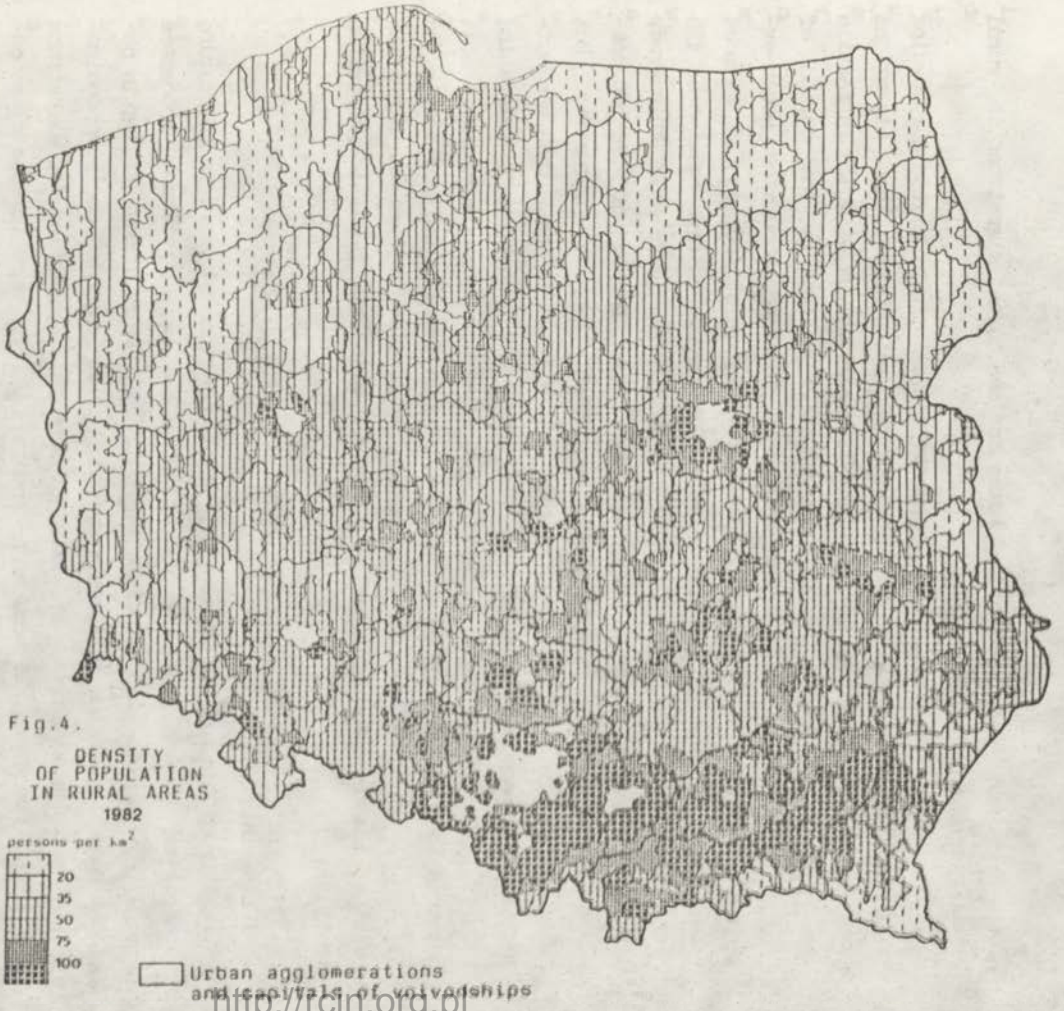

Fig.4.

3.4. Relations between numbers of women and men in net migrations in rural areas over the period 1979-1985

It was not possible, alas, to grasp the numbers of migrants according to age/sex groups in this study. It is known, of course, that migrations from rural areas in the years 1976-1980 caused outflow of women in fertile age. The number of women in childbearing age decreased in the period of 1976-1980 in rural areas by approximately 250 thousand, though one would expect an increase of this subpopulation, due to natural process, by almost 180 thousand. Thus, migration-caused decrease was in fact equal some 425 thousand women and constituted almost 240% of natural increase of this group (Sytuacja demograficzna..., 1985). Our study shows that out of some 500 communes (almost 1/4 of them) there were less women than men migrating. But there were more than 1500 communes from which more women than men outmigrated. In some 600 communes there were more than 125 women outmigrating per 100 outmigrating men in net migration numbers. Such communes were most numerous in north-eastern voivodships, although there is quite a mosaic as to the location of communes with domination of male or female outmigration over the country, in principle in accordance with the general proportion mentioned of 1:3.

4. A look into the future

Forecasting of the demographic development for 20 years in the future is a relatively easy task, if regional breakdown and migrational processes are not taken into account. From the point of view of needs arising in national economy, in the settlement system policy and in socio-economico-spatial planning agencies, the value of forecasts accounting for migrations and spatial breakdown is very high, though. Still, such forecasts are estimates which provoke always lively discussion, since they are based, as a rule, upon the assumptions involving a high degree of subjective opinion. In spite of such reservations I think that preparation of such type of forecasts is necessary, since they determine the field left for maneuvering and may serve as *warning forecasts* (Prognoza ludności..., 1984).

That is why I referred to the forecast of development of Polish population until 2000, with the clause attached, that this forecast was accepted by the Planning Commission with the Council of Ministers as in force for the planning work. The forecast says that population of Poland shall reach some 40.6 million people in 2000, with urban population of 26.1 mil-

lion people, and rural population of 14.5 million people. These magnitudes do not give rise to bigger doubts and seem to be rational. It is assumed in the forecast that population of Poland over the period of 1985-2000 shall grow by 3.3 million people, population of towns by some 3.6 million people and population of rural areas shall decrease by some 0.3 million people (Table 3). Current programs - of the years 1988/89 - envisage population number of Poland in 2000 at the level of 39.5-40.0 million people and the stability of population in rural areas.

Data contained in Table 3 suggest also that Polish society of 2000 will have less children and young people, and more aged people. In rural areas the conventional limit of 15% of share of old age population shall be exceeded and that is how rural society as a whole shall enter the phase of ageing. Situation shall be more advantageous with that respect in towns, due to inmigration of younger population from rural areas, but it will not be so with respect to children and young people, whose numbers shall be decreasing due to decline in *natural increase rates. With regard to labour resources, no essential changes are envisaged*, so that Poland shall still be in advantageous situation as to labour force.

When seen from the point of view of regional distribution of population, this forecast presents a much worse situation, especially with respect to rural areas of interest for us. It is namely assumed that rural population in 2000 shall be at 97.9% of the state of 1985. As I stated previously, such an assumption made for the rural areas as a whole seems rational. Still, in regional breakdown results were obtained which in my opinion cannot be treated as planning forecast, but as a warning forecast. Thus, in 8 voivodships there shall be rural population decrease by more than 10%: from 83.1% of the initial value for Białystok voivodship to 89.8% for Zamość voivodship. Among these 8 voivodships there are 4 - Białystok, Piotrków, Skierniewice and Biała Podlaska - which were in the period of 1979-1985 (Fig. 2) in the group of 12 voivodships with the greatest population losses. So, worsening of age structures must have occurred there. Rural population decreases by 5-10% are forecasted for subsequent 12 voivodships. Out of 20 voivodships to be contained in these two groups by the year 2000 there were 8 which belonged in the years 1975-1980 to the group of 12 voivodships with the greatest population losses, mentioned before. I personally doubt that this is just the desired trend. Forecasted changes in rural population according to voivodships are shown in Fig. 5.

Table 3. Age structure of population in 1985 and 2000 according to the Central Statistical Office forecast from 1984, taking into account migrations

Items	Poland		Urban areas		Rural areas	
	thousand	%	thousand	%	thousand	%
Year 1985 - totals	37357	100.0	22525	100.0	14832	100.0
in age group:						
0 - 17	11042	29.6	6440	28.6	4602	31.0
18-59/64 /a/	21775	58.3	13650	60.6	8125	54.8
60/65 and more	4540	12.1	2435	10.8	2105	14.2
Year 2000 - totals	40651	100.0	26123	100.0	14527	100.0
in age groups:						
0 - 17	11020	27.1	6788	26.0	4232	29.1
18 - 59/64 /a/	23802	58.6	15879	60.8	7923	54.5
60 - 65 and more /b/	5829	14.3	3456	13.2	2372	16.4

/a/ 18-59 for women, 18-64 for men (productive age)

/b/ 60 and more for women, 65 and more for men (postproductive age)

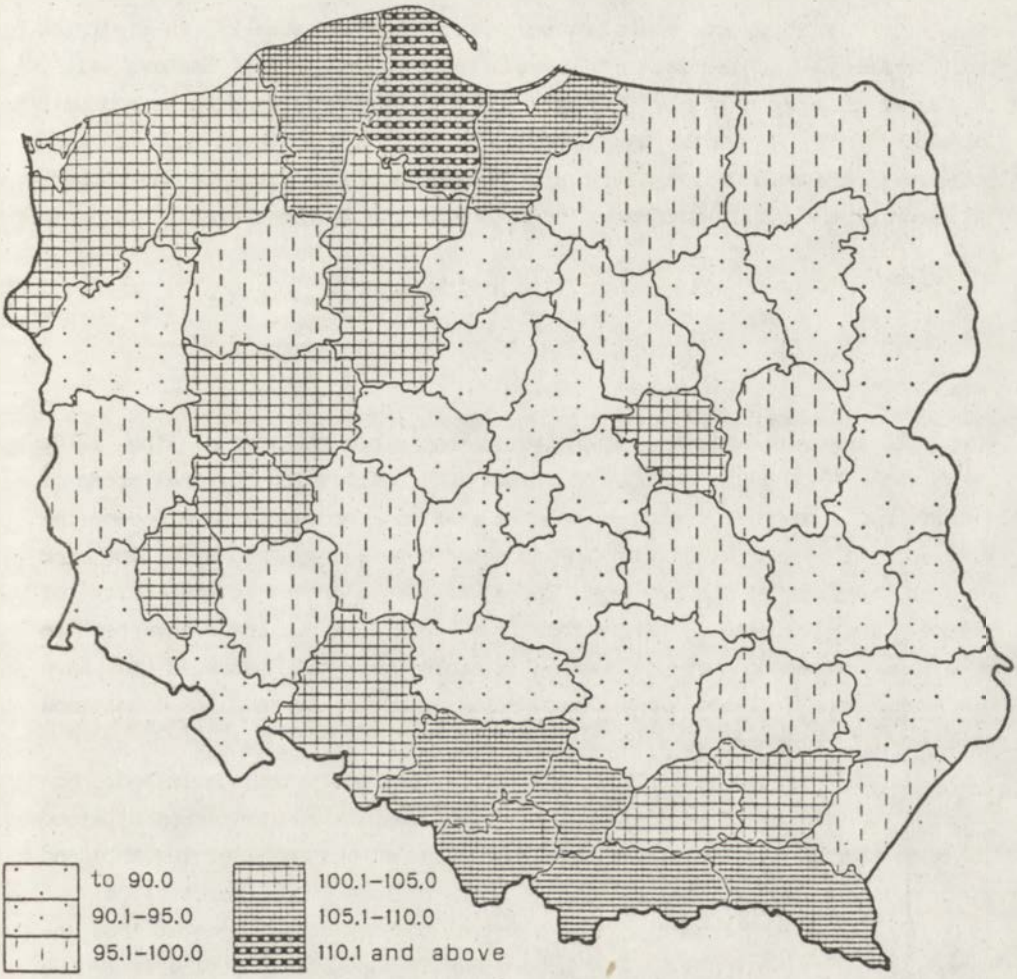

Fig.5. The projected change in the total population of the rural areas by voivodships, for the year 2000
(Poland total = 97.9%; 1985 = 100)

What would be the changes in the structure of rural population of these 20 voivodships according to the forecast referred to? In 13 cases the shares of the population group containing women of 60 and more years of age and men of 65 and more years of age exceeded 18% . In five voivodships: Białystok, Skierniewice, Biała Podlaska, Zamość and Łomża - the share of this population group would exceed 20%, to reach some 27% in Białystok voivodship. Out of the latter 5 voivodships 4 belong to the "Eastern wall". It seems to me that in further work on the spatial and socio-economic development of the country the consequences of such a forecast must be considered in a comprehensive manner and thought should be given to the methods of stemming the overly outflow of rural population in these areas.

\+ + +

The analyses performed demonstrated that since the turn of the 1970s there has been a worsening of demographic situation in rural areas of Poland. Socio-economic consequences of migrational processes have become increasingly alarming. Depopulation processes have encompassed with time ever greater territory of the country. There was also a growth in intensity of depopulation phenomenon. Migrations from rural to urban areas have been in some parts of the country so long and intensive that they started to have disadvantageous effects upon the functioning of economy and the conditions of life of inhabitants.

On the basis of strictly defined criteria areas were delimited, according to the state as of 1978, in which depopulation processes attained the most alarming levels. These areas encompass altogether over 100 thousand sq kms (some 1/3 of surface of Poland) in 12 regions (P.Eberhardt, 1986).

Results of the expertise of the Polish Academy of Sciences of 1986 uncovered the fact that due to lengthy process of population outflow from the areas mentioned, enormous deformations in demographic structures appeared. Very advanced process of ageing of population is connected with the imbalance of proportions of numbers of men and women. These structural disturbances play greater role than the very quantitative decrease of population numbers. With the thus deformed demographic structures one can only pessimistically evaluate the future demographic perspectives of large areas of

Polish countryside. It should be suspected that several disadvantageous types of tendencies built up over many years shall be getting still deeper, influencing the whole set of socio-economic conditions. In the nearest years demographic situation of the majority of areas of central and Eastern Poland will be getting even worse. This results from the fact that less numerous cohorts shall be entering childbearing age - thereby causing the decrease of numbers of new marriages. Disproportions between the numbers of women and men shall additionally limit future birth rates. A decrease of birth numbers (there are negative natural increase values already now in some communes of Eastern Poland) is a warning that there is a possibility of emergence of completely depopulated areas already in the first decades of the 21st century.

Studies conducted within the framework of elaboration of the expertise demonstrated that the general economic situation of depopulating areas is from many points of view alarming and requires elaboration as well as implementation of adequate economic policy of the State with regard to these areas (Założenia Planu..., 1986). It is hard to think of an improvement of food production situation in Poland without such a policy. The regions in question account for 1/3 of total agricultural land in Poland. Decrease of the numbers of agricultural and rural population, not compensated by the adequate supply of production means and by changes of systemic and organizational nature, shall only contribute to deepening of Polish crisis.

This requires undertaking of a wide activation and assistance program for the rural areas distinguished here. An initial stage of such an action must be elaboration of a comprehensive concept of future development and transformations in the areas suffering regress and facing the threat of demographic and socio-economic decline. The concept of activation should not be limited to demographic processes but should account for modernization of the whole spatial economy. It is an essential task to elaborate the program of modernization of agricultural economy. Widely conceived development of social and technical infrastructure should be connected with a concept of development of rural and small town settlement system. Improvement of economy in rural areas is a very complex problem. Each region has its specific features and requires different methods of activation and otherwise implemented concept of economic assistance. In our conditions, with high degree of centralization in the past, there is a tendency towards application of identical solutions throughout the country. Thus, for instance, the

depopulating mountain and submountain areas in Sudety range need different curative means than areas of Eastern, Central, or North-Western Poland.

An effective and logical concept for saving the depopulating areas may only be elaborated on the basis of results of detailed and broad scientific studies. Because of the socio-economic importance of these problems the research is presently conducted under the supervision of Polish Academy of Sciences, and should be conducted still in the future, after 1990.

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PROSPECTS FOR TRANSFORMATION AND DEVELOPMENT OF COUNTRYSIDE AND AGRICULTURE IN POLAND

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1. Historical heritage and demographic situation

Numerous historical circumstances made Poland enter the path of modern, industrial development with a delay in reference to Western European countries. The beginnings of industrialization of some areas in the 1930s did not produce profound structural changes in the national economy.

Poland has always been a country with a high demographic dynamics. After a large drop in the population in effect of the Nazi occupation and World War II altogether by over 1/5, in the recent 45 years population grew from 25 million in 1946 to almost 38 million in 1989, that is by over 25% . A much higher increase of the population in the countryside has been for many years offsetting the outflow of work force from agriculture to towns and industry.

A persisting and strong migration stream of rural population to towns and industry resulted from the accelerated industrialization of the country, started in 1950. The industrialization brought about deep changes in the structure of the entire economy, also in the countryside and in agriculture.

Despite being implemented excessively unilaterally, despite numerous errors, particularly severe to the countryside and agriculture, the difficult and costly process of industrialization solved a few basic economic and social problems. First, it created millions of new jobs and made it possible to employ many of those inhabitants of the countryside who either had too little land or no land at all. Second, it accelerated the country's economic development in the period of 1950-1975 and increased the social labour productivity. Third, it accelerated the development of towns and industrial centres as well as changed the structure of employment and of the entire national economy.

At the same time, the price paid for industrialization and accelera-

tion of economic development was high and the effects were not solely positive. The costs of industrialization were borne by the entire nation - by workers and intelligentsia in the form of low wages, by farmers in the form of low prices for agricultural produce, high taxes and obligatory supplies. The effects of high burdens on agriculture and low prices for agricultural produce were more harmful to the economy than low and slowly growing wages. The wages resulted in a low living standard of the population but created conditions for high accumulation and development of industry.

Low prices and heavy burdens laid on agriculture produced not only a low standard of living of farmers but also led to impoverishment of farms, especially larger ones, and often to their ruin and decreased production. This discouraged the young generation of farmers from inheriting farms and induced them to seek jobs outside agriculture, that is, to migrate.

During the same period, due to doctrinal simplifications, rural and small-town handicraft and processing of agricultural produce were destroyed. Thus, there were no jobs outside agriculture in the countryside and small towns which forced the inhabitants either to commute daily to their work, or to migrate for good to towns and industrial centres.

The industrialization has created quite a strong skeleton of the economy, based on larger towns and industrial centres, but at the same time it has weakened its muscle in rural areas and small towns.

The unilateral character of industrialization, manifested in the neglect for the industries of consumer goods and means of production for food economy, particularly sharply affected agriculture and has been delaying its development until nowadays. The failure of the attemps to collectivize agriculture in the 1950s not only proved that the farmers' opposition was justified, but also the truth that it is not so much the fact that agriculture is so fractioned, but the economic weakness of agriculture and neglect for industries producing modern means of production as well as a technological and investment weakening of the entire food economy that are the fundamental checks to modernizat_on of the countryside and agriculture.

2. Work in agriculture vs. other possibilities

Many young people tend to leave work in agriculture and find other jobs. This is due to growing mobility of the population and growing level of education of the young generation as well as common knowledge of the conditions of life and work in towns and villages, and also the realization of

the still large differences between the countryside and towns, especially with respect to the length of working day, the strenousness of work, availability of free time as well as the level of development and efficiency of operation of technical and social infrastructure. The trend in many regions of the country has been especially clearly manifested among young girls who leave the countryside since they do not want to marry farmers because of the toilsome and long work in a poorly invested farm and household.

One should remind that the phenomenon of migration of young people from the countryside to towns, ageing of the rural population and depopulation of some rural areas are well known in all countries in Europe and outside Europe, regardless of political systems. The phenomena have occurred in many countries, with differing intensification in different periods, and they continue in many. The papers by foreign authors will give us a more updated picture.

Considering the common character of the discussed phenomenon, and also its high intensification in some areas and its limited range in others, a question appears why in some areas migration produces demographic depression and depopulation of the countryside, whereas in other areas the results are not so severe.

Our research to date shows that the phenomenon of excessive migration, particularly of young women, occurs mostly in peripheral areas, with poor transportation and infrastructure and with no non-agricultural jobs to offer. Most of the young people leave small farms, with few technical facilities. Such farms often are left without successors. Farmers from larger and better technically equipped farms almost always have successors.

It is much less frequent that the depopulation affects villages located near towns and larger industrial centres as well as those with good transportation and infrastructure. Girls and young women, being able to work many years outside agriculture, willingly marry a farmer's son since it is the mother-in-law or mother who works at home and in the farm. This is beneficial to all family members - their income is increased and there are not any inter-generation conflicts and disputes. On the other hand, in the regions where there are no jobs outside agriculture and commuting is too long or simply impossible, a young couple often have to stay at their parents' farm and often work there as if they were hired labour. Thus they are not independent, neither in their social position nor in the ownership of own house. Two housewives in one house is a source of many everyday con-

flicts. It is work outside the house or an early control over the farm that eliminates the difficulties.

The briefly outlined picture of some factors influencing the demographic situation in the countryside should be complemented with the adverse effects of the long decline and regression in the country's economic development; this, however, requires additional studies which it is too early yet to initiate.

3. The countryside and agriculture in the face of contemporary challenges

Since our discussion concerns phenomena and processes occurring in a long time horizon, a reflection is justified on the impact of more important challenges of today and the near future on the countryside and agriculture in Poland.

A developmental delay of our country in relation to a majority of Western European countries, including also the countryside and agriculture, produces a temptation to look at the future trends of changes and development of our countryside and agriculture from the perspective of the road covered by the countryside and agriculture in countries that are ahead of us in the development.

It is worth reminding here that in the ten EEC countries, over 25 years (1960-1985), 3.1 million farms were wound up, that is almost 40% . For instance, in France, the FRG, the Netherlands and Denmark over 50% farms were liquidated and there are plans for further reductions. At the same time, 2.6 million farms in the EEC are in areas that are not favourable to agriculture (marginal areas). Those are mainly farms in mountaineous and peripheral regions in Italy, France, the FRG, Greece and Scotland. Most of those farmers are in a difficult situation and must combine farming with a job outside agriculture. In many countries the phenomenon of bi-professionality is quite widespread in agriculture, and it is also characteristic for Poland.

We realize, however, that a transfer and application of experience of other countries to the construction of our own development models is quite limited. It is impossible to escape one's own history which is not only written in books but also in the nation's material achievement, the achievements of the country's regions and local communities. The history is also clearly carved in the attitudes, scales of values and activity of individuals and local communities.

Studying the possibility of application and use of other countries' experience we find out that the conditions and roads for the countryside and agriculture development in individual countries, or even regions, differed substantially and depended mainly on the demographic situation and on the dynamics of economic development of a given country (region), and also on socio-economic policies towards the countryside and agriculture.

It is necessary to stress a general regularity according to which development of industry and other branches of the economy was followed by an acceleration in the development of agriculture and rural areas as well as an intensified outflow of population from agriculture. Thus the relation of production factors was changing - the number of persons employed per 100 ha of arable land was decreasing and the outlays for technical equipment as well as means for increasing crops and animal production calculated per 1 ha and per one employee were growing.

It is in those relations of production factors in agriculture that our developmental backwardness in agriculture is manifested in relation to highly developed countries. For instance, the number of persons employed per 100 ha of arable land in Poland is 26 persons on the average (12 to 60 depending on the region) whereas in the EEC it is about 6 persons/100 ha. The value of the means of production available to Polish agriculture per 1 ha is by one half lower and when calculated per one person employed in agriculture it constitutes only 20-25% of the corresponding EEC level.

As the above indicates, the countryside and agriculture face three great challenges of today and the future. First, the growing aspirations of the young generation who - due to education and various employment possibilities - can choose the place and type of work as well as the manner of living. The aspirations refer to work, income, level and quality of life as well as free time. Work in the countryside and in agriculture is just one of the alternatives, not too attractive, although perhaps less risky than others. However, if the difference between conditions of living and work in agriculture and in other professions continues to exist as much as it does now, the continuing exodus from the countryside to towns should come as no surprise. This produces a fundamental conclusion that a modernization of conditions of living and work in the countryside and agriculture is an urgent necessity, not only because it is vital to provide food to the nation but also in order to create proper living conditions for farmers and rural population.

The second challenge results from the development of science and technology as well as biotechnologies. In a majority of European countries, the acceleration of development of agriculture and the modernization of rural areas took place in the 1950-1975 period. That was a period of a great technological revolution in European agriculture, accompanied by a mass outflow of manpower from agriculture and by profound changes in the agrarian structure and in the employment structure of the rural population. Crops, animal production and labour productivity were growing fast in agriculture. The number of farmers with two jobs was increasing. Work in agriculture combined with a job outside became common particularly in areas with small farms, dense population and in the neighbourhood of large urban and industrial centres.

The countryside and agriculture in Poland have passed only half of this way, and in some regions they are at the beginning. Technological changes in agricultural production, induced by science and industry are playing a crucial role in the transformation. Results achieved by best performing farmers already prove that the Polish countryside is able to meet the challenge since the young generation is very much open to innovations and able to adjust their farms to the changing environment.

The third challenge is related to the progressing urbanization of rural areas and expanding non-agricultural economic activity in the areas. Mechanization, specialization and modern production technologies in agriculture accelerate changes in agrarian structure and elimination of small farms and also release substantial resources of manpower from agriculture. People who are not necessary in agriculture or only partly employed in small farms do not necessarily have to leave the countryside or commune to distant jobs in large towns if they can find a job in the village where they live or in a nearby small town.

In many regions of Europe there has been for many decades a model of migration from the countryside to towns and distant commuting to jobs, which has been leading to depopulation of rural areas. However, there are also other solutions, for instance creation of jobs in the countryside and in small towns thereby limiting migration and helping in the development of rural areas.

4. Differentiation of conditions and possibilities of a multifunctional development of the countryside

Natural conditions and the historically formed economic potential as

well as demographic situation of individual villages and communes are very different. There are also big differences in the location of individual communes in relation to larger towns and industrial centres as well as in their transportation connections and the state of technical and social infrastructure.

Quality of soil and land relief, water management, state of infrastructure and level of cultivation culture as well as location in relation to markets and agrarian structure are of fundamental significance from the viewpoint of developmental potential in agriculture.

Since in a majority of regions in Poland more than one half of inhabitants of the countryside are not farmers but representatives of other professional groups, and in the future the share of non-agricultural population in the countryside will grow, then analysing the socio-economic situation of individual local communities it is necessary to study the employment structure as well as level and structure of incomes of the population in a given commune (village) as well as trends and directions of changes underway.

Although almost each rural commune is different and requires a separate detailed analysis in order to produce an opinion or to participate in outlining the directions of its future development, there is a possibility and need to find a number of common features which will enable to group them and to develop a typology.

Although in many communes agriculture is not any more as important as it used to be, it does occur as an important branch of production, though in different forms. In a growing number of communes, two, three or even more economic functions are combined, especially in regions with high density of population and small farms. Thus, apart from communes that are mainly agricultural, located in the areas with not so dense population and located in the peripheries, many communes are clearly multifunctional, with more or less strongly manifested leading functions.

With some simplification, on the basis of the employment structure of the inhabitants, the following basic types of communes in Poland can be distinguished:

1. Agricultural communes, with domination of agriculture producing mainly for the market, in which minimum 60% of families work mostly in agriculture and the remaining inhabitants work in other branches of the economy or have other sources of income.

2. Agricultural-employee communes with a large share of small bi-professional farms and small production for the market. Those are communes where one half or more families combine work outside agriculture with work on a small farm. The number of farms whose owners get their income solely from agriculture is small in these communes.

3. Horticultural-employee communes with a substantial share of farms growing fruits, vegetables, flowers and berry fruits. Usually such farms are concentrated in suburban communes, with a large share of production in greenhouses, plastic foil tunnels and in fields. In the suburban communes there is a high percentage of people commuting to work.

4. Agricultural-recreational communes (tourism, spas) and service communes where many families combine work and income from outside farms - mainly from tourist, spa and recreation services, with usually a small agricultural or horticultural farm. Small scale production is dominant. Here there are conditions for the development of production of biodynamic and healthy food for the local market.

5. Agricultural-industrial and industrial-agricultural communes in which more than one half of employed people work in agriculture and a part of them are employed only in industry in the commune and/or nearby and some combine work in industry with work in a small farm. Such communes occur mainly in the south of Poland.

6. Agricultural-handicraft communes, with a domination of either agriculture or handicraft are also usually communes with small farms, related to small towns with old handicraft traditions or traditions of artistic, folk handicraft, mainly at the foot of the Carpathians and in Silesian Beskidy.

7. Multifunctional communes where apart from agriculture there can be parallelly a few other areas of economic activity without a clear domination of any of them. In this outline of a purposefully simplified draft typology we are not going into details which would require the definition of specific criteria and the distinction of very many types of communes. The above is restricted only to fundamental differences which can also be useful for practical purposes, namely for an analysis of structures and dominating functions of individual communes as well as to become aware of the changes underway and to outline possibilities and directions of further development.

Studies on the process of transformations going on in communes, conducted so far, show that many rural communes in Poland have entered the path of multifunctional development what was the result of the changes occurring

in the entire national economy.

A development of non-agricultural forms of economic activity in rural communes, along with progress in modernization of agriculture, is an objective necessity. At present, employment in the Polish agriculture is about 3.9 million people, that is, almost 23% of the total employment. In the next 20 years one should expect a decrease in the number of persons employed in agriculture to 1.2-1.6 million people, that is to 6-8% of the total employment. However, this does not necessarily mean a continuing depopulation and ageing of the countryside.

The chief method providing for the employment of the diminishing work force in agriculture, along with its mechanization and improvement in the agrarian structure, must be creation of new jobs outside agriculture in rural areas and in small towns. Non-agricultural employment in the countryside usually develops in connection with agriculture and the needs of the rural population as well as expansion of recreational and health functions of the countryside. The construction and modernization of small and medium-sized industrial plants or their affiliations, specifically those processing agricultural produce, producing parts for machines and equipment for agriculture, in cooperation with larger factories means the process of a further industrialization of the countryside and the whole country. An expansion of services, both services for the population, machine repairs, repairs of technical equipment and houses, transportation, construction as well as modernization and upkeeping of the entire technical and social infrastructure (roads, irrigation, water supply systems and sewer systems, electricity and telephone networks, shops, schools, health service, cultural centres) also means many new jobs in the countryside.

Creation of new jobs in the countryside and in small towns is much cheaper than in the case of construction of large factories in towns. A small plant or expansion of the existing repair shop or a cooperative processing plant can be completed within a few months as opposed to many years in the construction of large plants.

If those who are not necessary in agriculture could be kept in the countryside, this would also moderate the housing problems in towns.

The reviving initiative and private enterpreneurship begins to play an important role in the creation of new jobs in rural areas. In order to accelerate the economic boom and a multifunctional development of the countryside and small towns, substantial tax exemptions should be introduced

for enterprises in all sectors undertaking economic activity in those areas.

In some communes there are successes in combining non-agricultural economic activity with agricultural production. Many production cooperatives and some state-owned farms have had good results in this sphere. The development of non-agricultural and agriculture-related forms of economic activity in rural areas increases the incomes of the rural population, slows down the depopulation of the countryside and accelerates the improvement of the agrarian structure, affecting the efficiency of management in the entire food economy. This will also create economic and social basis to modernize the technical and social infrastructure and to improve the living conditions in the countryside.

5. Dilemmas and possibilities for development of agriculture

Substantial differences in natural conditions, demographic situation, historically formed agrarian structure as well as landscape and settlement systems in various regions of the country are factors decisive for the fact that agriculture in Poland will not develop according to one universal model for the whole country.

There is no a priori proof for an economic superiority of one form of agricultural management. Each form has its values and weak points which - depending on the conditions and effectiveness and operation as well as culture of the people - may be manifested with varying vividness.

The land-man relation is one of the fundamental factors determining the form of management in agriculture. The less land per one person working in agriculture, the smaller production units (=farms). Therefore, in the North of Poland larger farms and state-owned farms dominate whereas in the South there are very many small bi-professional farms. The differences will continue to exist for a few more decades. Also bi-professionality in agriculture is expected to survive some more time.

The overcoming of difficulties and of main checks to development of agriculture as well as modernization of the countryside will require substantial investment, changes in the structure of industry and adjustment of many industries to the need of modern, but structurally differentiated, agriculture. Also in the future it will be multi-sector agriculture with domination of private farms. Developmental trends in the acreage structure of private farms show a consolidation of a group of farms above 10 hectares and above 15 hectares. Totally, farms above 10 hectares cultivate almost one

half of the land owned by private farmers, and along with state-owned farms and production cooperatives they cover about 70% of arable land and provide almost 80% of agricultural produce to food industry. Small farms, with large resources of manpower, usually biprofessional, will continue to exist but their number will decrease. They will also be modernized and supply mostly vegetables, fruits, flowers, poultry and eggs as well as products for subsistence and the local market.

In the situation of a successful development of non-agricultural economic activity in the countryside, small biprofessional and specialized horticultural farms will be able to consolidate and develop satisfactorily.

From among medium-sized farms of 5-10 hectares, some will expand their area and strengthen their production potential and some will disappear since they will have no successors or will be transformed into biprofessional farms.

Inter-sectoral and intra-sectoral competition may produce structural changes which are expected to be rather slow and will take place in a rhythm similar to the rate of generation changes.

DEPOPULATION OF SOME RURAL AREAS IN POLAND IN A COMPARATIVE PERSPECTIVE

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The rural population numbers in Poland were stable over the whole post-war period and remained at about 15 million people. In spite of this general stability on the country-wide scale the situation was spatially very differentiated.

More detailed empirical studies for the level of communes (gmina) - 2070 administrative units - carried out for the period of 1946-1985 indicated that there are rural areas with high (positive) demographic dynamics, other areas with relatively stable population numbers, but also quite extensive rural areas in which population numbers constantly or periodically decrease.

A strict delimitation procedure, constructed on the basis of precisely defined criteria was applied to the commune-level data, yielding 12 depopulating regions in Poland, namely: (1) Warmian-Masurian region, (2) region of Suwałki, (3) Kurpie - Biebrza river region, (4) region of Upper Narew river, (5) Podlasie - Bug river region, (6) region of Janów - Hrubieszów, (7) region of Roztocze, (8) Vistula river region, (9) Pilica river region, (10) Region of Middle Warta river, (11) Region of Sudety Mts., (12) Western Pomeranian region.

These regions, which are characterized by persisting, long-term depopulation processes in rural areas, encompass altogether 105.3 sq. kms, the surface equivalent to 1/3 of the total country's surface. Within the areas of these regions rural population was 4,384 thousand in 1946, while 3,739 thousand of rural population lived there in 1985. Decrease amounted to almost 650 thousand people. Even stronger confirmation of demographic

regress of these areas is provided by appropriate percentage indices calculated with regard to whole population of the country. Thus, just after the war the regions delimited accounted for 18.3% of total national population, while in 1985 the same regions accounted for mere 10% of Polish population.

Location of the listed depopulation regions is quite characteristic. Three of these regions are situated in central Poland (the Vistula region, the Pilica region, and Middle Warta region), one in North-Western Poland (the Western-Pomeranian region), one in South-Western Poland (the Sudety Mts. region), and one in Northern Poland (the Warmian-Masurian region). The other six regions form a coherent spatial block, directly adjacent to the Eastern boundary of the country. That is why in geographical publications the spatial structure formed by these six regions is often called the "Eastern wall".

The present paper takes up demographic specifics of rural population inhabiting this area consisting of six spatial units. Altogether these six regions take 40.5 thousand sq. kms, that is - some 13% of country's surface.

The set of regions here analyzed stretches over the length of nearly 450 kms, with average width of 100 kms. From geographical point of view this area has certain number of unifying features, which distinguish it from the other regions of Poland. The area under analysis has typically agricultural nature, with signs of backwardness and low level of development of productive forces. Low urbanization degree and lack of more important industries are related to modest infrastructural equipment. Little attractive work conditions and life standard caused mass outmigration of population, which encompassed altogether over the period 1946-1985 as many as 1.5 million inhabitants. Population outflow was so intensive that a relatively high natural increase could not compensate for migration-related losses and population numbers between 1946 and 1985 were decreasing so that from 1806,7 thousand at the beginning of the period population dropped there to 1459,6 thousand at the end of the period (see Table 1).

Table 1. Rural population numbers in depopulating regions of Eastern Poland, 1946-1985 (in thousand)

No.	Depopulating regions	1946	1950	1960	1970	1980	1985
1	Suwałki	101.7	95.6	98.5	97.4	91.2	84.7
2	Kurpie-Biebrza river	374.8	352.2	354.6	341.8	307.9	291.6
3	Upper Narew river	282.6	263.7	264.4	249.2	220.4	204.6
4	Podlasie-Bug river	531.8	465.7	489.6	470.6	442.5	430.3
5	Janów-Hrubieszów	337.1	323.7	340.8	324.3	297.2	290.0
6	Roztocze (hills)	188.6	150.3	167.9	166.1	159.0	158.4
	Totals	1816.7	1651.2	1715.4	1649.4	1518.2	1459.6

With that, consideration should be made of the fact that the initial year of analysis (1946) is the first post-war calendar year and it must be mentioned that these areas suffered large demographic losses in the years of the World War II. The scale of losses can be seen through the fact that in 1939 the areas in question were inhabited by some 2.1 million people.

The data at hand indicate that an important demographic decrease occurred in the years 1946-1950. This decrease was related primarily to population outflow towards the Western Lands of Poland. Then, the decade of 1950-1960 witnessed still an increase of population numbers, resulting from high natural increase. In subsequent years strong depopulation processes took place. Population losses were distributed quite unevenly. In terms of percentage points the greatest losses were suffered by the Upper Narew river region, and by the Kurpie-Biebrza region, followed by the regions of Roztocze and of Suwałki.

It is characteristic of the regions analysed that they are located next to the state boundary. Along all of its length the area considered is adjacent to the Polish-Soviet border. That is why decision was made to perform comparative analysis of demographical situation in rural areas on both sides of the border.

This analysis shall of necessity have approximate character, since this author was not capable of availing himself of demographic data according to small territorial units for the borderline areas of the Byelorussian

SSR and the Ukrainian SSR. Demographic data in dynamic setting, i.e. reflecting transformations in rural population numbers and structures, have been acquired according to "oblast". These administrative units are very large, much larger than Polish voivodships.

Comparative analysis is also made difficult by the fact the depopulating areas were determined on the Polish side with the accuracy down to the smallest administrative units, gminas (communes), while data are available on the Soviet side only at the level of such large units as "oblast". Still, comparative analysis should make it possible to determine the pace of demographical transformations in rural areas stretching along the Eastern and Western sides of the boundary.

Regions of Suwałki, Kurpie-Biebrza and Upper Narew were compared to the adjacent Grodno oblast of Byelorussian SSR, the Podlasie-Bug region was compared to Brest oblast of Byelorussian SSR, and finally Janów-Hrubieszów and Roztocze regions were compared to Volhynia oblast of Ukrainian SSR.

Calculated data indicate that depopulation processes in rural areas of Grodno oblast proceed with much greater intensity than in the areas located on the Polish side of the common border. During the considered period of 35 years rural population of Grodno oblast diminished down to just half of the initial state of 1951, while the same decrease for corresponding Polish regions amounted to 20% . Even more clear picture is obtained when absolute population numbers are being compared: 711.5 thousand versus 993 thousand, and 580.9 thousand versus 525 thousand inhabitants, see Table 2.

Comparative results obtained for the Podlasie-Bug region and Brest oblast are akin to the ones obtained previously and analysed above, for the Polish and Byelorussian areas located more to the North. In spite of a smaller scale of depopulation processes in both of the two areas here compared, it is obvious that depopulation processes are more advanced on the Soviet side of the border. In the case of Polish areas the depopulation process started much later, and in principle it concerns only the 1970s and the 1980s. On the other hand depopulation in Brest oblast started in 1951 and is gaining increasingly in scale over the years, as shown in Table 3.

Table 2. Changes in rural population numbers of depopulating regions of Eastern Poland and in Grodno oblast of Byelorussian SSR, 1950/1951 - 1985/1987

No.	Regions	Units	1950/ /1951	1960/ /1961	1970/ /1971	1978/ /1981	1985/ /1987
	Suwałki	thousand	711.5	717.5	688.4	619.5	580.9
1	Kurpie-Biebrza	%	100.0	100.8	96.7	87.1	81.6
	Upper Narew	(1950=100)					
		thousand	993.0	805.0	744.0	609.0	525.0
2	Grodno	%	100.0	81.0	74.9	61.3	52.9
		(1951=100)					

For Poland - data from 1950, 1960, 1970, 1978, 1985
For Soviet areas - data from 1951, 1961, 1971, 1981, 1987

Table 3. Changes in numbers of rural population in Podlasie-Bug river region and in Brest oblast of Byelorussian SSR, 1950(1951) - 1985(1987)

No.	Region	Units	1950/ /1951	1960/ /1961	1970/ /1971	1978/ /1981	1985/ /1987
		thousand	465.7	489.6	470.6	442.5	430.3
1	Podlasie-Bug	%	100.0	105.1	101.0	95.0	92.3
	river	(1950=100)					
		thousand	935.0	901.0	836.0	721.0	640.0
2	Brest	%	100.0	94.5	87.7	75.6	67.1
		(1951=100)					

The data presented in Table 4 show a similar situation as to the difference between the areas on both sides of the boundary. This indicates a difference in socio-economic conditions of the processes considered in Poland and USSR. I think that the main reason behind the thus strong

depopulation processes in the Byelorussian and Ukrainian countryside is complete collectivization of agriculture, carried out in these areas after the World War II. People who are no longer bound by their privately owned land are making up their minds with regard to outmigration much easier. In addition to that, low effectiveness of agriculture on the Soviet side of the border does not secure adequate living standards and leads to massive outmigration of people from their home regions.

Table 4. Changes in rural population numbers in Janów-Hrubieszów and Roztocze regions, and in Volhynia oblast of Ukrainian SSR, 1950/51 - 1985/87

No.	Regions	Units	1950/ /1951	1960/ /1961	1970/ /1971	1978/ /1981	1985/ /1987
1	Janów-Hrubieszów Roztocze	thousand	474.0	508.7	490.4	456.2	448.4
		% (1950=100)	100.0	107.3	103.4	96.2	94.5
2	Volhynia	thousand	729.0	662.0	660.0	598.0	538.0
		% (1951=100)	100.0	90.8	90.5	82.0	73.8

Besides that, an interesting geographical phenomenon has appeared. Namely, as regions located more to the South are considered, their depopulation processes get less intensive on both sides of the border, though their intensity on the Eastern side of the border is still greater than on the Polish side.

In order to acquire a more complete picture of the demographic situation of rural areas of both countries near to their common border the indices of rural population density per surface unit were also calculated. When such a type of measure is taken into consideration the capacities of analysis of the phenomenon in question get broadened. Similarly as with the absolute number comparisons the corresponding - adjacent - regions are considered together (see Table 5).

Table 5. Population densities of depopulating rural regions of Eastern Poland and Western oblast's of Byelorussian and Ukrainian SSR in the period 1950/51 - 1985/87

No.	Regions	Area in thousand sq. kms	Population density per 1 sq. km 1950/ /1951	1960/ /1961	1970/ /1971	1978/ /1981	1985/ /1987
1	Suwałki Kurpie-Biebrza Upper Narew river	20.4	35	35	34	30	28
2	Grodno	25.0	40	32	29	24	21
1	Podlasie-Bug river	10.9	42	45	43	40	39
2	Brest	32.3	29	28	26	22	19
1	Janów-Hrubieszów Roztocze	9.1	52	56	54	50	49
2	Volhynia	20.2	36	33	32	30	27

Analysis based upon the population density indicators for areas located on both sides of the border make it possible to seriously question the statement of the great - in quantitative terms - strength of depopulation processes in Eastern Poland. The indices shown demonstrate that depopulation processes proceed much slowlier in Poland than on the other side of the border.

Average density of rural population of all the Polish regions here considered was in 1950 at 41 persons per 1 sq. km, and it decreased by 1985 down to 36 persons per 1 sq. km. During more or less the same period average population density in rural areas to the East of the Polish-Soviet border decreased from 34 persons per 1 sq. km to 22 persons per 1 sq. km, that is - by 12 persons per 1 sq. km. Thus, for instance, average population density in rural areas of the three regions of North-Eastern Poland was in 1950

lower on the average by 5 persons per 1 sq. km than in the neighbouring Grodno oblast. In spite of the fact that population density in the Polish regions mentioned decreased during the period of 1950-1985 on the average by 7 persons per 1 sq. km, the situation, in comparative terms, reversed at the end of this period. Population density was already quite significantly higher on the Polish side. Along other segments of the border demographical differences undergo changes which, likewise, are to the advantage of the Polish side. Naturally, this remark applies to demographical potential of rural population. Were urban population accounted for as well the results could change. This would require additional comparative studies.

In order to properly evaluate the demographic situation in the areas characterized by depopulation processes one should, in fact, pay much more attention to demographic structures than to the very phenomenon of absolute population decrease. This is related to structure-wise selective nature of outmigration. It is first of all young people who leave the countryside, and within this group - outmigration decision is taken more eagerly by young women than by young men. This causes, consequently, large deformations in the population structure.

With the purpose of demonstrating the scale of these structural deformations an example is shown regarding relations between numbers of men and women in two separate age groups (see Table 6).

Table 6. Sex ratio (numbers of men per 100 women) employed in agriculture in depopulating regions of Eastern Poland in 1978

No.	Depopulating regions	Sex ratio in age 20-24	Sex ratio in age over 60
1	Suwałki	181.4	77.8
2	Kurpie-Biebrza river	191.0	76.6
3	Upper Narew river	198.2	94.8
4	Podlasie-Bug river	207.7	92.9
5	Janów-Hrubieszów	156.3	63.3
6	Roztocze	164.7	66.4
	Regions together	184.8	78.2

Definite relations between numbers of men and women, as illustrated in Table 6, indicate a far-reaching process of masculization within young generation of people employed in agriculture of depopulating regions. On the other hand women clearly outnumber men in the oldest age group. Thus, data shown here for the sake of illustration demonstrate fairly well how the structure of rural population of Eastern Poland is deformed, which is the source of disadvantageous effects in the living conditions of inhabitants.

Depopulating regions are characterized by the high share of population in the oldest age groups. It might be mentioned here that as much as 1/5 of all the persons employed in agriculture are more than 60 years old. Such a high share of ageing people among the employed in agriculture does not only illustrate demographic situation. It is, indirectly, a reflection of economic specifics of the area. Namely, it is known that work effectiveness of older people cannot be very high. They are less inclined towards innovations and are less productive. Thus, low productivity is here closely coupled with conservative methods of work, and a low pace of investment which gives, consequently, slow development dynamics.

It should also be mentioned that the accelerating process of population ageing begins to be, simultaneously, connected with low natural increase, and often even with a natural decrease of population. This brings, in consequence, further deterioration of demographic structure.

In connection with previous considerations one should expect continuing decrease of population in the areas of Eastern Poland and diminishing importance of these areas in the economic structure of the country. One should perhaps mention that this situation is presently clearly perceived in Poland both in scientific and in planning communities. That is why in geographical scientific centres detailed diagnostic studies have been undertaken, making it possible to elaborate a concept of activation and economic development of the border regions of Eastern Poland.

DEPOPULATION OF RURAL AREAS IN SOUTH-EASTERN POLAND

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According to the results of an analysis of demographical phenomena carried out in the macroscale (that of voivodships) the author demonstrates, that these phenomena show a distinct regionalization in Poland. The region of South-Eastern Poland has a peculiar position. During the preliminary stage of studies, realized by the team of scientists from the Institute of Geography of the Jagiellonian University, for the whole country, the basic unit was the voivodship. The authors of the study wanted to show characteristic features of the South-Eastern region against the background of the whole country. Statistical materials were the results of National Censuses of 1950, 1960, 1970, 1978 - and those of the current registering of population from 1985, in order to show an actual situation.

For the whole period analysed (1950-85) the population number in the south-eastern voivodships increased. The negative net migrations from rural areas was there the smallest, when compared with those in the remaining voivodships, and migration losses in relation to natural increase were exceeding the national average.

The rural population showed a trend toward concentration. In 1985 the share of the discussed region (consisting of voivodships of Bielsko-Biała, Cracow, Krosno, Nowy Sącz, Rzeszów, Tarnów and Przemyśl) in the total area of Poland amounted to 9.8%, in that of the agricultural land - 9.4%, and in the total rural population number - 17.9% . There were surpluses of manpower, population density indices were over the national average, and the shares of the population living out of non-agricultural professions were among the highest in Poland. Thus, the population density amounted to 111 person/sq.km (in Bielsko-Biała voivodship) at the maximum, to 58 (in Krosno voivodship), while the national average was at 51. The density per 100 ha of the agricultural land varied from 240 (Bielsko-Biała voivodship)

to 98 (Przemyśl voivodship), while the national average amounted to 78.

Rural population in South-Eastern Poland is highly feminized, more than on the average in the country. The shares of the pre-productive population are also high (i.e. in Nowy Sącz voivodship: 39.2%; the highest share in Poland), and the increase of the productive age group is quite fast. Thus, the shares of the post-productive population were rather low. Generally, this is the region of the young age structure and the productive group is less overburdened by the non-productive ones.

In South-Eastern Poland high indices of births and natural increase are noted, those of deaths are on the national level. Therefore the demographical situation of this part of our country is better than that of Central and Eastern Poland.

The second stage of research concerned population number dynamics, population density, changes in demographic structures, natural increase and migrations - all considered in the mesoscale, where the basic unit was a rural community. The authors considered the voivodships of Bielsko-Biała, Cracow, Nowy Sącz, Rzeszów, Tarnów, partially that of Kielce (former districts of Miechów and Kazimierza Wielka) and that of Przemyśl (South of the San river) - 279 communities in total. From the point of view of the physical geography, this area contains Polish Carpathians, Sub-Carpathian Basins and a fragment of Małopolska Upland.

According to the macroscale investigation results (those obtained on the basis of voivodships), the rural population number in the south-eastern voivodships has been increasing constantly during 36 years. But the mesoscale research revealed a considerable spatio-temporal differentiation of the demographical processes. In all the subperiods between the particular Censuses there were communities where population numbers increased - and those where it decreased. Although the numbers and the locations of those latter units were unstable, they were always in the northern and central-eastern sectors of the discussed area.

Population density has been increasing constantly in most of the communities (213) - and it fell in 66 of them. But it is worth stressing that the communities of the northern depopulation sectors showed lower population density (40-60 persons/sq.km) than the central-eastern ones (80-120). Maybe depopulation processes are stronger in the northern part. Although the indices of population density in the regional scale were low, the area discussed showed high rural population density, as the national average

amounted in 1985 to 51 persons/sq. kms.

The depopulation areas were defined using coefficients of the natural movement and net migration (according to the method of J.W.Webb) for the periods of 1979-81 and 1982-85. The analysis of population dynamics for the period of 1979-85 made it possible to distinguish 3 types of communities: those, where the population increased, those, where the population changes were unstable, and finally the depopulating communities.

The communities showing demographical growth were situated all over Carpathians, but mostly in the north-eastern sector of the analysed part of Poland. In spite of its negative trends, the natural increase was high enough to compensate for the losses due to the negative net migration. There were highly feminized communities (except for Podhale Basin and Bieszczady Mts.), whose population lived mostly off non-agricultural professions. Rural population showed considerable shares of the pre- and post-productive age groups. Such age and sex structure leads to the conclusion that these are the areas which are the most abundant as to manpower reserves in the region under study.

The communities where the population number was unstable were situated in the middle of the investigated area, mostly along the borders of the particular voivodships, also in Carpathians. These are the areas of the potential depopulation in the nearest future because their population is ageing now.

The depopulating communities are found in the north-western part of the region studied, often forming belts along the administrative borders of the particular voivodships. In spite of the negative trend of the natural increase it was still rather high - but this increase could not compensate for high and very high negative net migration. In the last years there appeared some eastern communities, where the natural increase coefficients were very low (one community showed even natural decrease). This is an unusual phenomenon in South-Eastern Poland, but it shows, that the thus dangerous demographical phenomena can appear there. The depopulating communities were the agricultural, strongly feminized ones, and they had considerable shares of the pre- and post-productive age groups.

In the third stage of research, the detailed analysis of the population dynamics in the period of 1970-78 was made for Carpathians, by villages and cities. The changes in this dynamics were expressed by the percentages of the initial level (1978 versus 1970). The author suggested 3 types of

regions - the depopulating ones, where the population number in 1978 was no more than 97.4% of that of 1970, the stagnating regions (97.4-102.4%) and those with growing population (over 102.5%). The number of the analysed units amounted to 1853 in their totality (58 cities included). There were 815 localities of the first type, 179 - of the second type, and 901 villages and 58 cities of the third type. Therefore in nearly half of Carpathian localities population number in 1978 was lower than that in 1970.

In order to explain spatial differentiation of the demographical dynamics, the following variables were accounted for: the magnitude of a given village as characterized by its population number, the share of the population living off agriculture in the total population number and the altitude of the village centre. The strength and the character of relations between the spatial pattern of population dynamics and the above listed explanatory variables were described by the contingency tables, whose basic entries were χ^2 statistics and convergence coefficients, after V.Cramer and P.Pearson.

Comparing the spatial pattern of population dynamics within the distinguished regions with the respective differentiation of 3 explanatory variables, the present author found that:

- In the depopulating areas the villages are rather small (below 300 inhabitants), situated above 500 m a.s.l., showing high shares of agricultural population (except for Bieszczady Mts.) - over 64%
- In the stagnating areas the villages are mainly large and medium, lying between 500 and 800 m a.s.l. The share of the population living off agriculture varies from 17-30% in Zywiec Beskid to over 50% in Orawa-Jordanów Uplands.
- In the areas where the population number increases, the villages are also large or medium. They lie mostly below the altitude of 400 m a.s.l. The share of the agricultural population was rather low (except for Orawa-Nowy Targ Basin).

In the depopulating areas most of the variables influence negatively the population growth, but none of them influences it strongly, although their combined effect is strong.

In the areas of demographical growth one variable usually dominated and was decisive for the population increase. The most important factor was the magnitude of the village - it may, perhaps, express the significance of the widely understood socio-economic infrastructure.

Taking into consideration the links between the explanatory variables and the demographical growth, the author confirms that:

- The influence of the village magnitude on the population dynamics is quite distinct. The larger villages, having more than 1000 inhabitants, showed population growth, in the areas with small villages (below 300 inhabitants), population numbers decreased.
- The share of the agricultural population influenced negatively population dynamics: the greater was the share of the population living off agriculture, the higher was the decrease of the total population number. The only exception was Podhale Basin, due to the developed tourist function in the winter and summer seasons and to close economic links of the local population with the families in United States.
- The surface relief hardly influenced the population changes. This weak influence was negative - the population decreases were greater if the altitudes of given localities were higher.

On the basis of the present investigations, especially the statistical and cartographical materials, and the introductory field studies in selected areas, the present author defined some factors influencing the depopulation process of the country. These are: relief, location near to the State frontier, nationality relations, and job-related migration to foreign countries.

Relief

The area investigated by the team of geographers from the Institute of Geography, Jagiellonian University, contains mainly Carpathians and only some fragments of the area exceed the physiographic limits of these mountains. One can observe there many examples of lowering of the upper limit of the arable lands, accompanied by that of the settlements. At the end of the 19th century and even in the first half of the 20th century, due to strong demographical pression, the upper limit of cultures went too high to give minimal subsistence conditions to farmers. Tiny plots lying on steep slopes with poor soils were cultivated with the horse-power or manually. There were no roads to those fields, and therefore yields had to be transported on back or in hands.

When the problem of agrarian overpopulation was solved in the 1950s (as a considerable part of the population moved to the Northern and Western Territories and an intensive industrialization of Poland took place), the low yields and a low efficiency did not justify continuation of the use of the most elevated fields, situated on steep slopes, unfavourably exposed -

and hardly accessible. These fields were partially forested or turned to pastures. This process is still observed, but the mechanization of agricultural work became the new factor of the land use change. Further reduction of the upper limit of the arable lands was caused by the opportunity of the using tractors and various machines. Again, considerable part of the agricultural lands could not be used. Keeping of the actual area of these lands requires a change of the production orientation, from crops to animal husbandry. Such a change, if the necessary level of economic efficiency is to be attained, needs a considerable growth of the farm acreages, so that the numbers of people living off agriculture would get reduced.

Another factor in the depopulation of the mountainous rural areas is their accessibility. The least accessible farms are the first to be left. Some of them are still inhabited, deprived of the road, but existing only due to the anachronic horse transport. When motorization becomes more popular, these farms will be also left.It is in such a way that relief influences the accessibility of the area by means of the mechanized transport, requiring hard-surfaced roads. According to the field observations, the author confirms that the villages without proper roads get depopulated most rapidly. Such villages have no bus connections, their supply with goods and materials is also poor. As these are small villages, without any service institutions, except for small general shops, and from which there is no transport to the service centres, the feeling of a lower standard of living is common. This is the pushing factor, especially for the young generation.

Considerable concentration of the depopulating villages are observed in meshes of the railway transport network, in the barely accessible mountain massifs and along borders between particular voivodships, which sometimes too strictly define the scopes of operation of transport enterprises.

Location near to the State frontier

Long period of functioning of very restrictive regulations regarding movements within the zone near to the State frontier and the small number of frontier passages caused that the villages situated near the frontiers of Poland became strongly isolated and relatively inaccessible. The use of the fields and forests, where the plowed belt of land along the frontier went through and various frontier installations were situated, was uneasy. Such fields could not be used intensively and often were abandoned. A lack of the transit (regional) roads and a limited construction of the hard-surfaced roads of local importance made those villages less accessible. Restrictions

as to the movements of people in the zone close to the frontier and the poor state of the roads were hindering the development of the non-agricultural functions of these areas. As those villages were usually situated on high altitudes, where the soils were poor, the economic efficiency of their farms was minor. All these factors were not encouraging for staying and living in those localities.

Nationality relations

In the process of depopulation of rural areas the problems of national minorities and ethnic groups are considerable, especially in the eastern part of Polish Carpathians, eastward from the city of Nowy Sącz. In the investigations on macro- and mesoscale Bieszczady Mts. were considered, but because of historic reasons, these mountains were excluded from the detailed studies and their problems are not analysed in this paper.

According to Polish-Soviet post-war agreement, Ukrainian and Ruthenian population had to be removed from Poland to the Soviet Union, the ethnic group of Łemkos included. Łemkos came from Southern Carpathians. They were shepherds and farmers, living in mountain villages, either together with Polish population or by themselves. The action of resettlement was not realized consequently, therefore a part of Łemkos, avoiding the repatriation or living in mixed marriages, etc., were left in Poland.

Within the area studied there are two types of situations - the villages completely left by Łemkos and resettled by Poles, and localities depopulated only partially.

In the first type of villages, the typical recolonization phenomena are observed. First, there are proper stages of resettling, as the settlers come gradually and take the best farms, the most accessible ones. Thus not all the farms were resettled in terms of their size and the field pattern: the areas of the poorest soils, the worst exposed and the least accessible ones were not used and the number of farmers was lower than before. The change of the field pattern of the former farms, connected with an integration of the fields and marking of new holding boundaries were the positive phenomena, as the size structure was ameliorated, the number of the plots was reduced and the economic situation of the farmers improved.

The resettled villages have less inhabitants than before, but their demographic situation is good, as the resettlement concerned young people and the natural increase is high. The less positive phenomenon is the weak attachment of the new farmers to the place of their work and life. If there

are troubles in farming, those people are the first to leave the village.

Another, but non-economic phenomenon is returning of Łemkos to their villages. In some cases the social problems appear, and the new settlers feel a threat.

The villages only partially abandoned by Łemkos show another scale of those phenomena. A share of the new settlers is smaller, the local population was more cautious in taking of all the left farms, making only their farms greater and correcting their borders. The considerable part of the agricultural lands was not used or became afforested. The population number is lower than before the repatriation of Łemkos.

Job-related migration to foreign countries

Southern Poland, especially Podhale Basin, was the area of an important outmigration even in the 19th century. From the overpopulated mountain areas with small farms masses of people went to work abroad, mostly to America (especially to the USA and Canada). In the 1960s and the 1970s, when a more liberal passport policy was introduced, family contacts were restored by visits and then travels to work. Owing to numerous family links and organized forms of help in obtaining a flat and the work abroad, as well as own skills (mostly in construction), a flow of migrants became greater and greater, especially that directed to the USA. As the passport became available for all the citizens of Poland, the only factor limiting the number of those travels are the consulates, issuing the visas.

The migrants coming from the area discussed are generally manual workers. They do not speak foreign languages, they work hard abroad and have low salaries there. It is only the unreasonable, extremely high black-market rate of exchange of foreign currency to Polish złoty that gave to the returning people the privileged economic status. Therefore the permanent outmigration is seldom. Usually, young men and women return after several months, or a year, to their villages. The money earned is invested in houses, in flat equipment, and, at last, in the farm. Differences in the standard of living are easily to be seen, as they are expressed by the physiognomy of buildings.

Observations made during the field work in the depopulating rural areas have resulted in the following conclusions. In some cases the stays abroad of particular persons or sometimes of the whole families are prolonged to 6-8 years. The houses and farms of those people are guarded then by their relatives or neighbours. The migrants declare a will of

returning in a non-defined future. Usually one (or more) members of the family work abroad and send money for construction of the new house or the modernization of the old one. Some of those migrants want to stay abroad. The result is a dominating desire of leaving and getting richer among the population of such villages - but the level of their economy and the productive effects do not show a decline. Local population is not interested in working outside of the villages (there are poor opportunities of non-agricultural work on the spot) or in moving to the city.

RURAL DEPOPULATION AND AGRICULTURE IN MID-EASTERN POLAND

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The territory of mid-Eastern Poland is characterized by remarkable intensity of unfavourable social-demographic phenomena and processes. The spatial range of investigations (conducted by the Departament of the Institute of Physical Planning and Municipal Economy at Lublin) covered total areas of three voivodships: Biała Podlaska, Chełm and Zamość and the bordering territories of six rural communities of the Siedlce voivodship (Korczew, Przesmyki, Mordy, Zbuczyn Poduchowny, Trzebieszów and Łuków), three rural communities of the Tarnobrzeg voivodship (Chrzanów, Dzwola, Harasiuki) and 12 rural communities of the Przemyśl voivodship (situated to the north of the river San). Together, the research considered here covered 133 rural communities located in 6 voivodships.

Prior to the first investigation stage the following objectives were set up:

1. description of the state and changes of the demographic situation in the mid-Eastern area of Poland, in particular, determination of the regions with the highest depopulation level,
2. indication of factors appearing simultaneously with the particular demographic phenomena, namely, to undertake an attempt determining the causes and results of undesirable demographic processes (obviously as far as it is possible, basing on statistical calculations in rural community arrangement which, after all, are seriously internally diversified).

To reach these objectives a considerable amount of information had to be gathered and processed dealing not only with the state and changes of various demographic elements but also with the agrarian structure, agro-ecological and technical conditions of farming, the technical and social infrastructure of the rural communities, and indices indirectly defining dif-

ferent social processes - either undesirable (such as taking over of agricultural land by the State Land Fund) or desirable - such as readiness to invest and to mechanize or symptoms of civic activity.

The whole area investigated is characterized by a permanent decrease of the population in the post-war period. A temporary increase of the number of inhabitants (about 8.2%) mainly due to compulsory settlement of Poland's Eastern regions was only noted within the period of 1950 to 1960.

After 1960 the number of the rural population has been systematically decreasing:

between 1960 and 1970 by 2.6%

between 1970 and 1980 by 6.5%

between 1980 and 1986 by 0.7%

This decrease is, first of all, connected with the negative migration balance but also with the decreasing birthrate in the rural regions (in 1975 it was 8.6 and in 1986 5.8 per 1000 inhabitants), and in a higher degree results from the increase of the deathrate (from 11.0 to 12.5 per 1000 inhabitants) rather than from a very inconsiderable, thus far, decrease of the fertility rate in rural regions. However, it should be emphasized that the demographic ageing process advances systematically in the investigated area. The share of population in the post-productive age increased from 13.1% in 1970 to 17.2% in 1986. Simultaneously, the percentage of population in pre-productive age decreased from 34.4% to 27.9% .

Moreover, the rural areas of mid-Eastern Poland are characterized by a considerable deformation in the sex structure at the marrying age, since there are only 80 women per 100 men in the age of 20 to 29 years. This disproportion is mainly due to the outmigration of young women. Thus, within the population outmigrating from the rural communities subject to investigations there were 1000 bachelors for 1405 unmarried women in 1975 and for 1082 in 1986.

The above statements refer to the demographic situation in the whole investigated area which is, however, considerably differentiated internally. Attention is first of all drawn by those areas in which unfovourable demographic processes are of highest intensity and long duration. However, there are such rural communities in which - in relation to the average values for the whole investigated area - the scale of the population decrease is several times higher, birthrate is negative or nearing zero, the share of population at retirement age exceeds 20%, and the coefficient of

replacement of the oldest generation by the youngest one is lower than 1.0.

All these rural communities have shown strong statistical correlations with each other (as expressed by Pearson's correlation coefficient value above 0.70). It can be said that they co-exist and co-determinate the rural community demographic situation. Therefore they constituted a basis for distinguishing areas of different depopulation levels. Complementing the four above mentioned rural community features with the coefficient of excess outmigration one obtains finally five criteria, i.e. the following values of indicators (so that when these values are exceeded, this is recognized as a serious loss of demographic balance):

1. generation replacement coefficient - below 1.0 in 1986
2. share of population at the retirement age - above 20% in 1986
3. population decrease - at the over 20% level between 1950 and 1986
4. birthrate - below 5% between 1975 and 1986
5. negative net migration exceeding by more than factor of two the birthrate between 1980 and 1986.

Rural communities in which at least four of the above elements coincide are of special interest. Areas of the highest depopulation level are such rural communities as: Gorzków, Grabowiec, Radecznica, Rudnik, Skierbieszów, Turobin, Wysokie and Zakrzew - in the Zamość voivodship; Krasiczyn, Łopiennik, Wojsławice - in the Chełm voivodship; Podedwórze and Sławatycze - in the Biała Podlaska voivodship; Korczew - in the Siedlce voivodship.

It should be emphasized that the larger scale of the negative net migration co-exists with a generally better demographic situation in rural communities. Sometimes it is due to the inmigration of population (as for example in the rural communities of Włodawa and Wyryki) but mainly as result of actual impossibility of further outmigration. A considerable decrease of population outflow exists mainly in those rural communities "lacking in people able to leave", because, for example, 1/4 of the population are the retirement age inhabitants (such rural communities as: Radecznica, Gorzków, Turobin).

To define initially (before undertaking regional explanatory studies) the conditions and possible consequences of rural depopulation using Pearson's correlation calculation as many as 33 features of rural communities were analyzed. These features determined not only the particular aspects of the demographic situation but, simultaneously, referred to the

agrarian structure, conditions and level of agricultural production, supply with technical and social infrastructure, and also symptoms of activation and initiative - individual as well as collective.

It appeared that a generally far more advantageous demographic situation exists in rural communities of higher share of socialized agriculture, in which high population outflows are being balanced - thus far - by inmigration to the rural community. This relation also shows that the depopulation processes were connected uptonow, mainly, with private agriculture.

The main factor affecting the limitation of the above phenomena contributing to rural depopulation of mid-Eastern region, was - so far - the possibility of finding employment outside of the own farm. It concerns, in particular, rural communities of poor agro-ecological conditions and small farms where incomes do not allow farmers to maintain their families. In these conditions access to towns plays a special role; in rural communities surrounding a town the feminization coefficients at marrying age are, for instance, considerably higher. Towns, apart from the possibility of additional employment offer a number of other goods, facilities and profits, inaccessible in the country. It should be added that the level of rural depopulation does not show connections with the level of rural community supply in infrastructure. It is probable that differentiation with this respect is so unimportant - infrastructure in the whole investigated area showing a similarly low level - that it was not able to ensure a feeling of increasing stabilization and stop excess outmigration.

The argument about a far too low level of factors which can affect the course of demographic processes does not only concern the supply with social infrastructure. In a much higher degree it refers to such important rural community features as the existing agro-ecological conditions and the mechanization level of private farms. It seems that these factors play no role up to the point when a certain level is reached and then start to very positively affect the functioning of farms and through it the rural demographic situation.

Apart from the most important statements made above some other weaker statistical connections related to coexistence of different rural community features were observed.

On one hand they concern such unfavourable phenomena as giving over of farms by farmers to the State Land Fund. Higher intensity of this process is being noted in rural communities with a low mechanization level, par-

ticularly, due to shortage of manpower. On the other hand such conditions for desired processes were looked for as symptoms of investment and farm mechanization, and civic activity. It was ascertained that decreased activation characterizes rural communities of distorted demographic structure and increased population outflow. Probably, the most energetic and active people decided to migrate. The larger the outflow the less there are people able to undertake individual and collective initiatives. To explain these phenomena, particularly in their psychosocial aspects an analysis in rural community arrangement is not sufficient because of existing internal differences. Particularly important - as sociological research in the Zamość voivodship/x/ has shown - are cases of poverty which co-exist with undisguised lack of propensity to any action for the common benefit which, even if reached, cannot compensate for individual wants.

Likewise, some statistical relations among indicators defining the agrarian structure and the rural community demographic and social-economic situation are worth discussing. It appears that the larger the average acreage of private farms in rural communities the more frequently such features as: poor soil conditions, lower employment in agriculture per 100 ha of arable land, higher proportion of farms selling their products to the state appear. Moreover, in these rural communities a larger outmigration is noted, causing increase of energy consumption on farms and a very high demand for farm tractors and other means of agricultural production. On the other hand, considering that among the population leaving the above described rural communities young women dominate an intensification of sex disproportion in the age interval of 20 to 29 years, i.e. in the age of most frequent marriages , takes place. If deficiency of labour on farms can be tempered by development of mechanization, in case of family households the shortage of women cannot be compensated.

The problem of young women who stay in the country to work in agriculture is complicated and - as interviews with them have shown - their decision "to stay and marry" means not only the acceptance of the general living and work conditions (i.e. much worse than in towns) but also the acceptance of the secondary role of a wife-assistant on the farm next to mother-in-law.

/x/ M.Miazga and associates: Social activity of rural inhabitants on the example of the Zamość voivodship. IGPiK Lublin, 1986 (typescript).

The above problems are connected with the inheritance of the farm and play an important role nowadays and concern the functioning of private agriculture in the future. The so called successor enables joint investments on the farm, its mechanization, and frequently the increase of land surface. In cases when the potential successor is not available consumer goods dominate in the structure of expenditures. The previously quoted research carried out in the Zamość voivodship shows that an essential increase of interest in taking possesion of farms takes place when the level of equipment of the given farm is relatively very high. On the other hand, all kinds of shortages, both in farm equipment and in the village infrastructure contribute to intensification of outmigration tendencies (particularly in conditions of access to the towns). Presently the coincidence of all the above negative circumstances can be noted in the majority of rural areas of mid-Eastern Poland.

DEMOGRAPHIC PROBLEMS IN RURAL AREAS OF THE NORTH-EASTERN VOIVODSHIPS OF POLAND

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The areas of north-eastern Poland, that is - of the Białystok, Łomża, Ostrołęka and Suwałki voivodships, are characterized by a number of common features, among which one should in particular mention the following ones:
- at the beginning of the post-war period the whole area in question belonged to these territories of Poland where the level of economic development was the lowest; thus, for instance, out of 27 poviats (counties) existing in this area prior to the reform of the administrative breakdown (which took place in 1975), as many as 23 were classified in the group of 129 poviats representing the lowest level of economic development in 1950;
- sparse network of urban centres, lack of bigger towns except for Białystok, and generally low level of urbanisation;
- worst climatic-and-soil conditions in Poland;
- domination of relatively larger farms in private farming, especially as compared to acreages of private farms in central, southern and south-eastern regions of the country.

On the other hand there is a number of factors differentiating the voivodships considered, and among them:
- the spatial setting (while Białystok and Suwałki voivodships are located next to the state boundary, Ostrołęka voivodship is adjacent to the capital voivodship of Warsaw);
- a major part of the Suwałki voivodship was regained after the war, while other areas were previously Polish.

The two latter factors mentioned played an important role in the processes of transformation in total population numbers as well as of socio-professional structure changes, especially in rural communities. There was, namely, a process of resettling in the regained territories of Suwałki voivod-

ship, taking place in the first post-war years, and, on the other hand, job commuting to Warsaw agglomeration of large population groups inhabiting the southern belt of towns and communes in Ostrołęka voivodship.

In the years 1950-1985 the total population number in the four voivodships considered increased from 1369 thousand to 1843 thousand, i.e. by some 35% . In the same period population of Poland increased by 49% . The increase of population number ranged from 12% in Łomża voivodship to 56% in Suwałki voivodship. It is only this latter voivodship that featured positive population dynamics higer than the national average. It should be noted, though, that the highes dynamics of population increase in Suwałki voivodship occurred in the first post-war years, that is - during the intensive settling process. The other three voivodships suffered population losses during this period.

Urban population of the area considered increased over the years 1950-1985 from 290 thousand to 864 thousand, that is - threefold. The share of urban population in total population of the area increased from 21% to 47% in the period in question (this increase for the whole of Poland was from 40% to 60%).

Dynamic population growth was displayed by the voivodship capitals, and also by other bigger urban centres. Simultaneously, small towns featured usually low population increases or even stagnation with that respect. From among the small towns only those, in principle, which are located in the area of the Masurian Lakeland had definite positive population dynamics, due to their tourism and recreation functions. Weak population development characterizes small townships also in the present decade. These centres are therefore, it seems, still deprived of development-inducing factors.

During the period in question, that is 1950-1985, rural population number in the area considered declined from 1079 thousand to 980 thousand, that is - by 9%, while the analogous decrease on the national scale amounted to 6% . The magnitudes of rural population changes were, though, significantly differentiated in space. There was, in fact, a rural population increase in this period in Suwałki voivodship by 4%, rural population numbers in Ostrołęka were stable, while in Białystok voivodship the decrease amounted to 20% and in Łomża voivodship - to 16% . The latter two voivodships suffered the greatest losses of rural population among all the voivodships in Poland. It should be added that since 1970 the decrease of rural population numbers has been going on in all the voivodships analysed. In the period of 1970-1985 this decrease amounted altogether to 136 thousand, i.e. 12% of the total rural population number in 1970.

Demographic changes were especially importantly differentiated in the setting of gminas (communes). Out of the total number of 171 communes existing presently in the area considered there are 52 units in which during the period of 1950-1985 population numbers decreased by more than 20%, and 30 of them are located within the boundaries of Białystok voivodship, 15 - within the Łomża voivodship, and only a few in the other two voivodships. There was a population increase over the period in question in 44 communes and 21 of them are located in Suwałki voivodship, 13 in Ostrołęka voivodship, 8 in Białystok voivodship and only 2 in Łomża voivodship.

When demographic changes are observed via the setting of communes two subperiods can be distinguished: (1) the years 1950-1970, and (2) the period since 1970. First of these subperiods is characterized first of all by the fact that as many as 88 communes, i.e. more than half of them, featured then a population increase, and there was also a numerous group of communes with low decrease of population numbers. On the other hand only in 12 communes there has been a population increase in the years 1971-1985, while in 118 communes, that is - in 2/3 of all the communes considered - population decrease exceeded 10% of total population numbers of 1970.

The fundamental, direct factor contributing to population decrease in rural areas is outmigration from rural to urban areas. This migration is selective age- and sex-wise, insofar as it is dominated by young people and in particular by women, this fact leading to population decrease of course, but also to a number of other disadvantageous consequences. These consequences include the quickly progressing process of ageing of the rural population in the depopulating areas, and the deepening deformation of the population sex structure consisting in the high shortage of women in younger age groups of the productive age bracket, as well as systematic decline of natural increase rates. This type of phenomena indicate the development of the process of depopulation within certain parts of the area considered.

The course of the demographic processes in the countryside, as it has been going on until now gives the basis for distinguishing within the area of the four voivodships in question a number of larger territorial entities where depopulation processes are most advanced. First of these is a group of communes in Białystok and Suwałki voivodships, and also of Łomża voivodships, located in the Biebrza river valley and at the confluence of Biebrza and Narew rivers. The second territorial entity is constituted by the communes to the South, located in the valley of Bug river, over the area stretching from the state boundary in

the East to the Ostrołęka voivodship. Then the third territorial entity - the greatest one - is constituted by vast areas of Białystok voivodship, stretching to the East and South of the developing Białystok agglomeration. Besides that the particularly disadvantegeous demographic situation of many communes located in the middle and southern parts of the boundary-adjacent belt should be emphasized. This is especially reflected via the advanced process of ageing of population (more than 20% of inhabitants in the post-productive age), and negative natural increase.

An important decrease of the total population numbers, meaning depopulation process going on in a given territory, was not always connected with all these disadvantageous elements of the current demographic situation, which are the symptoms of the more advanced depopulation process (important ageing of the population, low natural increase). Thus, for instance, an important decrease of population numbers appeared after 1970 in a quite numerous group of communes in Suwałki voivodship, located in territories regained after the war. Still. demographic situation remained in these communes quite advantageous, as can be seen through high natural increase and, generally, young population age.

Attention should be paid to the set of communes located within the ethnographic region of Kurpie. In some of these communes population increased in the period of 1950-1985. The whole area features presently a relatively advantageous demographic situation, since there is a quite low share of population in the post-productive age and the natural increase is relatively high.

Regarding the general demographic potential of population inhabiting the area in question, the highest population density exists within the areas of higher urbanization level. One should mention here especially the communes located within the developing Białystok agglomeration and the communes located in southern parts of Ostrołęka voivodship, as well as units located around the other voivodship capitals and some greater urban centres. In the communes mentioned above there is also, in relative terms, higher employment in private farming. Still, people working in private farming are in just these territorial units older on the average than in other places. Situation namely is such that when a young person has a possibility of choice, this choice is usually to work outside of agriculture. On the other hand the highest number of young people work in private agriculture in the communes featuring low urbanization levels, especially in larger farms. Conclusion which could be drawn therefrom, for instance, is that young people, especially young men, can be kept in agriculture only on larger, economically more robust farms.

The dynamics of transformations of socio-professional structure of people inhabiting rural areas of the territory considered was higher than the speed of changes of total population numbers. This was reflected, for instance, in higher dynamics of increase of population numbers living off non-agricultural jobs and of simultaneous decrease of the number of people living off agricultural jobs as compared to the rate of decrease of number of total population inhabiting rural areas. It should be mentioned, though, that the whole territory in question belongs still to the areas with the lowest percentage shares of people who inhabit rural areas and work outside agriculture in Poland. Simultaneously, the territory in question features, since 1978, especially high increase of the number of rural population living off non-job sources of income (pensions and the like).

Differentiation of the socio-professional structure of rural population becomes visible in the cross-section of voivodships, and even more clearly in the setting of communes. A higher economic urbanization level of rural population is a distinct feature of the western part of Suwałki region, southern part of Ostrołęka voivodship, communes located in the vicinity of town of Białystok, as well as in the central and southern parts of Białystok voivodship.
Łomża voivodship has decidedly the lowest level of development of non-agricultural economic sectors in rural areas.

Private farming is characterized by especially strong differentiation in general population potential as well as in socio-professional structures, this differentiation being related to the acreage structure of farms. The relation of the magnitude of general population potential, of the number of persons employed in private farms and outside of them per unit surface of agricultural land is characterized by their inverse proportionality to the acreage of farms.

Polarization of communes, both on the scale of the whole area considered and within particular voivodships, concerns on the one hand communes located in the vicinities of voivodship capitals and other larger urban centres, and on the other hand communes located far from such centres. This first group of communes was as a rule characterized by the increase or only slight decrease of number of inhabitants, while the second group of communes was in principle characterized by a high population decrease.

It should be emphasized that there are no greater areas, or even concrete communes, having unambiguously inmigrational or outmigrational nature. Thus, in the communes featuring population increase there are villages with decreasing population, while in the depopulating communes there are villages with increas-

ing population numbers. The latter concerns the greatest villages, especially the communal centers, in which infrastructural equipment is better than in other places. On the other hand it is clear that depopulation processes are most advanced in small villages, as a rule deprived of any social infrastructure facilities.

The least urbanized areas are usually characterized by important population decreases. The instance is provided by almost whole Łomża voivodship. This is related, to a large extent, to the lack of possibility of finding jobs outside private farming, either in place, within the commune of residence or in its close vicinity. On the other hand, however, in weakly urbanized communes, where larger private farms dominate, there are relatively more young people working in private agriculture. The level of development of this agriculture and economic effectiveness of farms, especially within such communes, are the main factors of population stabilization, of keeping people within their initial residence area, in particular with regard to these persons who are indispensable for adequate functioning of family-managed and -operated farms.
North-eastern Poland suffered an important delay in socio-economic development, especially of the rural territories, but causes of significant rural depopulation were also of more local, regional nature. Some of them shall be commented upon in the sequel.

The first of these regional causes consists in concentration of economic potential in voivodship capitals and more important urban centres of the area. In Białystok voivodship this means concentration in Białystok, where some 56% of jobs of the whole socialized economy of the voivodship are located, while the share of value of production sold in the voivodship's total is even higher - 72% . Similar shares of the main centre can be quoted for investment value, fixed assets, and also for such other items as housing resources, education facilities, health care facilities or culture dissemination facilities.

The second cause leading to depopulation of rural areas of the region in question are much harder conditions of work in regional agriculture and in general of rural life in the region. This situation results from relatively less advantageous natural conditions of agricultural production, and from neglected social and technical infrastructure - which is particularly strongly felt in view of the sparse settlement system of the region.

The third cause which contributes to depopulation of rural areas and to decreased employment in agriculture is the relatively lower profitability of agricultural production in the region. The profitability level is shaped, on

the one hand, by the natural conditions and the state of infrastructure, mentioned before and on the other hand, by the regional policies of central authorities with regard to agriculture, which, in this case gave greater preference to regions with higher agricultural productivity and higher commercialization of agriculture. Resulting from these policies has been insufficient availability of production means in agriculture, fixed assets and raw materials, products coming from industry, as well as low limits of credits for agriculture. Because of this the unit costs of agricultural production in the region were higher than the national averages, while products have been sold to the state purchasing outlets at the same state-determined prices all over the country, so that in fact profitability of economic activity in agriculture in the region considered has been as a rule far below the national average. Agricultural income per unit of agricultural land is in the region at 75% of the national average.

The three causes of regional nature, contributing to rural depopulation in the North-Eastern Poland, refer to economic problems. Besides these, however, there are also other - sociological, national (ethnic) or cultural. They are usually of quite local character and that is why they have not been taken into consideration here.

Consequences of depopulation processes taking place in rural areas are quite vast. These consequences are especially visible through demographic situation and through agricultural economy of the region, both of these being, though, quite distinctly differentiated throughout the region. Depopulation consequences become visible in demographic situation via a number of elements, such as, for instance: deformed population structure in rural areas, shortages of labour force in a significant portion of farms (especially those with larger acreages), and a significant increase of the number of localities with very small number of inhabitants (below 100 or even 50 persons).

The deformed population structure is characterized by high share of population in the retirement age, (in fact there are more than 16% of population in 60 and more years of age), low proportion of population below 15 years of age, as well as shortage of the number of women in relation to the number of men in the fertile age. Thus, high proportion of older people and inappropriate sex structure of population in fertile age cause negative biological increase in some 20 communes of Białystok voivodship. The number of such communes has been growing for the last few years.

Starting with 1978 labour resources in the agriculture of north-eastern

voivodships have been decreasing by 1.2% annually, and there are currently some 20 persons per 100 hectares of agricultural land, treated as agricultural labour force. It should be added, though, that these labour resources are very importantly differentiated according to land ownership and magnitude of family farms. The appropriate index for the state and so called cooperative farms is at 12-15 persons per 100 hectares of agricultural land, and in private farms of 15 and more hectares of surface (owning together some 225 thousand hectares of agricultural land) it is at about 13 persons per 100 hectares. In many farms there is just one person working. Having in mind inadequate availability of fixed assets, which could substitute for human labour in agriculture it can be stated that in many farms labour resources are at a minimum level, limiting practically the level of agricultural production. There is also another important feature of this situation, namely - low quality of labour resources, resulting for instance from older age of those working in agriculture, and from the level of their general and professional education. This entails low dynamics in farm operation, domination of traditional production methods, and very limited propensity to technical and agricultural innovation. The phenomenon is connected with the fact that young people, usually better educated and more active are leaving agriculture as occupation.

Depopulation of rural areas takes place in a differentiated manner in the geographical space. The process is most distinct in small localities, deprived of adequate infrastructure, located far from greater service and supply centers. Inhabitants of these localities outmigrate not only to voivodship capitals or other neighbouring urban centres, but also to bigger, better developed rural centres nearby. These are usually communal centres. Consequently, one observes a process of population concentration in a few rural centres in which more than 1000 inhabitants live and a parallel increase of the number of villages with less than 100 inhabitants, but, what should be emphasized, these small villages undergoing depopulation, do not get completely depopulated.

These are the negative phenomena related to depopulation of rural areas. Their consequences encompass also incomplete utilization of the economic potential of agriculture, especially of land resources. The total area of land given over by private farmers to the State Land Fund is increasing (presently in Białystok voivodship there are 37 thousand hectares of agricultural land in this Fund), the livestock numbers are on the decrease and the scale of own investments in farms is also decreasing.

Still, along with these disadvantageous effects one can observe a few

facts indicating that prerequisites may be emerging for agricultural development over a longer time horizon. One of these new signs is a relatively stable agricultural production value per surface unit. This value persists on the level of 70-80% of the national average for already more than a decade. Since the aricultural population numbers show a steady downward trend, the scale of agricultural production and agricultural income per one inhabitant living off agriculture must be on the increase. If one adds to that the monetary incomes acquired by farmers from non-job sources (pensions of various sorts), one can conclude that the ratio of total financial incomes as compared to national averages is not decreasing. It should be remembered, of course, that these incomes are in fact significantly lower than in the country on the average and than those of people living off the non-agricultural jobs.

Another fact observed over more than ten last years concerns changes in the acreage structure of family-operated farms, and consists in concentration of land. This process is more distinct in the areas with better soils where presently already over 50% of land belongs to farms of 15 and more hectares of surface. Alas, this process is not observed in the communes where there are more lands in the State Land Fund, and where there are better opportunities for creating bigger farms. It can be anticipated that the process of gradual concentration of land in family farms shall be continued, and it seems that this process should be stimulated by adequate instruments of agricultural policy.

It is difficult to determine the strength of influence exerted by demographic processes upon the social and economic development of North-Eastern voivodships of Poland. Changes in the level and structure of the social and economic potential take place under the influence of many factors. Conclusions concerning determination of the strength of influence of the demographic factor, as one of many of them, must therefore of necessity have approximate nature. Still, it is expedient to try to gain complete knowledge of demographic processes and of the means of their control, in order to integrate this knowledge in the management system on regional level.

The task of territorial authorities can be competently executed by them if they have, first of all, adequate knowledge of problems related to human life in the region in its various aspects. Let us state that, in general, our knowledge of human affairs is still quite modest. The domains especially neglected with that respect are: life processes in historical perspective, attitudes towards life and work, aspirations, procreation-related needs, as well as needs as to living conditions and culture. In the economy reformed according

to the current plans the territorial authorities will be responsible for satisfaction of a much broader range of human needs, on the basis of the so called local economy, than they have been until now. Scientific diagnoses should provide knowledge as to the magnitudes and structures of economic potential in a region, including "local economy", i.e. state-owned but managed locally. These expertises should, however, primarily shed light upon the functioning of this potential in new, reformed conditions, under the influence of attitudes of people.

Adequate influence to be exerted upon the changes of the course of development processes taking place within the rural areas of north-eastern Poland with the aim of ensuring the desired trajectory of these processes must result from adoption of strong measures contained in a plan of intensive development (plan of the "problem area"), accepted by the voivodship authorities and central government of Poland. Types and magnitudes of factors used as instruments, whether political, financial, physical or legal, meant to support the development of problem area, should be taken so as to contribute to:

- stabilization of rural population, and general civilizational progress in rural as well as urban communities;
- improvement of life and work conditions of rural population inhabiting the area and equalization of the levels of these conditions with those in towns and in villages located in better developed voivodships;
- creation of possibilities for quantitative and qualitative growth of agricultural production, together with an improvement of effectiveness of economic activity in the whole regional economy;
- improvement in the use of natural resources in productive process, and creation of conditions for effective protection and rational use of environmental assets, which are unique on the vast parts of the territory in question, for the benefit of the region and of the country.

ATTITUDES OF FARMERS TOWARDS LAND OWNERSHIP ON BOTH SIDES OF THE FORMER EAST PRUSSIAN BORDER, 1984-1987x/

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Studies were carried out in 179 communes located at both sides of the pre-war Polish border with the former East Prussia. The map enclosed presents in detail the study area. For the sake of accuracy it can be added that the observed administrative units belong to seven voivodships: Ciechanów (14), Elbląg (37), Łomża (13), Olsztyn (48), Ostrołęka (9), Suwałki (43) and Toruń (15).

A few remarks on the objectives of the study. Generally speaking, an attempt was made to find out whether the long non-existing border is only a line on the map, or whether there are still some differences in the attitudes of people who live in the former borderland. In view of the fact that one side of the area under study was inhabited by people who lived there for generations, while the other was populated with settlers who arrived here after 1945, the author assumed that attitudes towards land ownership should differ northward and southward of the borderline between former Republic of Poland and East Prussia.

There is really no need to say that in terms of gaining more knowledge on current social problems in the area under study, any result either confirming or disproving the above hypothesis will be most interesting.

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x/ This paper is based on statistical documentation annexed to the research project RPBP 03.5 on depopulation of Polish countryside , in the report (in Polish) by B.Sałuda "Contribution to the Problem of Land Management", Olsztyn, 1988, pp.65 which is to be found in the archives of the Institute of Geography and Spatial Organization of the PAS in Warsaw, and in Special Collection of the Wojciech Kętrzyński Research Centre in Olsztyn.

It is really difficult to describe social processes with numbers. Still, I have made this attempt as otherwise it would not be possible to present this interesting problem in form of a cartogram. The proposed measure has been preliminarily called an "index of farmer's respect to land". The matter shall still be discussed later on.

Before passing into the discussion on the problem as such, explanation should be given as to land ownership in the study area. This problem is presented in Fig. 1. It is quite obvious that land ownership north of the former East Prussia border was shaped by state policy, and that this policy was of a doctrinal character. It was a priori decided that a number of the former Prussian landowners' estates were not to be parcelled out and were to become state property. When the farmers refused to join the cooperatives, these estates were transformed into State Agricultural Farms. In this period, the area of state land increased steadily, this being especially noticeable in the regions annexed to Poland after 1945. Without going into details, it must be said that over half of arable land in the area of the former East Prussia belonged to the state, and this must have affected attitudes of the peasants who settled there.

Conditions of agriculture in a given area can be assessed by analysing a number of technical and economic indices (yield of 4 cereals per 1 ha, animal stock per 100 ha of arable land, cereal production per capita, number of tractors per unit of area, use of mineral fertilizers in pure component per 1 ha, infrastructure level etc.). In Polish conditions, general view of the situation in agriculture, especially in the private sector, can be formulated by analysing the dynamics of taking over of land by the State Land Fund. This is presented in Figs. 2 and 3.

As can be seen from these figures, State Land Fund disposes of the largest land area in Olsztyn voivodship which is located entirely in the former East Prussia. The situation improved slightly in 1983-1987, but on 31 December 1987 still over 48 thousand hectares of agricultural land had no owner, this being 6.7% of all agricultural land in this province. The other two voivodships (Elblag, Suwałki) which are located in former East Prussia were in a little better position but still much worse than the regions south of the former Polish-German border.

When spatial approach is adopted (Fig. 3), it is readily seen that the communes in the so-called old regions are characterized by a decisively lower percentage of land given by the peasants to State Fund. The communes

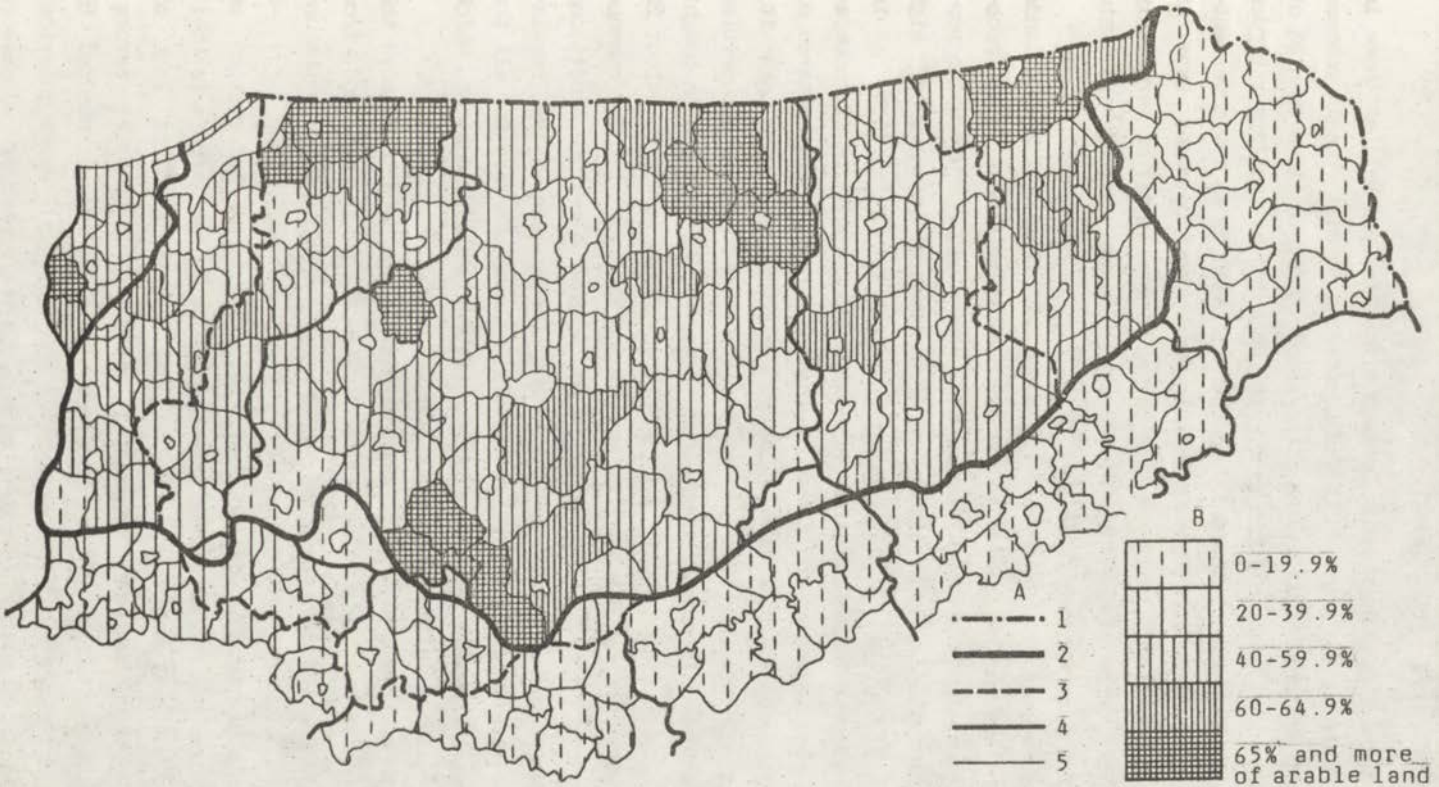

Fig.1. Arable land according to ownership (as of 30 April 1985, for Ostrołęka voivodship - 30 April 1986)
A - borders: 1 - State, 2 - former East Prussia, 3 - Olsztyn voivodship before 1975, 4 - voivodship after 1975, 5 - commune; B - socialized sector (per cent of arable land)

located in Toruń, Ostrołęka and Łomża voivodships as well as those in Suwałki voivodship in the areas which did not belong to East Prussia possess less land which is temporarily at the disposal of the state (less than 5% of private arable lands). On the other hand, to the north of the former border there is hardly any commune that would be characterized by so low a percentage of land at the disposal of the State Land Fund. Most communes have at least 15% of "nobody's land", either barren (waste lands) or very badly managed. In an extreme case of Miłomłyn commune (Olsztyn voivodship) this percentage reaches as much as 26.4%!

The extreme case of this commune calls for some comments. Arable lands in this commune are partly flooded by the Ostróda-Elbląg Canal, most probably due to improper conservation of this unique navigation route which represents a highly valued tourist attraction of European class. However, high percentage of unused land in this commune is mainly due to the fact that in 1986 a farm belonging to the so-called "agricultural circle" type of cooperative had to be liquidated for financial reasons. Hence, 560 hectares of agricultural lands became ownerless and there are no candidates to take it. Only part of this area had been purchased although the commune authorities are ready to apply all possible reductions. A hectare of land can be bought for 2-3 metric quintals of rye (in installment payments!) i.e. about 20 times cheaper than the usual price for land of the same quality! The commune authorities are sure that the land would be quite easy to sell on conditions that some regulations were changed. Changes of some administrative regulations would be beneficial not only for Miłomłyn commune but also for all the other communes, especially those located close to industrial centres which employ workers living in the countryside.

Now let us pass to the index which is to be used to measure the respect of peasants for their land. We shall view the State Land Fund from still another point, and shall try to work out a tool to measure the unmeasurable.

Voivodship Statistical Offices dispose of statistical information on how many hectares of land are given in each commune by the farmers to their successors and how many are taken over by the State in the case of lack of successors. The two values were compared. In order to avoid possible errors, a weighted average for 1984-1987 was used, the weight being represented by the area of privately owned land in a given commune. This way a numerical index was devised. Its value increases along with the number of successors

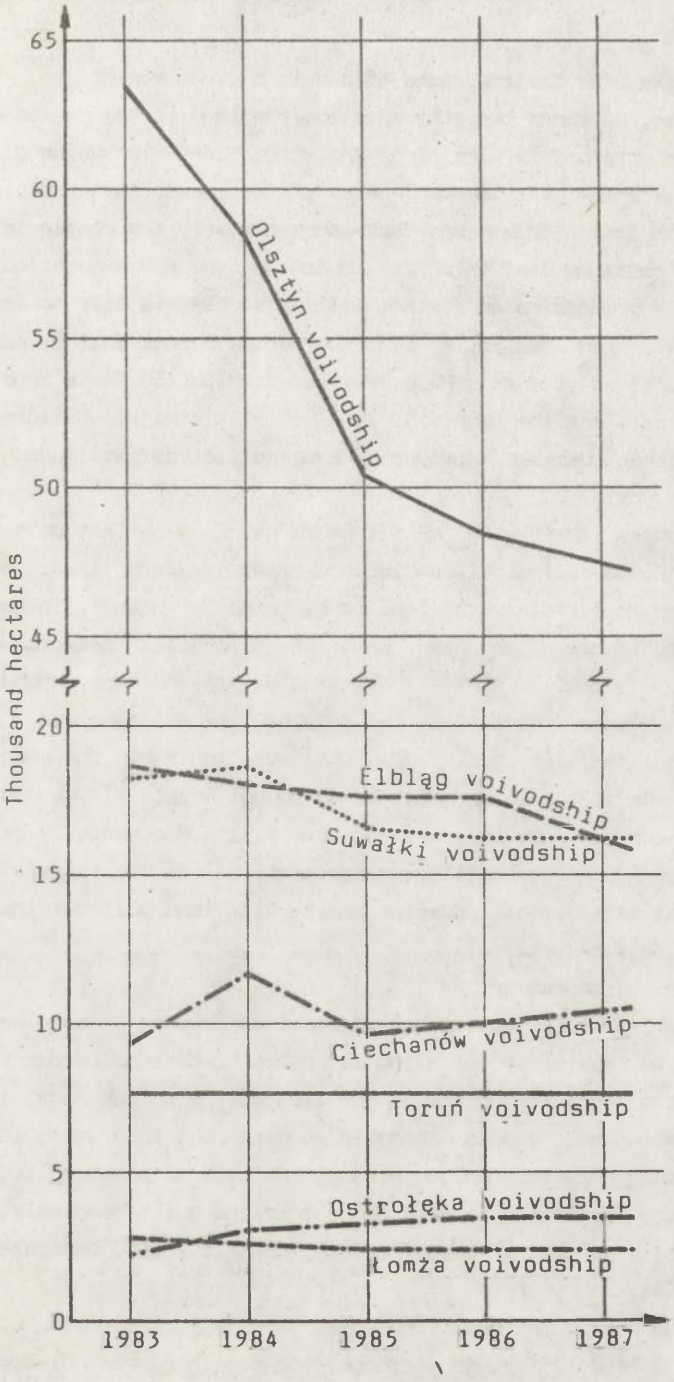

Fig.2. State Land Fund, 1983-1987 (as of 31 December)

ready to take over their parents' farms in a given region.

Figure 4 shows the attitudes towards land in the region under study. The picture obtained is very clear and suggestive. The value of the devised index is very low over the whole area of the former East Prussia, regained by Poland in 1945. This means that there are very few people in this area willing to continue land farming. Obviously, the new generation sees no future in this profession and is not willing to tie its life to land. All communes located in old Polish lands bordering former East Prussia present a totally different picture. Much less is given to the State Fund in exchange for pensions, and the "index of land-loving" is high. Children of farmers living in these communes obviously have different attitudes than their neighbours. Why?

Obviously there are many factors which cause that more young people living at the so-called Polish side are ready to farm land. However, the main reason is certainly the feeling of being "at home". These people have their roots there, and are part of a complex network of various relationships: family ties, long-standing friendships, bonds with local society as well as societies of the neighbouring villages etc. Here people have personal feelings for the land which was their own for generations. At the other side of the border such bonds do not exist. It should be remembered that for the past 40 years the authorities successfully prevented formation of such bonds by continuous propagation of the Marxist vision of agricultural development, scaring people with land collectivization, formation of state farms etc.

A few sentences to sum up:

1. The former border between Poland and East Prussia is no longer on the maps. It is invisible for a tourist going by car (no border passages, no guards, at present many brick houses also at the Polish side in place of former traditional wooden thatched houses) but when attention is paid to land ownership structure and to peasants' attitudes towards land, statistical data are sufficient to draw the borderline quite precisely. This line, non-existing on political maps, exists in reality and separates two different worlds.

2. Persistence of the described policy trends in the region of former East Prussia will lead to further decrease, or possibly even disappearance, of private farms. Were this the case, the land would have to be overtaken by the state. This would be most unsatisfactory from social as well as politi-

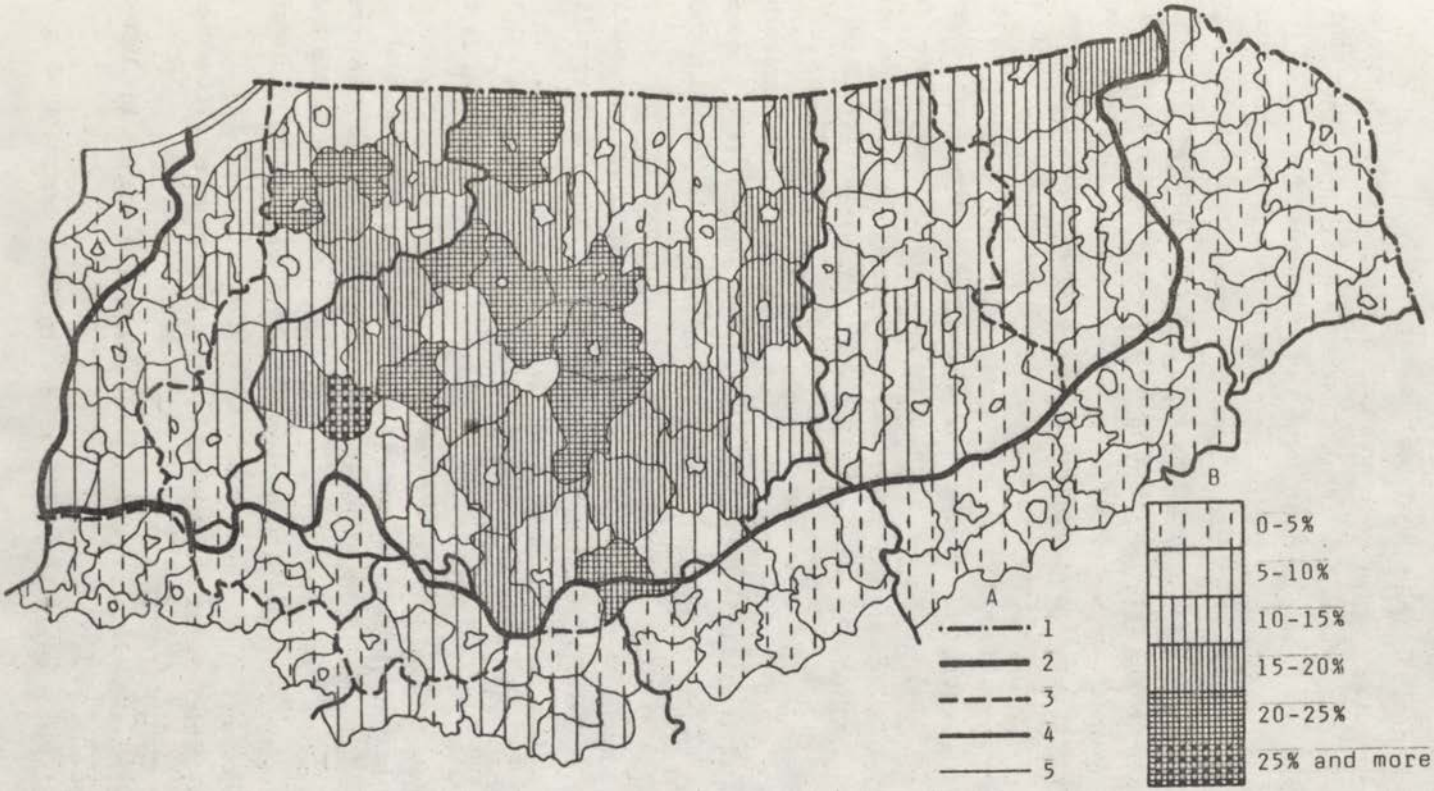

Fig.3. State Land Fund (as of 1 January 1988)

A - cf Fig.1; B - State Land Fund (reserves) in per cent of private arable land

cal point of view, due to at least two reasons:

a/ State agricultural farms are characterized by very high production costs (for instance, in 1960-1975 net production per 1 hectar was twice and in 1980 over ten times lower in state farms than in private ones /1/.

b/ Lack of private farms in the lakeland regions is very dangerous from the point of view of water protection. State farms breed less animals (per unit area) than private farmers, and compensate lack of natural fertilizers with high rates of mineral fertilization. Most of these fertilizers end up in lakes and rivers in the form of land run-offs. Obviously, high fertilization rates and use of planes for herbicide and pesticide spreading aggravates the negative effects on water quality. These statements are not only theoretical: there are hardly any rivers in the 1st class of water purity in Olsztyn voivodship /2/. In order to slow down rapidly progressing degradation of the natural environment it would be necessary to move state farms further from lake shores and river banks, or at least to force them not to carry out intensive plant production in the 0.5 kilometer belt along the water shores.

3. It was found that in the region of former East Prussia agricultural production is different than in the so-called "old lands". It is necessary to change the policy in this region. For instance, the following changes should be introduced immediately:

a/ - All young men willing to take over their parents' farms and cultivate them for at least 10 years should be released from the obligatory military service (the release would apply to one family member only).

- The same should apply to those willing to quit their present job and overtake their parents' farm instead as well as to the men marrying farmer's daughters and willing to take over the farms.

- The same should apply to men willing to buy land from the State Land Fund and engage in farming. These people should obviously be given credits and allowances allowing them to start up a farm. (When the young man had already passed through the military service, land taxes should be lowered in the above cases).

b/ Private farms located by lakes and rivers should be especially protected.

/1/ Agricultural production: gross, end, marketable and net in 1960-1980. GUS, Warsaw, p. 70.

/2/ Statistical Yearbook of Olsztyn voivodship. WUS, Olsztyn, 1986, p. 53.

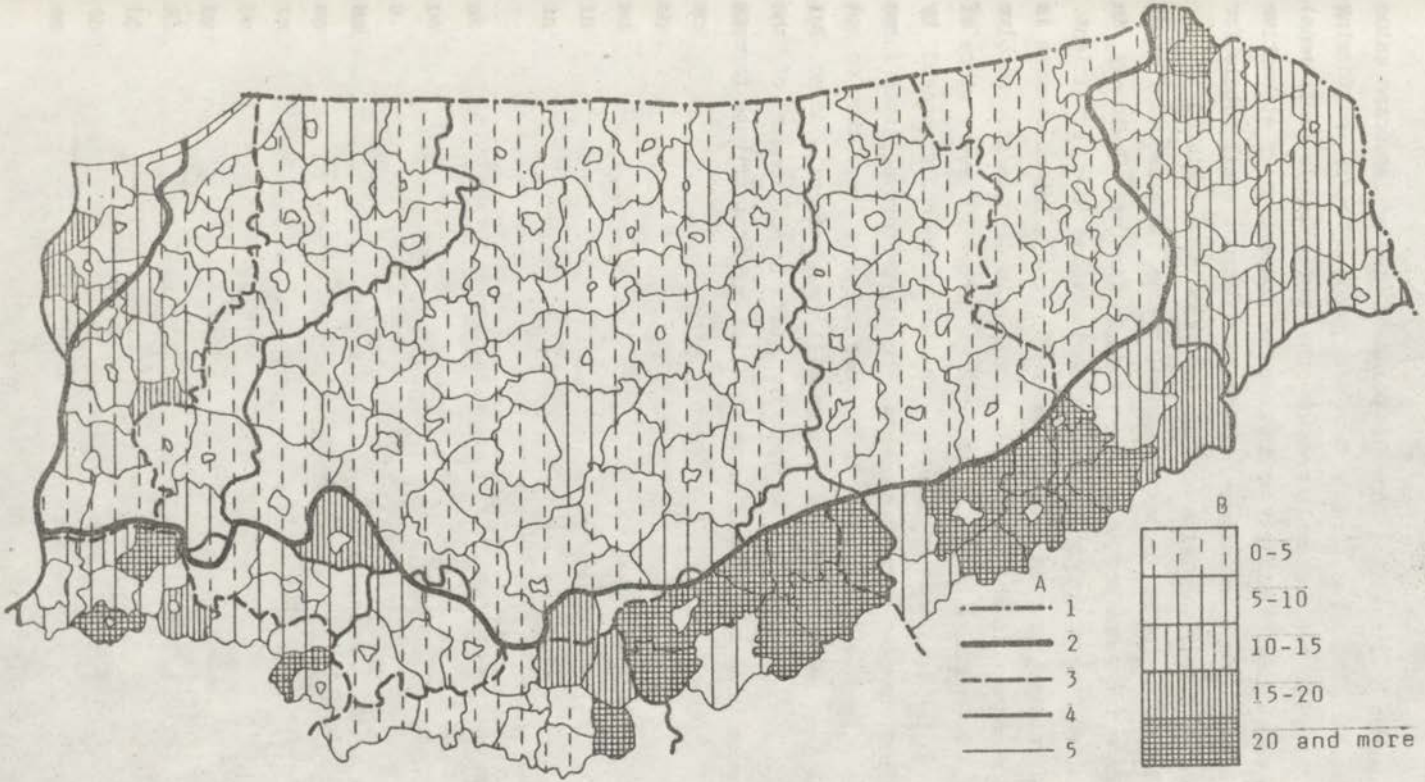

Fig.4. An index of the attitude of farmers and their children to land and profession
A - cf Fig.1; B - index

These farms cannot be liquidated from the point of view of landscape value and nature protection (this has already been discussed). Poorly performing farms (for instance, due to small area or other unfavourable conditions) should even be subsidized, similarly as in cases of touristically attractive areas in many Western countries. Those willing to construct small hotels for the tourists and to supply them with healthy food should be assisted.

c/ Lack of certainty as to the future of agriculture in the area under study is the main reason for young people not to engage in farming. Obviously, in view of the past 40-year experience, no oral declarations are sufficient. Parcelation of state farms might be too much, but a lot of openness is needed. It is necessary to show that it is possible to discuss and resolve these problems. An end must be put to authorities' greed for every piece of peasant land, to the idea that even barren lands or those badly managed by the state cannot become private property. Poorly performing state farms should make their land available. Let the farmers think it over; they do not need to buy the land immediately, maybe they will even refuse to do so. But the fact in itself would make it clear that the state is no longer of the opinion that peasants as such should cease to exist and that private farmers are doomed.

THE ADVANCEMENT OF DEPOPULATION PROCESSES IN THE VILLAGES OF CENTRAL POLAND

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Studies concerning depopulation of villages, presented here, have been conducted within the area which could, in a broader sense, be called Łódź region. This area encompasses Łódź, Piotrków, Sieradz and partly Skierniewice and Płock voivodships, as well as boundary-adjacent gminas (communes) of the Konin voivodship. Limits of the area considered were determined on the basis of the reach of daily job commuting to Łódź itself and to towns of Łódź agglomeration. The thus delimited area was increased through inclusion of the surrounding zones, which do not belong to any municipal region, since it is just in such areas that depopulation is most intensive. The main example of such a zone is the region beyond Pilica river in Piotrków voivodship, which was subject to more detailed studies.

Population number in the whole of voivodships here cited was in 1970 at 2 million, with 38.6% of this population inhabiting villages. Over the period of 16 years the population number in the area described increased by 9.4% attaining 2187.1 thousand. It is characteristic that the population inhabiting villages systematically decreased. The causes of this phenomenon were first of all related to migrations to towns, mainly to voivodship capitals and to the emerging centre of the mining-and-energy region, namely to Bełchatów. Population number in villages of Łódź voivodship decreased only by 3.5%, that is - the decrease has been significantly slower than in Sieradz voivodship - 9.7%, and in Piotrków voivodship - 11.9% . Excepting Łódź agglomeration this amounts to a decrease of the order of a bit less than 1% yearly, which suggest that the outflow of rural population was not especially destructive. Still, consequences of this phenomenon are much more

serious than suggested by its sheer physical dimensions, for it is the demographically selective nature of outmigration which really matters.

In the years taken for comparison, namely 1976 and 1986, age pyramids reflecting the age structure in Sieradz and Piotrków voivodships approximated rectangular shape, which illustrates well the advanced process of ageing of population of both sexes. The way data are grouped causes the age pyramid to take a deceiving shape, since the share of older children (7 to 15 years of age) is too emphasized. This group constituted in the first of the years considered some 14-15% of total population, while 10 years later a little less, approximately 12 % . On the other hand one could observe an increase of the share of people within the 25-40 years age category, mainly at the expense of decreasing numbers of younger people in productive age. The shares of men and women of more than 64 years of age grew by some 0.5-1.5% . Progressing ageing of population is well illustrated by the increase of the value of the population median age. The most important conclusions resulting from the analysis indicate that rural population in Sieradz voivodship is slightly older than in Piotrków voivodship. Simultaneously, in both regions women are, on the average, significantly older than men (by 5 to 6 years). Besides that, in the years of comparison the average age of men increased by 2 years in Sieradz voivodship and almost by 3 years in Piotrków voivodship. Female populations, respectively, grew older by 1 and 2 years.

Age and sex structure of a given population has fundamental significance for the process of biological reproduction of population. Deep changes of demographical proportions of the sexes with regard to the natural distribution cause limitations to natural increase and thereby further accelerate the process of population ageing. Such disproportions between the shares of two sexes have also their social dimension, since they lead to more intensive outmigration aiming at finding of spouses. In rural communities, where economic roles of both sexes are different and simultaneously indispensable for functioning of a farm, the imbalances mentioned have significant negative productive-economic influence.

In Sieradz voivodship there were in 1976 as many as 106.3 women per 100 men, though in rural areas this indicator was somewhat lower and attained 104 0. On the other hand, in towns, though none of them exceeded 50 thousand inhabitants, this feminization indicator was at as much as 112.4. This demonstrates that outmigration from rural to urban areas is quite significant, for namely women most often dominate in this outmigration. It can

therefore be suspected that depopulation processes in the Sieradz region villages had started already in preceding years. Over the 10 subsequent years feminization indicator significantly decreased both in towns and in rural areas. In 1985 respective values were 109.9 and only 100.2 women per 100 men. At this stage, an equilibration of demographic sex proportions in rural population, together with an increase of age medians, is an expression of growing intensity of outmigration and of structural depopulation.

In the middle of 1970s the feminization indicator in Piotrków voivodship was at 107.1, although, as in Sieradz, it was lower in rural areas, attaining 104.8 women per 100 men. Similarity of the two voivodships found its reflection in analogous changes of the feminization indicator, which in Piotrków voivodship decreased over 10 years altogether down to 102.9, while in rural areas to 100.6 women per 100 men. In the Łódź voivodship, dominated by the agglomeration of Łódź, proportions of the two sexes were similar, though there were exactly 104.9 women per 100 men, which is a slightly higher value than in other regions, corroborating the conclusion of lower intensity of population migration. A good example here is provided by the sex structure of Skierniewice voivodship, subject to draining influences of two large urban agglomerations - those of Warsaw and Łódź. Namely, in villages of this area absolute majority of men is observed, since feminization indicator is merely at 99.6. It should be emphasized, though, that deformations of the age and sex structures of the population are not very important. Age pyramid of inhabitants of villages in Łódź, Skierniewice and Płock voivodships had a very similar shape, approximating rectangular one. This means an average, for Poland, degree of progression of the population ageing process. Such a conclusion is also confirmed by a relatively low surplus of the oldest-age-group people, as well as by the values of age medians. In all the described voivodships of the northern part of Łódź region and in the very Łódź voivodship the average age of men was at some 31 years, while the average age of women was at some 34 years. Both these values can be considered an expression of a moderate, but distinct process of ageing of rural population.

In order to determine the tendencies of changes taking place in natural movement and in migratory flows over the period of 1976-1986 the method of Webb was applied. This method makes it possible to reflect in real terms and in general manner the increase or decrease of population numbers, and to determine the role of both factors previously mentioned, see Table 1.

Observation of the types of real increases in 142 communes makes it possible

Table 1. Types of real increase of population in communes (the method of Webb)

Types	1976	1980	1986
B + PN > + SM	2	2	3
C + PN < + SM	-	-	-
D - PN < + SM	-	1	2
F - PN > - SM	-	1	3
G - PN < - SM	3	10	11
H + PN < - SM	118	104	107
A + PN > - SM	19	24	16
Totals	142	142	142

to state that the phenomenon in question is relatively homogeneous and stable in time. In consecutive years as much as 73% to 83% of communes belonged to the inrease type H, that is - the type for which the negative net migration is greater, as to its absolute value, than the positive natural increase. This means a significant domination of communes with a moderate population decrease which, taking into account demographic selectivity of migrations, can be called structural depopulation. In consecutive years the type mentioned was complemented (excepting just a few units in which quite random proportions in population dynamics occur, accounting for just 1.4-5.6% of the total) by the change types A and G. Type A correesponds to an insignificant surplus of natural increase over the negative net migration flows, that is - effective population increase. Such a phenomenon was observed in only a few communes located in the vicinities of towns. This type, advantageous for villages, which could be called moderately progessive, is partly outweighed by a symmetric type G, which is characterized by the domination of net migratory outflow over the net natural population decrease. The latter is a reflection of the advanced process of changes related to demographic structure and of an important degree of depopulation. Appropriate units, because of their low numbers (4 to 11) are not dis-

tributed in any definite order.

One could merely state that between 1976 and 1986 there occurred some increase of differentiation of the types of real increase. It should be added that this differentiation increase was multidirectional, since there was a simultaneous growth of the number of units featuring effective increase and effective decrease of population numbers.

In particular voivodships proportions among various types of effective population increase were as follows. In Sieradz voivodship there were in 1976 three types of changes of effective population numbers. There were only 6 communes belonging to type A, meaning natural increase higher than migrational outflow. These communes, as mentioned, could be called moderately progressive, in view of slight population increase which occurred in them. These increases did not exceed 1% of population and the administrative units in question were located mainly in the direct vicinity of towns. Only just one commune belonged to the decidedly negative type G, in which both natural increase and net migrations are negative.

A significant majority of communes - together with the average for the whole population - belong to type H, featuring higher (in absolute terms) negative net migration than positive natural increase. This type can, by analogy, be referred to as moderately recessive, though, in fact, its persistence over a longer time period can lead to important changes in the age structure of population, that is - to structural depopulation.

From the point of view of depopulation it is not only important to know the type of changes, but also the absolute magnitude of population decrease. In 42.5% of the communes of Sieradz voivodship the effective population decrease was only slightly greater than 1% per annum and such a decrease should be considered serious when it is coupled in a definite way with demographically selective structure of migration. It should be added that population losses exceeding 2% per annum were observed only in 5 communes. These administrative units which were losing more than 1% of population were usually located at the boundary of the voivodship, and clustered in its southern part. This part of the voivodship featured advantageous demographic proportions, which means that even high biological vitality of village populations is not capable of securing against migrational depopulation. In consecutive years spatial distribution proportions among the particular types of changes of population numbers have been quite stable. In 1980 there were still 29 communes belonging to type H, but there were also 6

communes in the decidedly recessive type G. On the scale of the whole region there occurred, however, certain improvement, since the number of administrative units which have been losing more than 1% of inhabitants decreased down to 12. Only 6 communes showed a slight effective population increase, and these communes were primarily located in the southern, better developed part of the voivodship.

National crisis in housing construction had definite limiting influence on the population inflow to towns and entailed therefore a decrease of intensity of depopulation in rural areas of Sieradz voivodship. Still, as far as proportions among types of effective population dynamics are concerned, the differences were not that important. This means that were dealing more with migrations which are simply delayed in time than with actual improvement of the situation in terms of rural population dynamics.

In Piotrków voivodship the numbers of communes belonging to particular types of effective population increase were similar as in the neighbouring region. In 1976 net population increase occurred in 11 communes, that is - in 20% of the administrative units. In Gomunice and Gorzkowice communes the proportions of population dynamics were of type B (positive net migration lower than natural increase), but migrational increase did not exceed 0.1% . Other communes in which population numbers increased belonged to type A, and in the commune of Tomaszów the effective population increase reached even 1.1% . Similarly, other units in which positive changes in population numbers were observed, directly bordered with towns. Other communes were losing population primarily because of the fact that natural increases did not compensate for outmigration losses (type H). It is only in Dłutów commune, neighbouring with the town of Pabianice, and in Czarnocin commune, belonging to Łódź agglomeration, that proportions of the recessive type G were observed.

The facts here cited would indicate that in the middle of the 1970s depopulation processes were less advanced in PiotrkÁw than in Sieradz voivodship. Still, also in Piotrków voivodship the communes with the greatest net population losses were located in the outskirts of the region, especially within the zones of influence of Łódź and Upper Silesia and within the borderline region beyond the Pilica river.

Four years later intensity of depopulation diminished, which reflected, it seems, a national tendency. The number of communes in which population increased was then greater by 12 (mainly in type A - altogether

11 communes). These communes belonged to Bełchatów region and to Radomsko zone, and there were also suburban units. It can be hypothesized that in these communes job commuting to nearby towns or large industrial enterprises (like the ones located in the Bełchatów Industrial Zone) was a substitute for permanent outmigration. Continuation of the processes which had been taking place previously could also be observed in the deepening depopulation within the zone of Łódź agglomeration and in the region beyond Pilica river, where most communes were still losing over 1% of population per annum. Simultaneously, the total number of units with such annual population loss decreased down to 15, that is, by as much as 68% . Changeability of the depopulation rates is confirmed by the fact that only half of these administrative units had featured thus significant population losses also before.

Trends here outlined persisted in the following years, since only 12 communes lost in 1986 more than 1% of the population. Simultaneously, population increased in 9 communes. These latter communes were different than previously, which confirms the conclusion that the advantageous, progressive types of population dynamics are of low stability.

The most recessive character had still the dynamics of population changes in the communes located within the sphere of influence of Łódź agglomeration. Similarly as in Sieradz voivodship, the general change of net migration and natural increase in Piotrków voivodship was contained within the frames of the H type. Natural increase diminished by 3.7%, while the negative value of net migration - by 3.3%, so that over these 10 years rural population decrease process was quite stable, with two main components, migration and natural increase, at a diminishing level. This is a corroboration of the persistence of causes and phenomena resulting in rural depopulation.

Finally, in Łódź voivodship, directions of changes of natural increase and the magnitudes of migrations of rural population were similar, although absolute values were somewhat different. In the years 1976, 1980 and 1986 effective decrease of population numbers within the type H was observed. Still, in first of these time points this decrease amounted to 10%, while in the last one - to only 2.8% . Simultaneously, natural increase declined from 9.1% to 3.4%, which, it seems, was not an effect of a depopulational deformation of the age structure of the local population, but was rather connected with the general national decrease of birthrates. This phenomenon was

accompanied by an important decrease of the negative net migration index from 19.1% down to 6.2%, which, as was previously mentioned, resulted first of all from the changes in housing construction rates in Łódź. It can be also suspected that the scales of natural increase and net migration, when considered for whole voivodships, are more related to processes taking place on the national level than to regional specificities.

Differentiation of types of effective population dynamics is in âÄdĘ voivodship, having obvious urban nature, not too diverging from the one in other, typically agricultural voivodships. In 1976 all the communes belonged to type H, that is, were undergoing depopulation. This was related to a - relative - boom in housing construction in Łódź during the 1970s. As, however, economic crisis was gaining momentum and a real breakdown in housing construction rates followed, touching especially the central town of âÄdĘ agglomeration, the migrational inflow from rural areas of the voivodship first decreased and then even substitutive or stage-wise inmigration appeared. Thus, one could speak of limited depopulation or of it being delayed in time. In 1980 there were 6 communes in the type A group, that is - communes which underwent effective population increase. Still, six years afterwards there were only 2 such communes, with the other ones returning to the moderately depopulational type H. Thus again, the hypothesis of a low durability of an improvement in depopulation processes, together with their small absolute scale (back and forth between types A and H), got confirmed for the suburban villages. In the northern part of Łódź region, similarly as in southern voivodships in all the years considered proportions of changes in population numbers were primarily of the type H (some 80-90% depending upon the role and particular voivodship). It is solely along the transport line Łódź-Koluszki-Skierniewice-Warsaw that sporadical units belonging to type A could be encountered. In this case the influence of the commune location - peripheral, central, or well connected with the centre - on depopulation processes taking place there becomes, as mentioned already previously, visible. This influence, however, is not so strong as to stem the overly outflow of inhabitants. It can be stated that the northern part of the region is subject to depopulation to the similar degree as was described for Sieradz and PiotrkÄw voivodships.

Within the area of Central Poland depopulation processes concerning rural population appeared over the last 10 years quite distinctly. The scale of these processes, however, did not exceed, in principle - irrespective of

location of villages - just 1% of the average population number per annum. Thus, it can be said that the threat resulting from depopulation is moderate for these areas. More serious problem is constituted by destruction of demographic age and sex structure of rural population. This concerns overly outmigration of young women and general ageing of inhabitants of villages. Such a phenomenon, in turn, entails a steady, though quite slow downward trend of natural increase, so that in some communes natural increase becomes even negative. This situation could be treated as the first stage of depopulation.

During the time period here considered one could observe a decrease in the rates of population losses suffered by rural communes. This fact, though, was related to general problems of housing construction and not to improvement of the standard of living in rural areas. Anyway, the effect which could be even deemed advantageous from the point of view of depopulation processes, taken up here, is not in fact durable, since it is just a delayed migration, and not its true decrease. Still, such a situation opens up room for undertaking of actions aiming at the goals like strengthening of this present tendency or, at least, like optimization of the future - increased again - outmigration.

RURAL DEPOPULATION OF THE KOSZALIN AND SŁUPSK PROVINCES AS THE CONSEQUENCE OF POPULATION MIGRATION

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The territory of the Koszalin and Słupsk provinces, the so-called Middle Pomerania, constitutes the eastern part of the large geographic-historical region of Western Pomerania. Both these provinces have many features in common as the consequence of the historical past and of their physico-geographical, demographic, economic and social conditions.

This territory, occupying 5.1% of Poland's surface, contains 28 towns and 66 communes with the population of 894 thousands (1986) which makes 2.4% of total population of Poland. Rural areas are inhabited - in the Koszalin province by 38.5% and in the Słupsk province by 45.8% of the population. Socialized economy is dominant. An essential feature of this region in demographic respect was formation (after the return of these territories to the mother country), as a result of the large-scale post-war migration, of a demographically young population of high vitality. As a consequence of formation of a population of such favourable age structure there occurred in the following years high indices of natality and contracted marriages, together with low mortality, which caused many demographic, economic and social implications in the region. Among many demographic phenomena, prominence was gained by the population migrations, which were of prime importance through the entire post-war period. They reflected the political and economic changes as well as changes in agricultural and economic structures. Of special importance are here the village-to-town migrations.

Until 1970, population growth in towns proceeded at the rate equal to the natality while the negative migration balance of villages was compensated by the natural increase. In the period of 1970 to 1980, however, when

the rate of industrialization and urbanization was considerably accelerated and more emphasis was laid on land socialization, migrations of rural population to towns were boosted, amplified yet by the contribution of the age-groups of the "demographic explosion" reaching then their age of intensive migration.

Population in the communes decreased at a high rate, especially in the southern regions of Middle Pomerania. In the recent years, i.e. after 1980, a distinct decrease in the rate of village-to-town migration was noted simultaneously with a decrease of the negative migration balance in rural areas. It can not be excluded that this is a transitional tendency, connected with the economical crisis of the region and of the whole country. This is also most certainly influenced by the lack of apartments in towns as well as by the exhaustion of population surplus (potential migrants) in certain regions.

Migrations of rural population cause various consequences, both positive and negative ones. The decline in farming population in rural areas contributes to the increase of land concentration, resulting in the growth of individual farms at the expense of the deserted farms, and also adds to the area of socialized agriculture. It may be added here, that in the seventies, when there was a fast growth of the State Land Fund, this land was, due to lack of demand, transferred to state and collective farms, which were not able to utilize it properly.

Some demographic indices specific for this region, are worth noting, for instance the rural natural increase index reaching 12.6 per 1000 inhabitants in the Koszalin province and 15.1 per 1000 in the Słupsk province while the all-country average is 8.2 per 1000.

A peculiarity of the migration movements in this region is the prevailing negative migration balance of the rural areas as a result of the high intensity of outflow therefrom. This is shown by the relative indices: the rural areas of Koszalin and Słupsk were losing population at the average rates of 12.8 and 13.6 persons per 1000 inhabitants, respectively, while the all-country average was 10.4 persons per 1000 inhabitants.

The depopulation process of rural areas usually reflects various political, economic, social, cultural, demographic and other factors. It is impossible to assess the negative influence of the particular factors. Nevertheless, a positive correlation is noted between the economic level of the communes, the qualities of the agricultural production area and the

migration processes.

Investigations have shown that migrations in Middle Pomerania contribute to diversification in spatial distribution of the rural population and, indirectly, cause changes in fertility and in the population structures (structure deformation) which chiefly manifests itself by the ageing and masculinization of the rural population. These processes constitute also in this region the cause of changes in the rural settlement network. There appear namely points of population concentration which most frequently are the seat of the commune authorities or state farm compounds while small localities and small settlements disappear. Undoubtedly, the state policy aiming at socializing the land and the system of subsidies for state and collective farms is responsible for the lack of interest in farming production. Besides this, low effectivenes of the state farms resulted in low wages paid to employees of these farms as compared with the wages in non-farming branches. The effect is excessive outmigration of farming population and shortage of labour. Since a large number of former state farm employees retain their flats while taking another job, the problem arises of lack of labour accompanied by the lack of dwelling for the potential candidates for employment. Excessive outmigration from rural areas threatens to cause lack of labour force for farming and effective usage of the soil.

The process of rural depopulation is a universal phenomenon. However, a complex assessment of that process and the isolation of regions taking into account the negative demographic, social, economic and also natural factors, is a complex and difficult problem. It would be an extreme simplification to base solely on the census changes within a specific time or to take into account the balance of migration alone, although these are of essential importance. Furthermore, the actual increase or decline in population as the effect of migration or natural movement, is only an external (statistical) aspect of census changes. Of great importance is also the population potential and the demographic structure of the rural population, especially as divided by sex and age categories. The thus composed demographic structure of rural areas should be complemented with the system of social and economic features as well as the structure of land ownership. The sole isolation of all possible factors showing the social and economic degradation of rural areas is a very complex matter, while one should add to this difficulties in their quantification, making the problem very intricate indeed.

Basing on the investigations conducted in middle-scale (i.e. communes) in the Koszalin and Słupsk provinces, attempts were made to isolate such areas of most unfavourable migration processes and negative factors of demographic, social and economic structures. The rank method was used in doing this. The results for a set of these features were compared with the qualities of the natural environment. The following features indicating the level of demographic, social and economic development were adopted: migration effectivenes index, ageing index, feminization index, population density, social level, economic level. On the other hand, the following features determining the quality of the natural environment were adopted: the potential of touristic qualities and the quality index of the production area for farming. The sum of the rank value of the particular features for the communes constituted the basis for the isolation of areas of most unfavourable demographic, social and economic processes. In assessing the qualities of the natural environment the following were adopted: the potential of touristic qualities and the quality index of the production area for farming. In the procedure of delimitation also the following were taken into account: the structure of land property; changes in population number through the period 1976-1986; and also the amount of land in the State Land Fund and the possibilities of utilizing it.

As a result of such delimitation 8 communes were chosen (5 from Koszalin and 3 from Słupsk province) characterized by the most extensive depopulation and a high degree of social and economic degradation. The isolated communes are situated in various physico-geographical zones, and represent various demographic, social, economic and functional microregions. They constitute thus a representation of depopulating areas of that region, where a continuing depopulation process may lead to a definite threat to the social and economic development of the communes.

Basic investigations concerning the natural increase and migrations of the rural population as well as the social and economic conditions for these processes were conducted through the period 1976-1986 in 8 selected communes divided into localities (hamlets).

According to the Central Statistical Office migration is understood as change of residence connected with crossing the border of the territorial unit (commune), and such data are gathered only for the basic administrative units, communes and towns. In this way the intra-communal migrations of the population are completely neglected. The present author has collected the

data concerning the natural movement and migrations for separate localities (hamlets), basing on the Personal Inhabitants' Files kept in the commune offices. This made it possible to comprise the full picture of migrations, including the structure of migrants according to sex and age as well as according to the directions of mobility. It is clear that the migrations proper of the rural population take place from one village to some other. Demographic research on rural territories exclusively in the arrangement of basic administrative units results in averaging of the processes and in blurring of the actual picture of the migration processes and of the demographic structures, at the same time hampering the investigation of the conditions and the results of these processes. In his investigations the present author not only takes into account the magnitude, intensity, directions, sex and age of the migrants but also attempts to investigate the correlation of these features with the infrastructural equipment of the country.

Investigations on spatial mobility of population in the aspect of socio-economic conditions of the rural settlement units is not only of cognitive but also of practical importance. The knowledge of these processes, their mechanisms and conditions is one of the essential elements in making decisions concerning the dynamics and the directions of development of the particular localities.

The investigations accounted in total for 139 localities in 8 communities. At this point some results of the analytical investigations conducted at present shall be presented. The natural increase, which is the prime factor of the numerical development of the rural population, was on the average in the communes (in the period of 1981-1986) at around 8-12.0 per 1000, but its differentiation in the rural settlement units was considerable, e.g. in the commune of Czaplinek it reached the span from -11.7 (decrease) to +44.1 per 1000. A widespread conviction prevails that large villages are to a higher degree inhabited by young married couples and the natural increase is there much higher. The results of our investigation confirm this only to a slight degree, as a wide differentiation in natural increase exists, irrespective of the size of the village. Previous studies of the author on this subject show a relation between natural increase and the condition (age) of the dwelling facilities: the higher the share of new housing the higher natural increase was found.

A fairly common opinion prevails that the demographic processes, espe-

cially the migrational mobility, depend to a large extend on the development of the infrastructure in the settlement units, viz. a well-developed infrastructure acts as attracting agent while a poorly developed infrastructure acts in a repelling manner. But this are mainly hypotheses. Studies conducted in the scale of communes by I.Frenkel and A.Rosner as well as by the present author do not fully confirm this hypothesis. Linear correlation coefficients of 5 demographic features with 10 features of infrastructural outfit were calculated. The linear correlation coefficient of natality with 10 variables characterizing the infrastructure of the village is in the majority of the communes studied very low (adopts negative and positive values), and for the entire group of communes the value of this coefficient with the majority of infrastructural outfit features of the villages is negative. This cannot be considered as indication of dependence between natural increase and the infrastructural outfit of the village.

Table 1. Correlation coefficients of demographic features with the infrastructural outfit of the villages

Mean farm area	0.513	0.468	0.515	-0.159	-0.152
Service establishments	0.303	-0.370	-0.385	0.201	0.542
Retail shops	-0.534	-0.087	-0.610	0.589	-0.024
Post offices	0.008	0.605	0.659	-0.177	-0.740
Number of newspapers subscr.	-0.693	-0.490	-0.570	0.107	0.066
Health service centres	-0.512	-0.218	-0.484	0.243	-0.009
Clubs, librairies	-0.513	-0.033	-0.189	-0.364	-0.439
Number of pupils	0.403	-0.798	-0.317	-0.573	0.548
Number of pre-school places	-0.169	-0.385	-0.515	-0.052	-0.017
Length of water-supply lines	-0.209	0.659	0.694	-0.135	-0.790

The migration processes represented by 3 variables (inflow, outflow and net migration) were also confronted with 10 variables characterizing the infrastructure and the mean size of the farms, and for each migration variable the linear correlation coefficients with 10 infrastructural variables were calculated. Calculations were carried out for sets of localities in the arrangement of communes as well as for the entire group of localities of the communes studied.

The correlation coefficients of population inflow into the villages with the infrastructural variables for the entire set of localities (139) have (for 7 out of 10 variables) negative values. The value of the coefficients for the adopted variables is in the particular communes highly differentiated, from statistically significant positive to highly negative correlations. In the majority of cases, however, there is no statistical correlation within these pairs of features.

The correlation coefficients between the population outflow from the villages and the features of their infrastructural outfit show also highly differentiated values and in the great majority of cases show a low statistical correlation.

The net migration, as resulting from inflows and outflows, is in almost all the localities studied negative and has values as low as -70.9 persons per 1000 inhabitants (Kołdowo in the commune of Człuchów) and averages in the communes studied for the period of 1981-1986 from -14.1 to -35.0 persons per 1000 inhabitants. The correlation of net migration with the features characterizing the infrastructural outfit is also low, with both positive and negative values, and the highest correlation was found in the commune of Czarne.

The most general conclusions from the analysis of the correlation of the agents of natural and migrational mobility indicate low values of the obtained correlation coefficients and the lack of regularity in the appearance of positive and negative relations. This may be interpreted in one of the two ways: either the relations between the variables characterizing the infrastructure and the migration movements are weak, or the adopted empirical material or methodology do not reflect the actual state. It was certainly possible to find in reality accidental values of migration intensity and infrastructure indices because of the small territorial units adopted (villages). It is also possible for non-linear relations to occur. After the intensive outmigrations from the villages in the seventies it may also be possible that the migration potential in settlement units of low-developed infrastructure has been exhausted.

The correlation analysis indicates undoubtedly that the problem is more complex and causes more difficulties than were anticipated. On the basis of the investigations conducted on the relatively small areas doubts may arise as to the commonly expressed thesis of correlation between the infrastructural outfit of the villages and the intensity of migration

processes. Undoubtedly, this problem is much more complex and it has to be assumed that migration is affected by many other factors of both infrastructural and entirely different nature. Many of them are non-measurable, such as family traditions and bonds, the ancestry of the rural population, the qualitative functioning of the infrastructure etc. Hence it has to be assumed that this empirical material will be greatly enriched by sociological studies conducted on this area.

The studies confirm that the spatial distribution of the migration balances and their effectiveness show a particularly intensive depopulation process of rural areas in the southern parts of the Koszalin and Słupsk provinces. The studies confirm that the population outflow to the towns is connected with the location of the communes in relation to major towns. A distinct influence of the distance factor on the size of migration of rural population to towns should be noted. Migration selectivity was found in both the "meso" and "macro" scales, especially as to the sex structure. Young people are definitely prevalent in migrations, with a distinct female dominance.

Interrelations have also been found between migrations and the natural mobility of the population, viz. a negative relation between the outflow and the population density, and a positive relation between the migration inflow and natural increase. The comparative analysis of synthetic social level (in the setting of communes) and the migration processes as well as linear correlation results, equipment of villages with social infrastructure and the intensity of migration processes, show minimal or none at all statistical interrelation of these phenomena.

However, positive correlations between the synthetic economic level of the communes and the migration processes viz. higher outflow of population from regions of low economic level and a better migration balance in communes of a higher economic level were found in "meso" scale.

As shown by the studies, the highest intensity of rural depopulation of Middle Pomerania takes place within the scarcely populated Lake Districts. These are at the same time regions of high touristic qualities. Among the limited possibilities of activating these areas, especially the farming ones, the intensification of the touristic economy seems to be the choice. Especially such features as scarce population, poor soils, low share of cultivated land (forests and lakes) and also lack of major towns in the vicinity constitute valued touristic qualities which, combined with the high

touristic potential of the natural environment, make an optimum set of conditions for recreation and tourism. Thus it seems proper to postulate intensification in developing tourism in this region, developing at the same time agriculture, mainly of ecological type, with a slightly changed production structure.

Thus it may be stated that population migrations in this region essentially affect changes in population concentration and also in its age and sex structure, causing definite deformations therein.

Migrations taking place in Middle Pomerania have in the past been and still are an essential factor in demographic changes taking place there. A distinctive feature of this region has always been a high spatial mobility of the population, mainly of the rural one.

The process of rural depopulation is the result of many diverse political, economic, social, cultural, demographic and other factors. It is essential to gain a possibly wide knowledge thereof through the in-depth interdisciplinary studies.

SOCIAL CONDITIONS AND CONSEQUENCES OF DEPOPULATION OF RURAL AREAS IN KOSZALIN ANS SŁUPSK PROVINCES

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Middle Pomerania is one of the regions of Poland where depopulation of the countryside can be observed. Therefore, both demographic and social phenomena taking place in this area make it fully justfiable to adopt it as a subject of interdisciplinary study of migration from rural areas.

When discussing various aspects of this process, the ones of the highest importance seem to be those concerned with its social background. Therefore sociological investigations are necessary to recognize the full range of changes taking place in this area.

The main idea of conducting the studies in both provinces is to demonstrate the reasons of excessive outmigration of rural population, considered in its relation to enviromental changes in their broad sense. The study is also supposed to deliver some general suggestions and conclusions which could provide basis for future activity aimed at reducing the scale of depopulation in the Middle Pomeranian rural areas. An attempt was also made to evaluate the effects of this phenomenon observed within rural communities. The rural areas provide environment for local communities and in some cases they can be regarded also as big factories employing a large number of workers. This concerns villages with both private and state farms (the latter being in majority here) which are very typical for this region.

The study was conducted in 6 communes (i.e. 14 villages) of Middle Pomerania. The criterion for selection was the biggest intensity of rural depopulation observed in the years 1976-1986. Migration process coefficients in certain villages was also taken into account. Two control villages were chosen (from within the 14 mentioned above), whose migration coefficients were positive. The following population categories were investigated:
1. Heads of families - 205 persons

2. Adult persons inhabiting the farms - 121 persons
3. Migrants from the years 1986-1988 - 61 persons
4. Families of the migrants (members of these families) - 51 persons
5. Competent informers in communes and villages - 68 persons

The whole population polled numbered 506 people.

The results provide sufficient material for a proper estimation of local community with regard to conditions and consequences of outmigration.

Despite all social and geographical differences the cultural and living conditions of these villages are surprisingly similar.

To the North of Koszalin and Slupsk the soils are of higher quality (class IV) than those to the South (class V - VI) but this seems not to affect the opinions of the people on the quality of their living conditions - these opinions vary to a very little degree. The location of a village (close to the main road or far away from it) does not have great importance either. The same applies to the distance between the village and the seat of local administration and/or of a commune council.

In the villages inhabited by private farmers mostly old buildings prevail. Up to 92 per cent of them were founded before 1945. In villages consisting of both private and collective farms the buildings are also old. In villages in which only state farms are located the percentage of old buildings (built before 1945) is rather low and amounts to 31.5 per cent.

The infrastructure of villages subject to the present study is in most cases limited to a grocery and a community centre, the latter seldom used for social purposes. Almost complete lack of any cultural, amusement and recreational infrastructure is the main reason of people's dissatisfaction and their expectations for some positive changes of this situation.

A big nuisance is caused by lack of properly developed telephone communication system. Only 15 per cent of examined farms have telephones. Development of telephone services along with water-supply services, roads and land reclamation is also one of the greatest problems still to be solved. The other goods whose lack makes country life difficult are: means of agricultural production, building materials, fertilizers, feeding stuffs and the like.

It is impossible to name and discuss here all the problems tormenting local farmers - we can only mention the most burdensome ones. The reflection of everyday life in the country can be found in farmers' answers to questions concerning good and bad sides of such way of living. Not less than 90

per cent of questioned persons pointed to enviromental benefits (clean air, climate, quietness, silence) as being good sides of country life. The bad sides occurred to be: little comfort, shortages in shops supplies, difficult access to cultural goods.

Questioned persons pointed also to some social problems, such as generation gap or divisions existing between the private farmers and the employees of state farms. The opinions presented by young people and concerning their perspectives and possibilities very distinctly show their attitudes: 72.1 per cent of questioned persons cannot see any possibilities, 9.7 per cent of them evaluate the possibilities as poor and only 6.8 per cent can see some positive perspectives ahead of them.

The reasons of outmigration of particular social groups can be concretized when examined against a broad background of country life. The most significant fact, however, is that villages are left mostly by young qualified people (81 per cent). It means that boys and girls after having graduated from high schools (trade schools in majority of cases) stay in places of their education or migrate to other cities.

Another factor of big importance is, it seems, constituted by the recruiting campaigns led by people coming from Upper Silesia. The aim of these campaigns is to recruit young men to mining industry. A combined action of both the perspectives attracting boys for big city life and numerous repellent aspects of rural life can be observed in this case. Very meaningful answers were given to the comparative question concerning the rural and urban living conditions: 47.3 per cent of persons questioned stated that their present conditions are rather bad while 22.4 per cent of them regard them as definitely bad.

The reasons of outmigration were presented as follows: at the first place difficult (or even hard) living conditions were pointed out (30 per cent), at the second - family troubles (marriage excluded) or better perspective of employment in other towns, pointed out by 19.7 per cent of respondents. The other reasons were: getting a flat in the city or marriage. An important reason for leaving rural areas was for many migrants their need for establishing their own house (8.2 per cent). Only in Koszalin province 8 per cent of the population questioned pointed at house shortages in the countryside as the reason for leaving it. Next, a need for easier life, lack of will for work in the field of agriculture, lack of good perspectives of country life were pointed out. Totally 20 various reasons were given, part

of them of objective, part of subjective character.

The results of the inquiry confirm social and economic problems of villages subject to the study. The additional factors affecting outmigration from the countryside are probably also related to historical conditions and to relatively easy access to flats and jobs in the cities. These problems should be dealt with separately.

Questions concerning consequences of outmigration were put to migrants themselves, to members of their families who did not leave the country and to competent informers in each village (village administrators and other social workers).

A major part (56 per cent) of migrants have families in the countryside whilst 44 per cent of them do not. Half of the questioned migrants having families in the countryside state that their leaving did affect living conditions of their families. Various effects were pointed at: from increase of living area of those who stayed through worsening living conditions of some families. The rest of the persons questioned cannot see any effects upon their families remaining in the countryside. More than 90 per cent of migrants maintain contacts with their family houses - mutual visits mainly.

Members of their families point out the increase of their living area (being the direct result of the decrease of the number of persons living in their houses) but also - loneliness. The latter concerns mostly old people.

Almost 60 per cent of questioned family members of migrants cannot see any effects caused by the fact that their relatives left the countryside.

Asked about their plans for the future the family members responded as follows: 69 per cent of them would like to stay in their houses, 5.9 per cent would like to go and stay with their children in the cities, 7.4 per cent plan to turn their farms over to the state. The rest could not mention any precise plans for the future. The majority of this group was constituted by private farmers.

Competent informers from particular regions are the ones who regard the migration problem as a very acute one. Asked about consequences of this phenomenon they point out first of all deterioration of villages (30 per cent of them). Secondly they indicate shortages of people who are the most needed for villages: young, qualified and active. Lack of successors capable of taking over individual farms as well as shortages in the state farms' labour force are main limitations to growth of agriculture in the discussed

areas.

The results of the present study (because of technical reasons presented in a shortened and incomplete form) fully confirm the difficult social and economic situation of villages suffering from depopulation in both provinces. Besides the well developed and prosperous areas there are such which are endangered by social destruction unless a change of their conditions of work and life will take place. It is possible even now to point at certain villages which are inhabited almost entirely by old people. These villages have no means nor social resources allowing them to improve their conditions either are they able to function properly. Statements of the farmers: "the village is old and dead" (Kosobudy), "only old people are left, the young ones moved away" (Spore) are not exceptional ones.

The only way to improve the present, highly unfavourable situation for the whole region is by undertaking complex activities aimed at raising the profitability of farming production because this is the basis for social, economic and cultural aspects of country life. The citizens of the investigated villages, no matter what their history was, are waiting for proper decisions allowing them to conduct quiet, profitable and effective farm work. These postulates, coming mostly from country people, must not be reduced. The positive results shall be that more people will be ready to take over the farms, which at present are deprived of successors and it will also be possible to retain employees in state farms.

DEPOPULATION OF THE COUNTRYSIDE IN WESTERN POMERANIA

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The movements of people from rural districts to towns have constituted a process of permanent character in Poland in the post-war period. In the region of Western Pomerania this process was directly connected with problems of populating these territories with Polish people just after the war, and later - with the changing policies of the State. Processes of artificial administrative divisions and enforced collectivization, affected directly or indirectly changes which were occurring in the countryside.

The Pomeranian region has never had any surplus of labour force in the rural districts, therefore even a small migration from countryside to towns brings about a serious danger to the proper functioning of agricultural economy. The induced enthusiasm and rejoicing on occasion of urbanization of the country, consisting simply in the increase of urban population at the expense of farmland population, has never reached such intensity in Western Pomerania.

Western Pomerania was generally fed by population surpluses from central Poland. The present magnitude of outflow of people from countryside carries a serious threat not only on the scale of a commune but of big areas of the region. This problem created necessity of performing as thorough investigations as possible into the demographic and economic relations, in order to work out methods preventing these processes.

Western Pomerania covers the area of 12,425 sq. km within two morphologic units of Szczecin Plain and Pomeranian Lake District. Soils in this region have overlaid subsoil of sands and clays and in their mass they belong to podzols, needing intensive cultivation. Useful lands cover 55% of total area, 74% thereof being arable land - soils of the IIIrd and IVth valuation class are predominant. Forests cover about 27% of the total area.

A characteristic feature of the Western Pomeranian region is high level of general index of urbanization. It ranks among the highest in the country and amounts to 71% of urban population, Szczecin included, and 54.6% without Szczecin.

The functional division of the region is influenced by the geographical system of this area, in which we can distinguish:

- Szczecin agglomeration of which the main axis of development is the river Odra and its estuary,
- coastal belt connected with the developed and still growing recreational function,
- agrarian part of the province covering the rest of the area.

The geographical situation of the region, its natural values, and the social and technical infrastructure formed have enabled a clearly defined course of development of leading functions in the province.

These are:

- function of marine economy and industry connected with it,
- recreational function of essentially seasonal character,
- agricultural and food processing function.

The above functions in their dynamic development encounter a series of barriers excluding one or another, and giving rise to many conflicts. The coastal areas connected with mouths of big rivers are important in international sense. Possible industrial zones overlap areas predisposed for development of tourism. Complicated hydrological systems need comprehensive and not sectional studies. These problems are directly connected with the development of agriculture. An additional difficulty is dependence on seasons both in tourism and in agriculture in the coastal belt. Conditions revealed when carrying out the work of spatial planning show ever wider range of mutual dependences. Treatment of problems in the sectional scale leads to the overly narrow solutions and compels to look for methods of work appraising phenomena in interdisciplinary systems.

Comminuted administrative division of the country with 49 small areas of provinces implies the necessity of seeking logical divisions into macroregions connected with natural and economic conditions. Provinces of Szczecin, Koszalin and Gorzów are situated in the same drainage basins of rivers which create specific spatial conditions and the considerations relevant to areas enclosed within artificial administrative boundaries leaving out these phenomena cannot be accepted.

Migration movements occurring in Western Pomerania are connected indirectly with the settlement network. The system of the settlement network in this region corresponds to the structure of historical layers. The fundamental settlement network was formed in the Middle Ages over the background of European urbanization. Stratification of towns took place in the 19th century and the process of diversification in the between-the-wars period. In North-Western Pomerania there are altogether 36 towns from which a group of eight quickly growing small towns came out in the effect of quickly developing petty industries and handicrafts. These towns were for a long time performing functions of district towns (Gryfice, Trzebiatów, Świnoujście, Stargard, Pyrzyce, Goleniów, Choszczno, Kamień). The other towns had lower rate of development and their main task was servicing agricultural hinterland.

The rural settlement system is composed of 1100 villages, not to count hamlets, with 17% of villages with less than 100 inhabitants, 32% with 100 to 200 inhabitants, 24% - 200-300 inhabitants, and 27% with more than 300 inhabitants.

The average density of population in the communes amounts to 15-30 inhabitants per 1 sq. km. Density of population exceeding 30 inhabitants/sq. km occurs in the area of Szczecin agglomeration and in the commune of Pyrzyce (best soils in the Szczecin province).

When examining the structure of rural settlements it has been established that in the pre-war period nearly 60% of total number were engaged in mass-production economy (big estates). At present, similar proportion is maintained by the State Farms. A high degree of socialization of agriculture is the result of the post-war agrarian policy based, in particular, on the system of populating the region (Fig. 1).

The original cumulation into bigger wholes of the incidentally chosen farms without proper consideration of the effects of conditions of their temporal accessibility and technical infrastructure contributed to creation of administrative conglomerations of great degree of concentration, often adverse to economic-productive prerequisites.

Rural communes take up 34% of rural settlements and they are inhabited by some 38% of rural population. Altogether about 40% of the whole area of the region is affected by depopulation, whereof as much as 60% constitutes rural communes, and only 30% - urban-rural communes surrounding the smallest towns. The problem of depopulation of many communes resolves itself into the

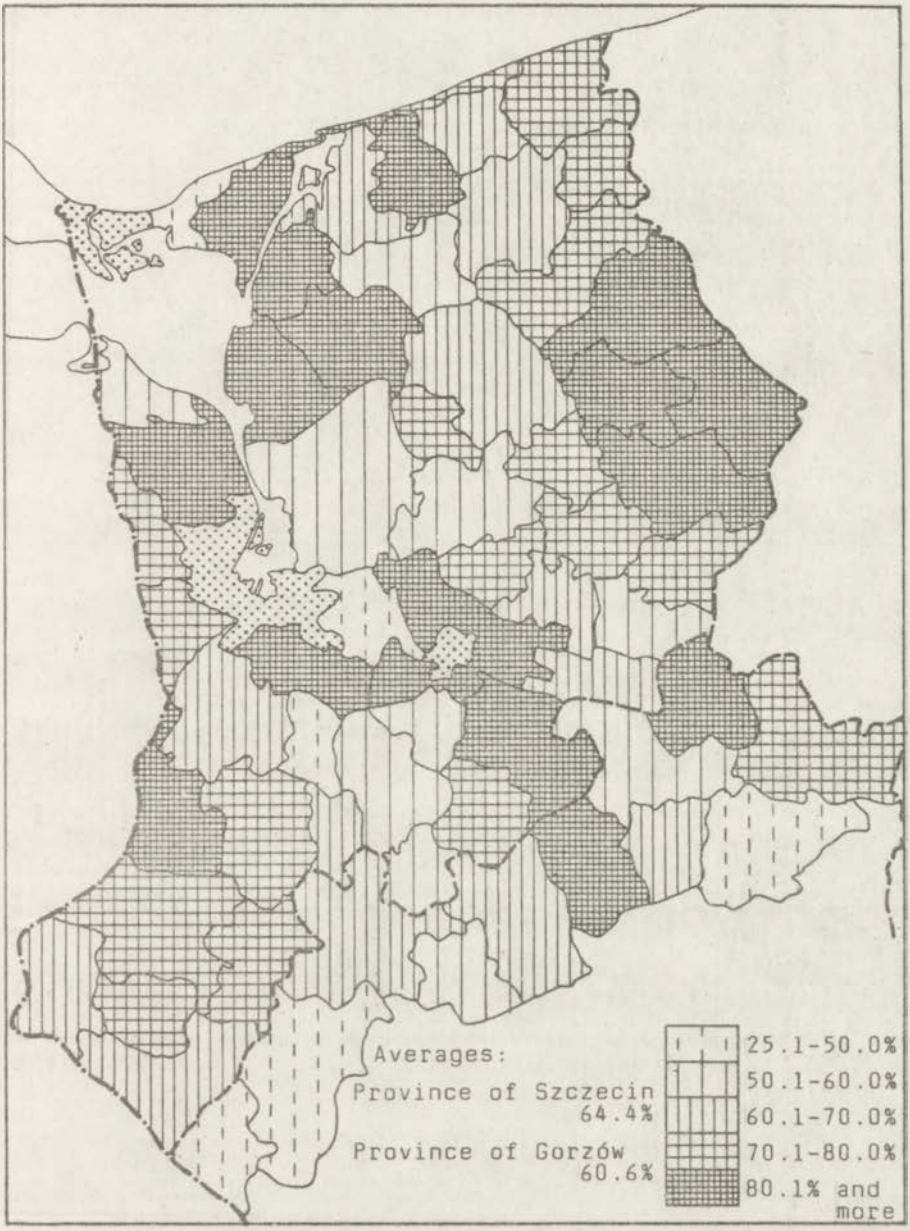

Fig.1. The share of socialized economy in management of useful lands .

Fig.2. Percentage of villages with decreasing population, 1970-87

question whether the reason of this phenomenon is to be looked for in the commune itself or rather outside of it (Fig. 2). The dominant role in the structural and agrarian changes in agriculture falls to the State Land Fund. Resources of the Fund are subject to constant shrinkage, the biggest proportion (61%) of this Fund's lands is in use by the private farmers on terms of tenancy. In areas abunding in poor soils farmers turn over their farms mainly to the State. In some communes the socialized farms transfer to the reserves of the State Land Fund their grounds of the Vth and VIth class because their exploitation is unprofitable. Moreover a phenomenon of leaving poor quality soils to lie fallow occurs more and more frequently.

At the begining of the eighties the state-owned enterprises entered the stage of their economic independence while being seriously indebted which affected the financial situation of the State Farms. A dozen of them found themselves facing bankruptcy for this reason.

As regards private farming, the number of small farms has been decreasing in recent years - 66% of useful land belongs to farms with the area exceeding 10 hectares. The average size of a farm grows systematically: in 1982 it was 7.7 ha and during five years it has grown up to 17 ha.

Very important influence on demographic transformations of the countryside were exerted by the territorial divisions and changing competence of authorities of various ranks - in Szczecin province the lack of stability in this respect had particularly negative effects. Administrative changes caused economic changes. Enlargement of communal units in 1973 in an endeavour to make management more effective, and in the next stage elimination of counties and diminution of areas of provinces, have in the meantime weakened functional links between county towns in the region. In all these changes the functional structure of the province, as exhibited by the spatial differentiation of functions has not been accounted for properly.

The coastal zone, the share of State Farms in the agricultural economy of the province exceeding 66%, problems of Szczecin agglomeration, private economy - all this was not taken into consideration when shaping the administrative systems.

At present the north-western region is divided into 62 commune units, whose seats are located in 35 cases in small and middle-sized towns and in 27 cases in villages. In the total number of 27 rural communes 8 of them count more than 5 thousand of inhabitants, while the other ones - 2-4.5 thousand. In the total number of 35 rural-urban communes there are 18

counting 5-11 thousand of rural population and 16 of them - 2-5 thousand.

The contemporary rural demographic structure of Pomerania has been formed on the basis of four processes:

- migration movements,
- biological increase,
- development of house construction,
-development of labour market.

Though the above processes occurred simultaneously, their dynamics and character were quite different. The growth of population in the years: 1970-1978-1987 was dominated by characteristic migration movements. In the seventies there occurred a systematic absolute decrease of population - the outflow of rural population to towns exceeded the birthrates. The eighties brought some slowing down of depopulation in some rural areas but in general the process of depopulation has still persisted (Fig. 3).

Migrations to towns consisted primarily of young people, what caused systematic ageing of the countryside population (Fig. 4). Permanent outflow of young people from countryside in the period 1970-1987 resulted in the deformation of the age structure of people remaining there, reflected, among others, in the growth of percentage of post-productive group and a drop of percentage of mobile group (18-44 years). In the spatial system the percentage of the group of people aged 18-44 oscillates in particular communes from 33 to 48% (Fig. 4).

Employment in the socialized agriculture in the seventies, these years being in Szczecin privince the period of dynamic development, grew from 28.9 thousand in 1970 to 38.6 thousand in 1978. In the years 1978-1987 the employment fell down to the value of 31.8 thousand, i.e. by 29% . The tendencies of growth and of drop of employment appeared in the whole area and all communes were subject to them. In private agriculture there has been since 1970 until now a systematic process of decrease of the number of farms and therefore of diminishing employment.

Generally, the characteristics of changing population in the provinces of Szczecin and Gorzów are presented in the table.

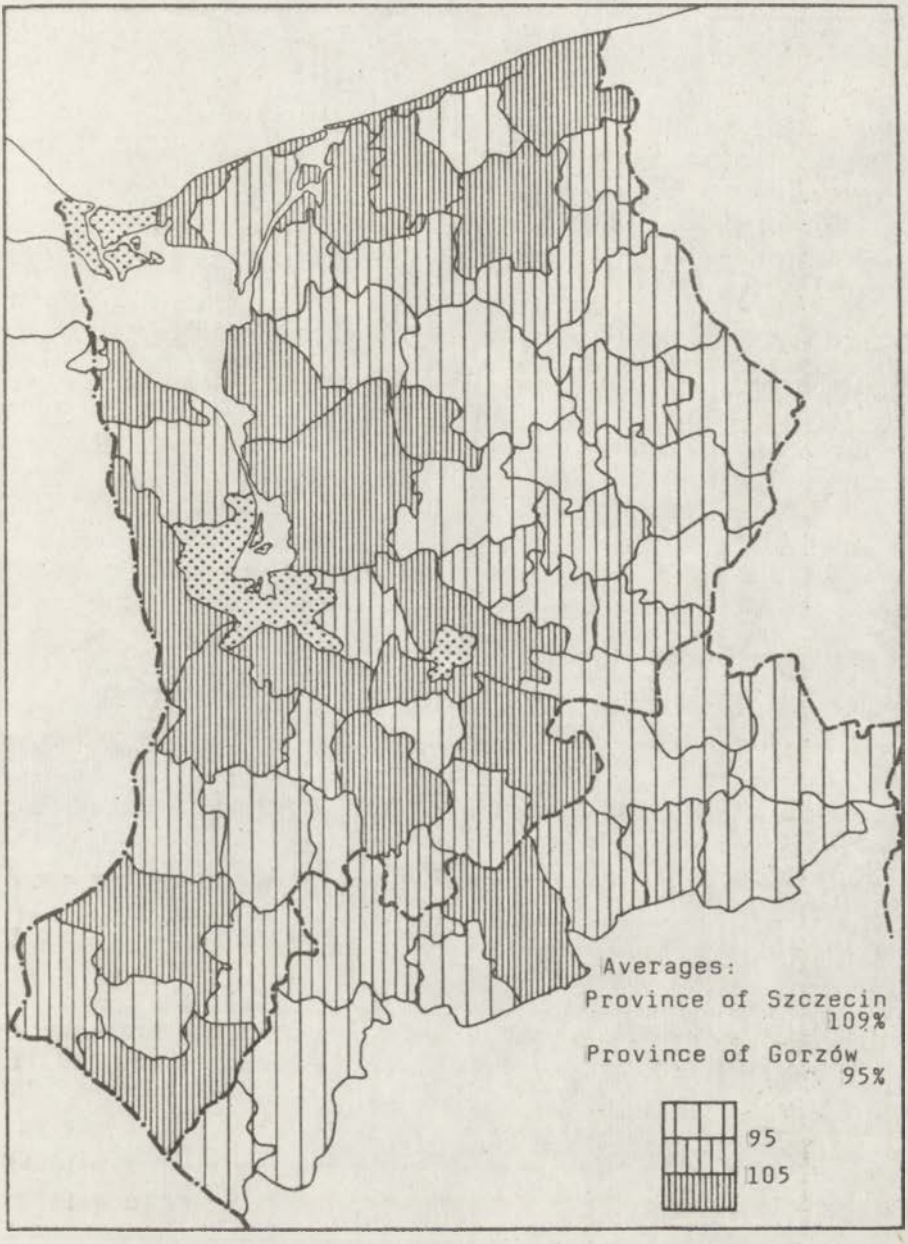

Fig.3. Rate of population growth, 1970-87

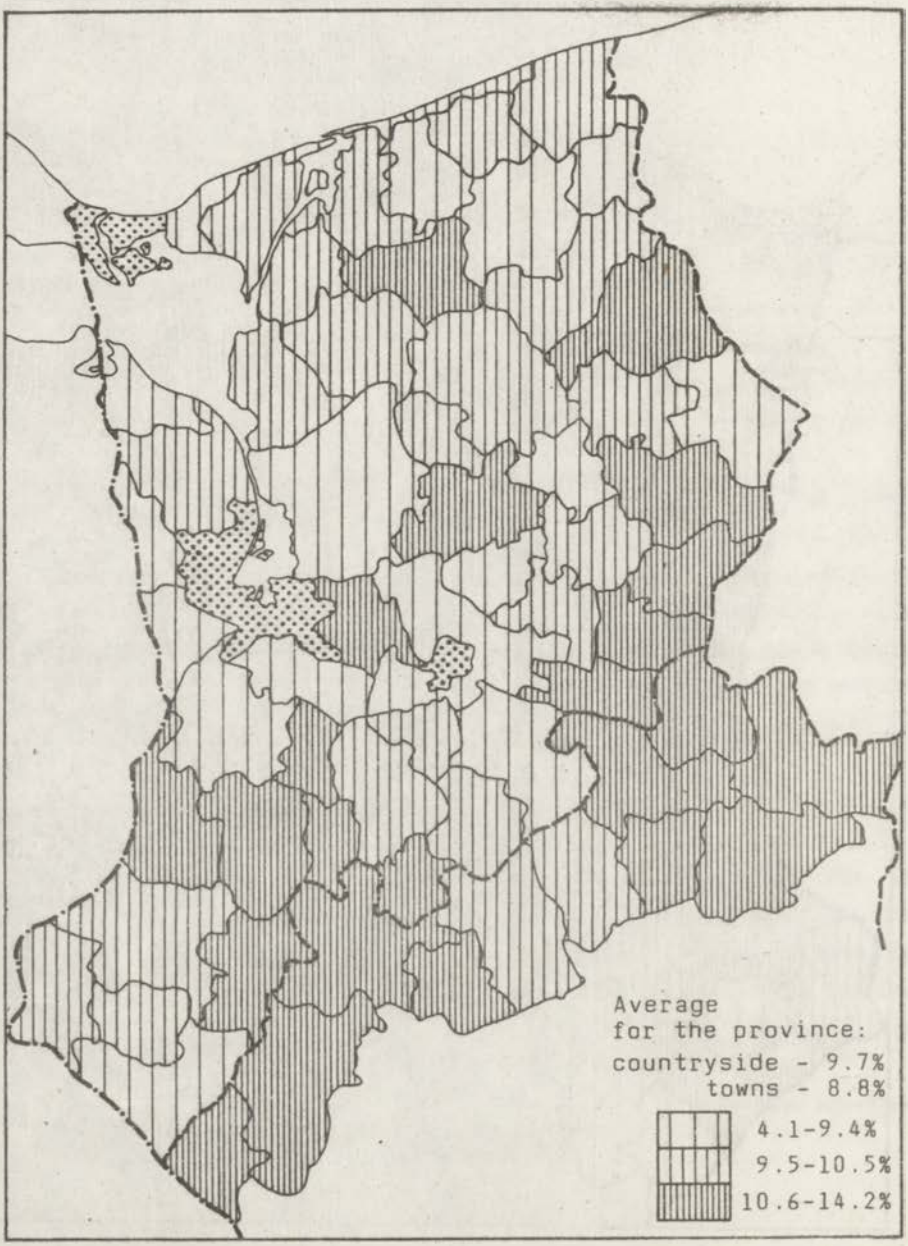

Fig.4. Rural population in post-productive age (people aged 60/65 and more); 1987

Province		Total	Permanent increase	Changing dynamics	Permanent decrease
Szczecin	number of villages	919	143	397	378
	%	100	16	43	41
Gorzów	number of villages	254	27	90	97
	%	100	13	42	45

Investigations and analyses carried out till the present have proven that the problem of depopulation of the countryside has grown so as to become one of the chief negative problems faced in the region of Western Pomerania. In recent years this phenomenon keeps still aggravating and the lack of effective methods of countering it may end in impeding the development of the leading function which is agriculture.

Analyzing the whole of problems in the region and taking into consideration necessity of distinguishing areas with predominant negative characteristics, such as: slow rate of development of population, large net migration, scarce population, the lowest percentage of people in mobile age, it has been found that the following areas of similar characteristics can be discerned in the province (Fig. 5).

- the middle part of the province situated in its eastern region, neighbouring the province of Koszalin, with predominant negative phenomena,
- the areas of Szczecin agglomeration with the biggest dynamics of development,
- the coastal belt where positive phenomena alternate with negative ones,
- the other areas without clear specific characteristics which could identify the region.

A thorough investigation of particular areas will allow to work out methods of counteracting unfavourable phenomena, but already now it is possible to distinguish a number of causes which led to, and keep now advancing, an aggravation of the problem of depopulating countryside in the region of Western Pomerania. The following causes belong here:

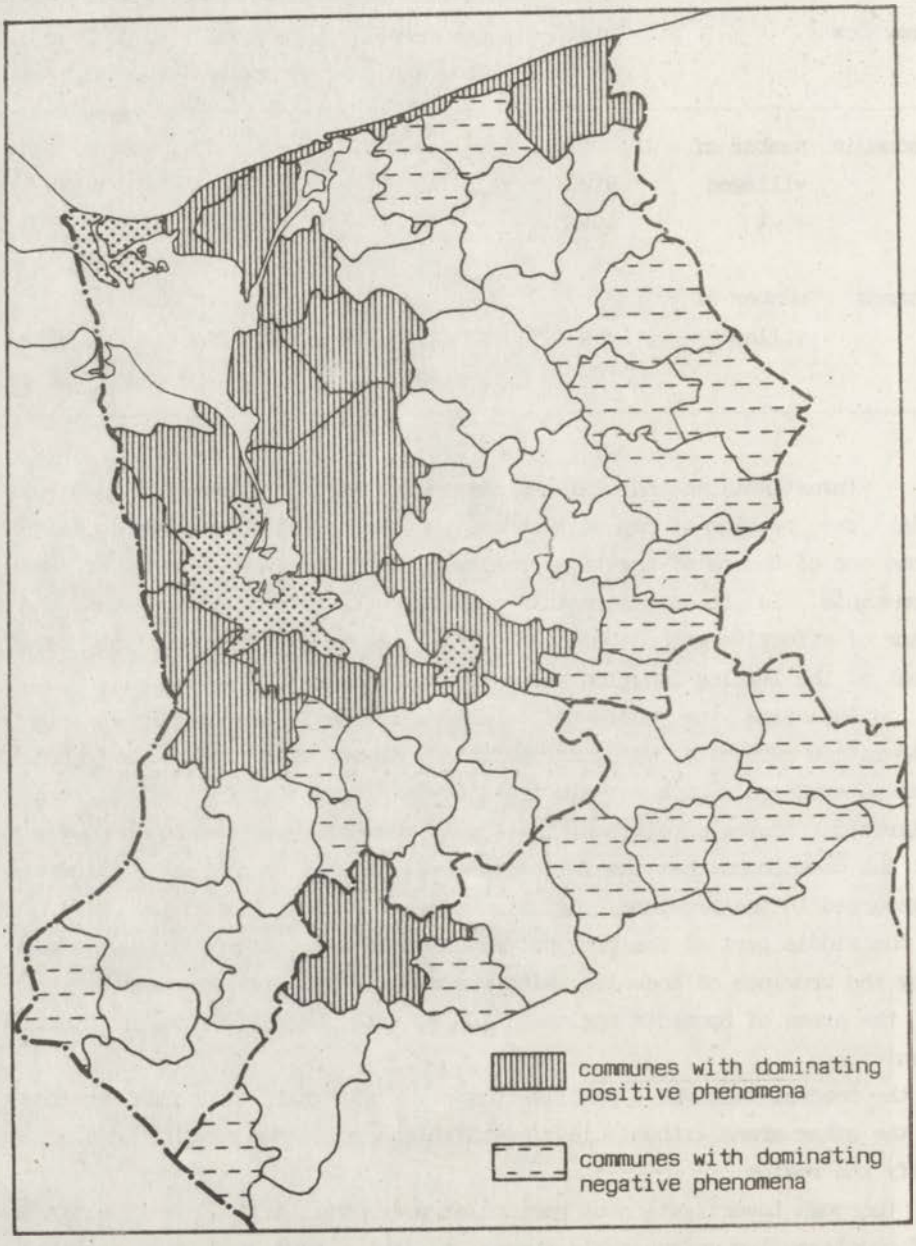

Fig.5. The synthesis

- lack of stable policy of the State with regard to the countryside,
- wrong decisions concerning the structure of management and administration,
- neglect of spatial characteristics of the province, such as land utilization, and its geographical and functional system, in its administrative divisions,
- unprofitable agricultural production and lack of sound perspectives for this situation to be changed,
- lack of alternative employment opportunities,
- hard labour conditions,
- low living standard,
- unfavourable demographic structure.

After the sociological, technical and agrarian investigations, which are presently being carried out, are completed, it will be possible to work out detailed conclusions regarding methods of counteraction.

DEPOPULATION OF RURAL AREAS IN SOUTH-WESTERN POLAND

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1. Introduction

The process of depopulation is commonly understood as a decrease in the number of people inhabiting a given territorial unit within a given period of time. The decrease of the number of rural population is a natural consequence of town development and industrialization as well as of the progress in technology and in methods of food production. The process of outmigration from rural communities to cities is a positive phenomenon only as long as it does not cause any negative results in the social or economic sphere, with such results potentially appearing both in villages and in the cities. An excessive outmigration of rural community causes first an insufficient supply of manpower in agriculture and a decrease in the rate of agricultural production, then the appearance of non-cultivated arable land, decapitalization of unused fixed assets (farm buildings, houses, technological and social infrastructure), lowering of the standard of living and finally - appearance of the so-called "social deserts", i.e. the depopulated areas with a low level of socio-economic development as compared to other areas.

An excessive outmigration of rural population may also lead to lowering of the standard of living in the cities, if the latter are not prepared to accept such an inflow of people. Then, there may appear such problems as lack of apartments (with simultaneous deterioration of apartments in villages), difficulties in such domains as public transportation, water supply, sewage disposal, waste disposal etc.

Therefore, an analysis of depopulation of rural areas as a negative phenomenon cannot be based merely on the fact of the decrease of population. Depopulation should be treated as a complex process determining a certain

state of the development dynamics of a given population, displaying the features of the narrowed reproduction and leading to numerous other negative phenomena, e.g. in the economic sphere. Since there are no convincing and applied constructs of "depopulation" or "depopulation area", this paper is only an attempt to present one of the possible approaches to the problem. If "depopulation" is defined as a certain state of the investigated territorial unit, the definition should include all the elements describing that state.

Existence of depopulation areas makes it necessary to introduce spatially variable socio-economic policies, and thus to distinguish such areas in the first place.

The goal of this paper is to select rural depopulation areas in the communes of the following provinces: Jelenia Góra, Legnica, Wałbrzych, Wrocław, Zielona Góra. Because of technical difficulties the areas adjacent to the border of the territory have been neglected, although they are certainly connected with it by a network of various relationships. It has been assumed here that depopulation exists in the areas with narrowed reproduction and where negative consequences of outmigration of rural population appear in agriculture.

An analysis of demographic processes in the period 1960-1985 has served as a starting point for attaining our objective. This time horizon has been chosen not only because of the availability of data but also, and perhaps foremostly, because of the fact that since 1960s the rural settlement have indicated a significant decrease in population.

As the basic research units the communes of the five investigated provinces have been selected. In this way 176 research units have been established, for which information characterizing demographic processes in the years 1960-1985 has been collected as well as that concerning the state of the socio-economic development of the communes and the state of private agriculture in 1986. This information has been obtained from the Institute of Geography and Spatial Organization of the Polish Academy of Sciences, from the Institute of Geography of the University of Wrocław, from the statistical publications of the Provincial Statistical Offices and from the Provincial Offices of Geodesy and Agricultural Land in particular provinces.

In the analysis of demographic processes the following aspects have been considered:

- changes in population density in the years 1960-1985, with particular attention given to the last years of this period,

Table 1. Classification of the diagnostic features and the corresponding point scores

Diagnostic features	5 points	4 points	3 points	2 points	1 points	0 points
1. Population increase in the years 1960-1985 (%)	10.0	5.1-10.0	-5.0- +5.0	-5.1- -10.0	-10.1- -15.0	-15.0
2. Population increase in the years 1978-1985 (%)	5.0	2.1-5.0	-2.0- +2.0	-2.1- -4.0	-4.1- -6.0	-6.0
3. Annual average factor of migrations in the years 1979-1985 (%)	10.0	5.1-10.0	-5.0- +5.0	-5.1- -10.0	-10.1- -15.0	-15.0
4. Annual average factor of population growth in the years 1978-1985 (%)	14.0	12.1-14.0	10.1- 12.0	8.1- 10.0	6.1- 8.0	6.1
5. Population in post-productive age in 1987 (%)	9.0	9.1-11.0	11.1- 13.0	13.1- 15.0	15.1- 17.0	17.0
6. Population of pre-productive age in 1978 (%)	34.0	31.1-34.0	28.1- 31.0	25.1- 28.0	22.1- 25.0	22.1
7. Area of SLF in 1978 (% of total arable land)	2.0	2.1- 5.0	5.1- 9.0	9.1- 14.0	14.1- 20.0	20.0
8. Manpower resources in private farming sector (jfp/100ha AL)	18.0	16.1-18.0	14.1- 16.0	12.1- 14.0	10.1- 12.0	10.1

AL - arable land

- migration movements in the years 1978-1985,
- changes in population growth in the years 1979-1986,
- the structure of population according to sex - expressed through the feminization coefficient - in the years 1979-1985,
- changes in the structure of population according to age in the years 1978-1987,
- the dynamics of changes in population numbers according to the division into three periods: 1960-1969, 1970-1978, 1979-1985,
- real population growth in the communes investigated,
- fluctuations of demographic processes in the years 1976-1986.

In view of the lack of statistical data describing the state of the socio-economic development of the communes, the available information has been analysed and such items have been selected that could possibly describe the causes and the results of outmigration of rural population. These are:
- the index of taxes and fees from private farms and population (calculated per 1 inhabitant), which characterizes the prosperity and activity of the society,
- the state of the reserves of the State Land Fund (SLF), whose volume reflects the interest of the population in agricultural production,
- the state of employment in agriculture, reflecting the relative surplus or the relative shortage of manpower.

The limited space of the present paper allows neither presentation of all subsequent stages of the research nor a more complete substantial commentary. Consequently we have to limit our considerations to the presentation of the final results of the analysis, i.e. to presentation of the depopulation regions within the area of the 5 provinces of the South-Western Poland.

2. The depopulation regions

The analysis of the spatial variation of the features describing the demographic processes and the state of the socio-economic development of the investigated communes made it possible to select the diagnostic features that served as a criterion for separating the depopulation regions. Eight diagnostic features were selected which describe the phenomenon under consideration (depopulation) clearly and which show big spatial variation at the same time.

The depopulation areas have been isolated by means of the point score

method. The version of the point score method assumed in the present paper consists in determining 6 classifying intervals for each diagnostic feature and assigning a certain number of points to them (Table 1), and then in assigning the communes to the appropriate regions depending on the obtained sum of points according to the following rule:

- a region, in which there will be no depopulation in the immediate future: 30 and more points,
- a region, where there is no depopulation yet: 25-29 points,
- a region of clear depopulation: 20-24 points,
- a region of intensive depopulation: 15-19 points,
- a region of very intensive depopulation: below 15 points.

Table 2. Statistical characteristics of the depopulation regions

Diagnostic features	Types of depopulation regions				
	I	II	III	IV	V
1. Population increase in the years 1960-1985 (%)	19.9	-3.0	-3.2	-10.5	-14.6
2. Population increase in the years 1978-1985 (%)	8.5	2.2	0.2	-3.6	-3.6
3. Annual average factor of migrations in the years 1979-1985 (%)	-4.5	-12.0	-13.8	-17.0	-14.6
4. Annual average factor of population growth in the years 1978-1985 (%)	15.8	14.6	12.9	11.8	9.4
5. Population in post-productive age in 1987 (%)	10.9	11.9	13.1	14.2	15.4
6. Population in pre-productive age in 1987 (%)	33.3	32.6	31.0	30.2	27.5
7. Area of SLF in 1987 (% of total arable land)	4.7	6.6	8.3	9.9	12.8
8. Manpower resources in farming sector (jfp/100ha AL)	17.7	16.5	15.3	13.8	12.1

AL - arable land

A statistical analysis of the selected regions has been presented in Table 2, and their spatial arrangement in Fig. 1. The regions obtained are spatially non-compact and scattered throughout the whole research area.

Regions of type I. In this region no depopulation will take place in the immediate future. This is indicated by the demographic indices which are at the level characteristic of the population with extended reproduction (high population growth, low percentage of people in post-productive age, and high percentage of people in productive age, as well as high real population growth in both analysed periods). In these regions the factor of permanent migrations is also low, there is no surplus of SLF resources and there is high employment factor in private agriculture. Twelve communes have been assigned to this type of region, not constituting a spatially compact area. They are located mainly near Wrocław (6 communes); two communes are located in the Legnica province, and four in the Zielona Góra province.

Regions of type II. This are the regions where depopulation does not take place yet. However a high index of permanent migrations as well as low index of real population growth indicate that this problem may soon appear there. Fifty communes have been assigned to this type of regions: 5 of the Jelenia Góra province, 9 of the Legnica province, 7 of the Wałbrzych province, 18 of the Wrocław province and 11 of the Zielona Góra province. In some communes of this region there are significant SLF resources (e.g., 24.2% in Nowogród Bobrzański, 13.4% in Oborniki Śląskie), indicating improper management of land or more generally of agriculture.

Regions of type III - of clear depopulation - are characterized by the population growth lower than the rate of permanent migrations, by the stable population numbers in the years 1978-1985, small decrease in population numbers in the years 1960-1985, by the significant SLF resources and by the average employment factor in the private sector of agriculture. This is the type of region most often met to which 66 communes have been assigned, 10 of which are located in the Jelenia Góra province, 12 in the Legnica province, 9 in the Wałbrzych province, 11 in the Wrocław province and 24 in the Zielona Góra province.

Regions of type IV - of high depopulation - are characterized by a much lower factor of population growth than the factor of constant migrations, by a significant decrease in the number of people in the analysed periods, by the high percentage of the people in the post-productive age, by the significant State Land Fund resources and by the low employment factor in the

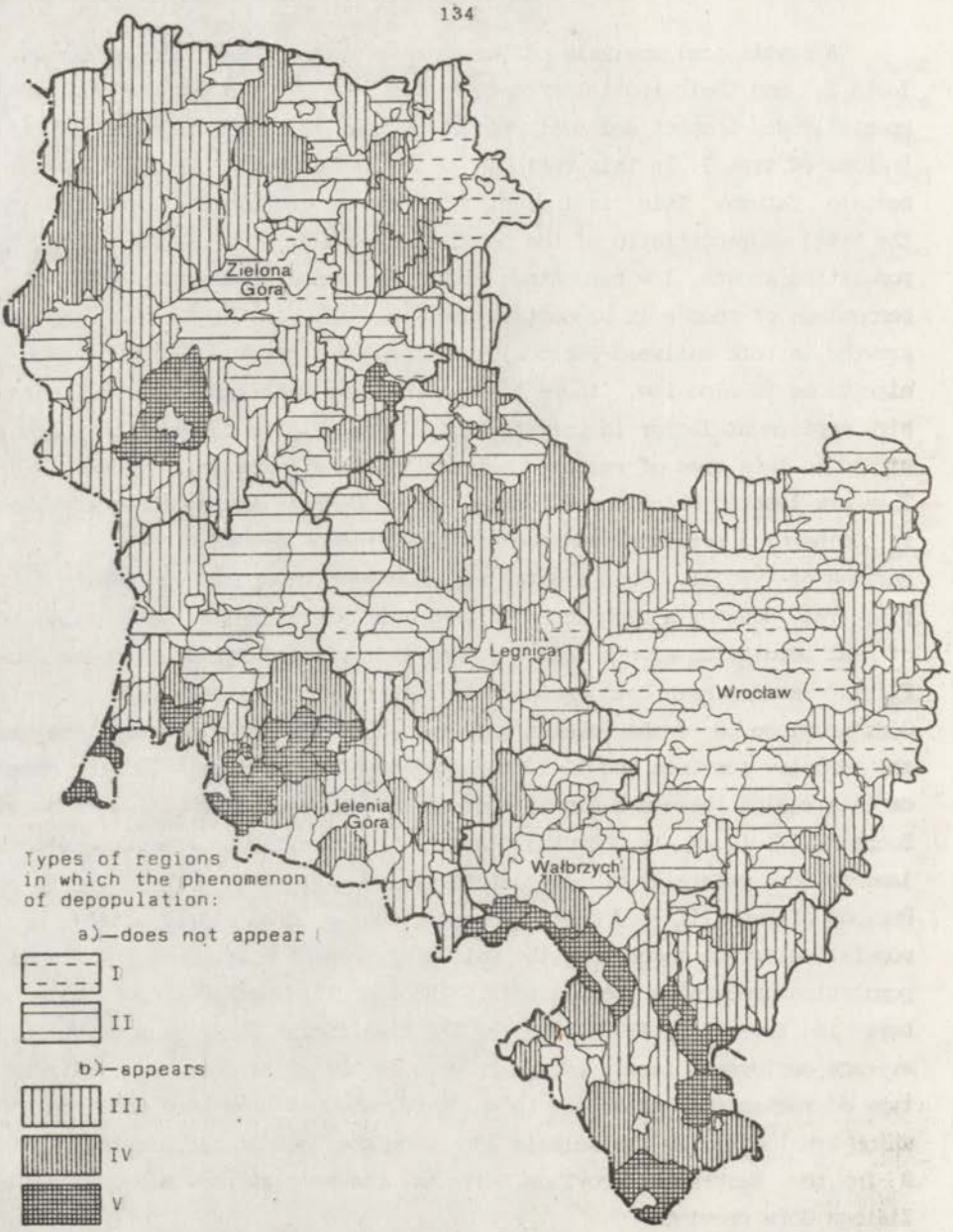

Fig.1. Depopulation regions according to voivodships

private sector of agriculture. Thirty four communes have been assigned to this type of region, 8 of which are located in the Jelenia Góra province, 8 in the Legnica province, 7 in the Wałbrzych province, 2 in the Wrocław province and 9 in the Zielona Góra province.

Regions of type V - of very high depopulation - are characterized by the very low population growth (below 10.0%), by the high factor of permanent migrations, by the significant decrease in the real number of people, by the high percentage of the people in the post-productive age and a very low percentage of people in the productive age, as well as by the very large State Land Fund resources and a very low employment factor in the private sector of agriculture. The demographic factors of this type of region correspond to the level typical of the populations with narrowed reproduction. Regions of type V contain 14 communes, 12 of which are in the mountainous provinces: 5 in the Jelenia Góra province and 7 in the Wałbrzych province; 2 communes are in the Zielona Góra province. Spatial arrangement of these communes has the property of certain ordering. We can distinguish two non-compact areas of concentration. One is located in the south-eastern part of the Wałbrzych province, and the other in the south-western part of the Jelenia Góra province.

Within the research area altogether 114 communes have been assigned to the depopulation regions. This constitutes 64.8% of the total of the communes analysed. Twenty three such communes are in the Jelenia Góra province (20.3%), 20 in the Legnica province (17.5%), 23 in the Wałbrzych province (20.2%), 12 in the Wrocław province (10.5%) and 36 in the Zielona Góra province (31.6%). The contribution of particular provinces to the depopulation area is much defferent if we compare the number of communes assigned to the depopulation area with the total number of communes in those provinces. Then it turns out in the Jelenia Góra province 82.1% of communes undergo the process of depopulation, in the Wałbrzych province - 76.6%, in the Zielona Góra province - 72.0%, in the Legnica province - 64.5%, and in the Wrocław province - 32.4% .

It should be pointed out that 48 communes (27.3% of the total of the communes analysed) belong to regions of type IV and V, i.e. to the regions of high and very high depopulation. The majority of these communes are located in the Jelenia Góra province (13) and in the Wałbrzych province (14), that is, in the mountainous areas. They constitute 46.4% and 46.7% of the total of communes in those provinces, respectively.

From what has been said so far it can be concluded that the Wałbrzych and the Jelenia Góra provinces are characterized by the highest depopulation accompanied by important disturbances in the demographic structures and processes, by the significant SLF resources and by the low employment factors in the private sector of agriculture.

3. The reasons for depopulation of rural areas

The explanation of the causes that have led to the present demographic situation in the area studied requires a detailed research. However, we can already say that they belong to different spheres: economic, social, psychological, and political. An essential role in the depopulation of the rural areas have been played by psychological factors, which were labelled by A.Zagożdżon "the lack of emotional attitude towards the farm". This factor starts a "chain of causes" leading ultimately to the outmigration decisions.

The analysed area of 5 provinces (Jelenia Góra, Legnica, Wałbrzych, Wrocław, Zielona Góra) belongs to the so-called Regained Territories, in whose development the period of settlement and land planning lasting until 1949 heavily influenced the set of social and economic relations. In this period revolutionary changes in citizenship, production conditions, geopolitical situation, and demographic relations took place in the Regained Territories. German population was displaced from these regions, and people from overpopulated old Polish areas including those from the areas overtaken by the Soviet Union were transplanted there instead. So this population did not feel any emotional ties with the area inhabited. Consequently, even small difficulties could cause outmigration decisions. Among numerous outmigration reasons a few most important ones can be enumerated:

(a) Hard conditions of farming - the areas undergoing depopulation are characterized by low quality of soils, often also a complicated configuration of the region, predominance of northern exposures, and in the mountainous areas - by the growing season 4 weeks shorter than in the lowlands. These difficult natural conditions affect significantly the economic effects in agricultural production, complicate organization of production etc. A foreign population was incapable of farming in such regions.

(b) An enormous role in the depopulation of the studied region was played by the unstable agricultural policy in the whole 40 year period. Abandoning and giving up of farms voluntarily took place in the mountainous areas as early

as in 1948. It was a consequence of the decrease in the farm's acreage norms, of the increase in the land tax, of charging the farmers with the fees towards the Social Fund of Agricultural Savings. In 1948 alone 7.5 thousand of farms were given up in the area under consideration. The politics of enforcing the transformation of the agricultural system by forming the cooperatives, which started in 1949, did not facilitate the stability of the farmers' life either. It follows from the report about the state of the farming fittings (dated 30.10.1956) issued after the "thaw" of October 1956 that it was necessary to carry out all the affranchisement actions on the western territories all over again because the actual land use was not conform with the ownership status. The buildings abandoned by the settlers were damaged because they were being demolished for building materials or fuel.

The above state of settlements on the western territories was the result of high financial duties imposed on new farms as well as changing agricultural policies. The settlers taking the farms over usually did not have the means to manage them. Therefore the financial burden should have been fixed at a level that would enable the farmers to cultivate all the land they had and to purchase sufficient amount of livestock appropriate for the size of the farm, as well as to repair the buildings they took over or to build new farm buildings. High financial duties imposed on private farming in the years 1945-1956, introduced in order to obtain the means for developing the industry, caused incalculable harm to the development of agricultural production in the country, and completely slumped the farming settlement on the western territories.

The initiators of the rules mentioned achieved unprecedented "success". For they brought about a massive abandonment of farms together with buildings, machines, and tools by the farmers at the moment when their ancient dream of many generations to own land came true. This instability of agricultural policies of the 1940s is the main reason for rural depopulation of the western territories.

(c) Wrong politics concerning the socio-economic development of the country led to the decline of craft and private service, which were not replaced by the collectivized equivalents, as well as to the decline of regional industry in the rural areas. These areas became monofunctional - agricultural. So, they do not offer employment for the people who are leaving farming; consequently those people leave villages. Such policies, aimed at the

economic aspects of the development, paid little attention to social issues. As a result, they deepened spatial disproportions in the level of the socio-economic development. Areas with unfavourable natural conditions or insufficient infrastructure were not sufficiently included in the market economy. Consequently this led to the significant outflow of people from the "weak" areas.

To conclude, we would like to emphasize again that the main reason for outmigration from the rural areas of the western territories was the instability of socio-economic policies, particularly those concerning farming. Lack of emotional ties with those areas only made the decision to outmigrate easier.

DEPOPULATION PROCESSES OF RURAL SETTLEMENTS IN THE OPOLE REGION

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1. Introduction

Opole Silesia is traditionally known as a region of harmonious and adequate dynamic development of agricultural economy and rural settlements. During a certain period of time it has belonged to most interesting regions in Poland with regard to development directions and character of transformations in the rural settlement system. Historically shaped network of rural localities underwent several, at least, settlement processes changing entirely their former morphological, demographical and socio-economic structures. Some of the contributing processes have already terminated (for instance: land reform, formation of factory workers' colonies in rural areas and of dispersed settlements etc), some of them are still underway (growing complexity of morphological systems, construction developments along transport lines etc.) and some of them have barely started (depopulation of some rural settlements, transformation to fully urbanized suburban zones in some areas, formation of the network of local centres, concentration of rural population in greater villages, social urbanization etc). Processes of depopulation belong to these phenomena which affect shape, functions and socio-economic structure of rural settlements in some parts of Opole Region.

2. Regional rural settlements structure and its origin

In spite of many later stratifications and far-reaching morphological, structural and functional changes, the present rural settlement system in Opole Silesia is still considerably connected with the primary distribution of settlements in the Middle Ages. The network of villages is very dense there (altogether 921 settlement units in 1988, giving on the average 8.5 sq. km per one unit) and strongly differentiated with regard to village population and their morphological, functional and socio-economic character.

Rural settlements are usually rather big (200-1000 inhabitants) (Table 1).

Table 1. Rural settlements in Opole voivodship, 1978-1988

Population number categories	Numbers of settlements				Total population numbers in categories of settlements			
	1978		1988		1978		1988	
	numbers	%	numbers	%	numbers	%	numbers	%
Total	955	100.0	921	100.0	510736	100.0	495845	100.0
<50	7	0.7	4	0.4	292	0.0	1980	*
50-99	46	4.8	50	5.4	3557	0.7	3967	0.8
100-199	158	16.5	148	16.1	23544	4.6	22313	4.5
200-499	364	38.2	360	39.1	123194	24.1	122474	24.7
500-999	265	27.7	249	27.0	184725	36.2	174537	35.2
1000-1999	96	10.1	93	10.1	125009	24.5	124457	25.1
2000-4999	19	2.0	17	1.8	50415	9.9	47601	9.6

Source: Badanie wyposażenia miast, gmin i miejscowości wiejskich w podstawowe placówki i urządzenia. GUS - Biuro Spisów, woj. opolskie, issue 27, Warszawa.

Five genetic periods have usually been distinguished, in general, during which new rural settlements in Opole Silesia originated: the early Middle Age settlements, the Middle Age period of foundation of new villages, late feudalism, rural capitalistic reform (Friderician reorganization of the settlement system), and the socialist reconstruction of the rural settlement system (Golachowski 1969; Szulc 1988). The hamlets of the Opole region, as anyway is the case in other parts of Poland, were formed during several settlement stages, with strong reference to the regional environmental conditions.

In the second period mentioned, till the end of the 14th century altogether nearly 800 villages originated, which formed together with towns (more than 30) the basic settlement network. In the subsequent period the number of newly created hamlets was very low, less than 100, whereas many of the earlier existing villages decayed. It is in the 18th century that Opole

region became the area of intensive creation of new regular settlements, planned comprehensively (1740-1806), where the initial goal was intensification of agriculture and, in the terminal phase, of industry as well (Rajman 1962). Friderician settlements were created almost exclusively on the right bank of Odra river. Thus, the settlement system was spatially determined. As many as 385 hamlets were created and of these, the localities connected with development of metallurgy had played an important part. Radical changes in the regional settlement network have taken place in the 19th and 20th centuries, when industrialization occurred and modern communication and transport network was formed. This produced dynamic increase of towns, which expanded towards their suburban areas. New numerous morphological units were created next to settlements already existing. The latter ones in turn were affected by rapid internal and external transformations of villages. That was the result of building beyond the village cores, but inside their expanse. Numerous factories, complicating the existing morphological structure of rural settlements, were created at the time. Significant location freedom, characteristic for that period, influenced the development of evolutive settlement forms (units located along communication lines, spontaneously dispersed settlements, workers' colonies etc.) (Liszewski 1970, Zagożdżon 1971).

In this period there was further differentiation between the rural settlements in the western and eastern parts of the Opole region. Western areas were characterized by considerable stagnation in the rural settlement system, while eastern areas presented a complicated mosaic of settlement types with different functions, population structures and spatial forms (Zagożdżon 1966).

In the post-war period there were, besides the radical population changes (population exchange, verification of autochthonous population, post-war migrations etc.), deep reforms of rural possesional and organisational structure (land reform, organization of state farms, creation of collective or cooperative farms etc.). Rapid industrialization of some rural localities has led these villages to obtaining of urban rights and to further transformations into towns. New settlement units were created in large numbers in suburban belts, having urban type of built up areas and non-agricultural employment. These new settlements contributed importantly to complication of morphological, socio-economic and functional structure of rural settlements located in the zones of influence of regional urban

centres, first of all Opole, Kędzierzyn-Koźle, Krapkowice, Strzelce Opolskie, Kluczbork (Heffner 1985).

In the eastern and middle parts of the Opole region rural settlements underwent intensive urbanization process (very often called there creation of rural industrial-housing complexes and of production-and-settlement complexes, or semi-urbanization, suburbanization etc.). Connections between central urban units and those villages are very strong. Most of them are dominated by housing function and their morphological and spatial forms are very similar to urban housing estates (Mikołajewicz 1973).

Both in the eastern and in the western part of Opole Silesia almost no new farm buildings are being erected. New houses are by their character and style very similar to urban dwellings. As the time drew nearer to the eighties, more morphological units with urban character, meant for the state farm and cooperative workers were created, in particular in the villages beyond Opole agglomeration in areas with high level of collectivization. Those units were located in areas with higher propensities towards the "socialization" of agricultural land and they were absolutely not connected with the existing rural settlement network. These localities are draining population of smaller villages, which are not adapted to the large-scale agricultural economy. In the western part of the Opole region handing over of land to the socialized sector was a specific and continuous process with its own individual schedule, which produced the effect of spatial concentration of the settlements layout.

3. Rural population changes in the post-war period

Analysis of changes in rural population was carried out for ten-years periods beginning with 1950, when Opole voivodship was created. Earlier population movements were related to settling in rural localities of people from eastern and central regions of former Poland, verification of autochthonous inhabitants and displacement of German population (Rauziński 1982). Two opposing trends characterized Opole region in the period 1950-1960:

- increasing wave of demographic boom in rural areas,
- very intensive foreign outmigration, which reached in 1956-1959 the level of 30% of all migrations of the period 1950-1986.

High natural birthrates overcompensated for the negative influence of foreign migrations and caused total rural population growth from 469 thousand persons to 493 thousand (i.e. 5.2%). In 17 communes absolute

population declines were noted (i.e. in 28% of all communes). In accordance with expectations, decrease was observed in areas with high shares of autochtonous population, mainly in the middle-southern part of the region (Biała, Głogówek, Pawłowiczki, Polska Cerekiew, Krapkowice, Gogolin and Leśnica), where population decrease was especially big, and in the northern fringe of the forming Opole agglomeration (Lasowice Wlk., Zębowice, Pokój). The western part of the region with the newly settled population has reached high effective population increase which made them similar to the rest of Lower Silesia.

In the period of 1960-1970 far-reaching changes in demographic development of region have occurred first of all caused by the birthrate decrease down to under 1% in 1970 (9.8%). Meanwhile foreign outmigration process of autochthonous population was relatively stable. Total number of rural population was still growing (from 493 thousand to 520 thousand inhabitants in 1970, i.e. by 5.4%). Population decrease was noted in 15 communes (i.e. in 25% of their whole number). Distribution of rural depopulation areas in the Opole region changed, they generally shifted towards the southern, borderland part of the region, where the greatest population decreases occurred in Głubczyce, Lubrza, Kietrz, Prudnik, Głogówek and Otmuchów communes, to the west (Kamiennik, Namysłów, Świerczów, Wilków) and also to the northern parts (Byczyna, Domaszowice and Wołczyn). The possible reasons of this phenomenon lie in the peripheral character of those areas and in the agricultural character of employment (Deszczka 1989).

An essential turn in the rural population level took place in the years 1970-1978. Rural population grew by 1978 to 500 thousand (i.e. 3.9% of growth) while total population of the region grew by 4.4% . Negative real population growth was recorded in 52 communes (85%), and in 7 among them this decrease exceeded 10% (Baborów, Pokój, Świerczów, Polska Cerekiew, Pawłowiczki, Branice and Kietrz). Although there was even further relative stabilization of foreign outmigrations of autochthonous population (foreign migrations dramatically escalated only at the end of the seventies), but in conditions of persisting, relatively low birthrate levels, there occurred massive internal migrations to urban and developed industrial centres of the region (Opole, Kędzierzyn-Koźle, Nysa, Kluczbork, Zdzieszowice, Ozimek, Zawadzkie) and outside of it (above all to the Upper Silesian industrial region). Generally, the population decrease zone contained the whole agricultural part of the region, except for the middle-western part, where a

number of important industrial investment projects were being carried out, and where transport connections with urban centres of Opole agglomeration were consolidated (Grodecka, Rauziński 1982).

In the eighties (1978-1986) total rural population numbers of Opole region have not been changing on a greater scale (the number of rural inhabitants decreases by 0.6% in relation to 1978). Population decrease was noted in 31 communes, and though it was not of so profound nature as before, the depopulation tendency has become a permanent trait. Birthrates, remaining on the level as in the previous periods, could not compensate for the migrational outflow, both the external one very quickly growing in central and eastern part of the region, and the internal one, to the voivodship and external urban centres, characteristic for southern, western and northern parts of the Opole region. Population decrease was greater than 5% in 6 communes (Baborów, Pawłowiczki, Głogówek, Biała and Ujazd). Especially high population decrease was recorded in the southern and borderland zones again (Eberhardt 1989).

4. The reach of rural depopulation

Depopulation processes appeared with greater or lesser intensity in the Opole region during the whole post-war period. It was stated that the zones of permanent real rural population decrease were the middle-southern (the region of Biała, Głogówek, Strzeleczki, Baborów and Pawłowiczki), south-western (the region of Kamiennik) and northern (the region of Domaszowice and Wołczyn) parts of Opole Silesia (Stasiak 1989).

Depopulation process has touched mainly the villages from agricultural zone, but population decline was observed in rural localities of the Opole agglomeration too, especially in those located at its fringe (Grodecka 1987).

5. Main demographic processes in rural areas

Except for the first ten years after the World War II, when rural popultion birthrates were especially high, migrations have played an important part in depopulation processes of rural areas. This applies both to internal (oriented towards regional and extraregional urban centers) and external migrations (outmigration). Population dynamics, with relatively high share of non-agricultural population living in rural localities, was less pronounced than in urbanized belts of monocentric agglomerations in other

regions of Poland (Eberhardt 1989).

Migrations from rural localities were being undertaken by both agricultural and non-agricultural population. The increase of the number of workplaces in non-agricultural parts of regional economy, located mainly in urban centres had a great importance for the development of rural migrations. Continuing industrialization of the Opole region and considerable constant demand for rural labour force in non-agricultural jobs caused great flow of labour force from hamlets to towns, residence changes included (Rajman 1965, Góralczyk 1979). High attractiveness of these jobs was the cause of such migrations.

Rural population decrease occurred also due to changes of land ownership and agricultural land use structure, including formation of large-scale, mechanized state-owned and cooperative farms. Those reasons made it easier for younger inhabitants of rural localities to decide of working outside of their farms.

Migration decisions were caused, as well, by availability of education beyond villages, in towns. Similar role was played by the possibility of non-agricultural employment in the zones with commuting facility (neighbourhoods of industrial-urban centres). The crucial problem of all the social transformations in rural areas of the Opole region is constituted by professional preparation of youth to work in agriculture (Rauziński 1987).

A separate problem is constituted by the causes of external migrations of the autochthonous population. Besides the political conditions of outmigration, its basic causes are social and economic differences of living standards between Poland (Opole Silesia) and West Germany and permanent increase of family connections of this group of population with West Germany. Propensity to external migration is still expanding spatially (Rauziński 1982, 1983, Grodecka 1987).

6. The size structure of rural settlements and the depopulation process

As concluded in earlier works on the subject the outflow of rural population was connected not only with spatial location of some zones inside the region, and with socio-economic and functional structure, but also with the rural settlements' size (Mikołajewicz 1973). Generally, this dependence is inversely proportional to village size and is connected with differences in infrastructural and social equipment, usually worse in smaller localities. High numbers of small and very small villlages in some rural

areas (less than 200 inhabitants) is the factor activating the depopulation process. Areas of particularly dense network of so small villages are rural, western and south-western parts of the Opole region, especially outside of the Opole agglomeration.

Conversely, the tendency of population concentration in greater villages is very frequent. Bigger localities, well equipped infrastructurally, usually show population increases (Rajman 1965, Zagożdżon 1966). Localities having had urban rights before, with developed services, and administrative and industrial functions, have particular importance in population increase (Drobek 1987, Heffner 1987).

7. Industrialization of rural settlements and the depopulation process

Rural settlements in the Opole region are considered relatively strongly industrialized. After the Second World War the numbers of factories in rural localities have significantly increased (from 600 to nearly 1400), and their spatial location is more regular than previously. Industrial factories are located now in 461 villages (i.e. in more than half of rural localities), and there are frequently more than one factory in a settlement unit. Rural industrial plants are concentrated in a few areas (Odra river valley, Niemodlin, Głuchołazy, Kędzierzyn-Koźle, Korfantów, Strzelce Opolskie, Krapkowice, Stobrawa river valley and Turawa). As can be expected rural industry is one of the factors stabilizing rural population (Tkocz 1982 a, b).

Still, the really small plants (employing usually less than 10 workers) do not constitute a factor keeping rural population in places where they are located. Consequently, increase or stability of rural population depends upon yet another factor, upon the development of other spheres of economy. Development of local industry could at its very best just aid in the rural population stabilization process. A majority of "industrialized" settlements located in the depopulation areas are characterized by population decrease, similarly as for the neighbouring typically agricultural villages. It can be stated that industry located in rural localities causes positive population changes only if the scale of industrialization (employment, production quantity, advancement of technologies, development perspectives etc) is at least matching the potential local labour stock (Fig. 1).

Only rural industrial centres, very frequently comprehensively

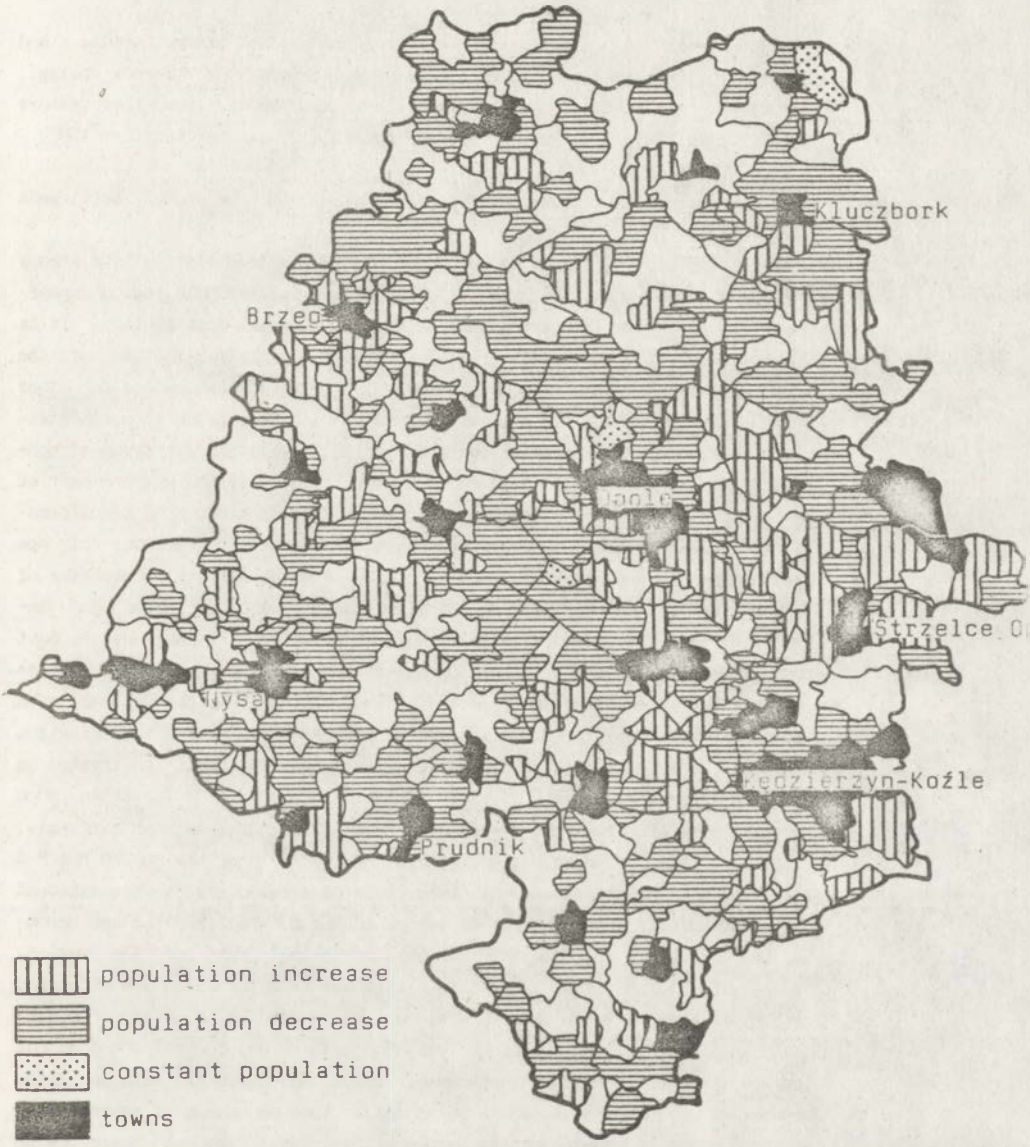

Fig.1. Rural settlements with industry by population increase and decrease

developed (including services, technical and social infrastructure, and administration), note population increases (e.g. Korfantów, Tarnów Opolski, Tułowice, Łambinowice, Gracze, Dobrzeń Wielki, Murów). Thus, they feature strong urbanization, and not merely an industrial character (Heffner 1987).

8. Main causes and directions of transformations in the rural settlement system

Recapitulating, one could argue that rural depopulation is a steady component of the rural settlement system changes in the Opole region appearing, though, with differing intensity and spatial distribution. It is characteristic that the well-marked dychotomic spatial structure of the rural settlement system is consistently valid for depopulation and for other settlement processes. This spatial differentiation is related to morphological structure of settlements, forms of agricultural economy, types of construction, as well as to socio-economic structures. In the western part of the region where rural settlements underwent less of urbanizing transformations, the socio-economic processes evaluated negatively (decline of the smaller settlement units and changing of settlement layouts), transfer of land to the State Land Fund, decapitalization of built up areas and infrastructural installations) take increasingly place. In the eastern part dominating urbanization processes change morphological patterns of settlements. They often lead to formation of the settlement belts connected with urban centers. In a lot of localities of this area the rural urbanization process (especially its socio-professional aspect) could be treated as finished. Lacking only is formal confirmation of this fact. In such localities housing function dominates, while agricultural is only marginal.

The line of demarcation between the two parts of the region has N-S direction and the area along this line could be treated as a transitional zone. Rural settlements there have been changing most quickly and are becoming increasingly similar to the eastern, urbanized part of the region. Groups of villages which form the area of these transformation are connected with Opole agglomeration from the western side and with Nysa, Prudnik-Głuchołazy and Głubczyce urban centres. The eastern and central zones do not feature the social and layout changes in rural settlements, although some depopulation processes appear there as well. The phenomenon of characteristic succession of population and management is very frequent there, with transformations going in the direction of entire urbanization of the depopu-

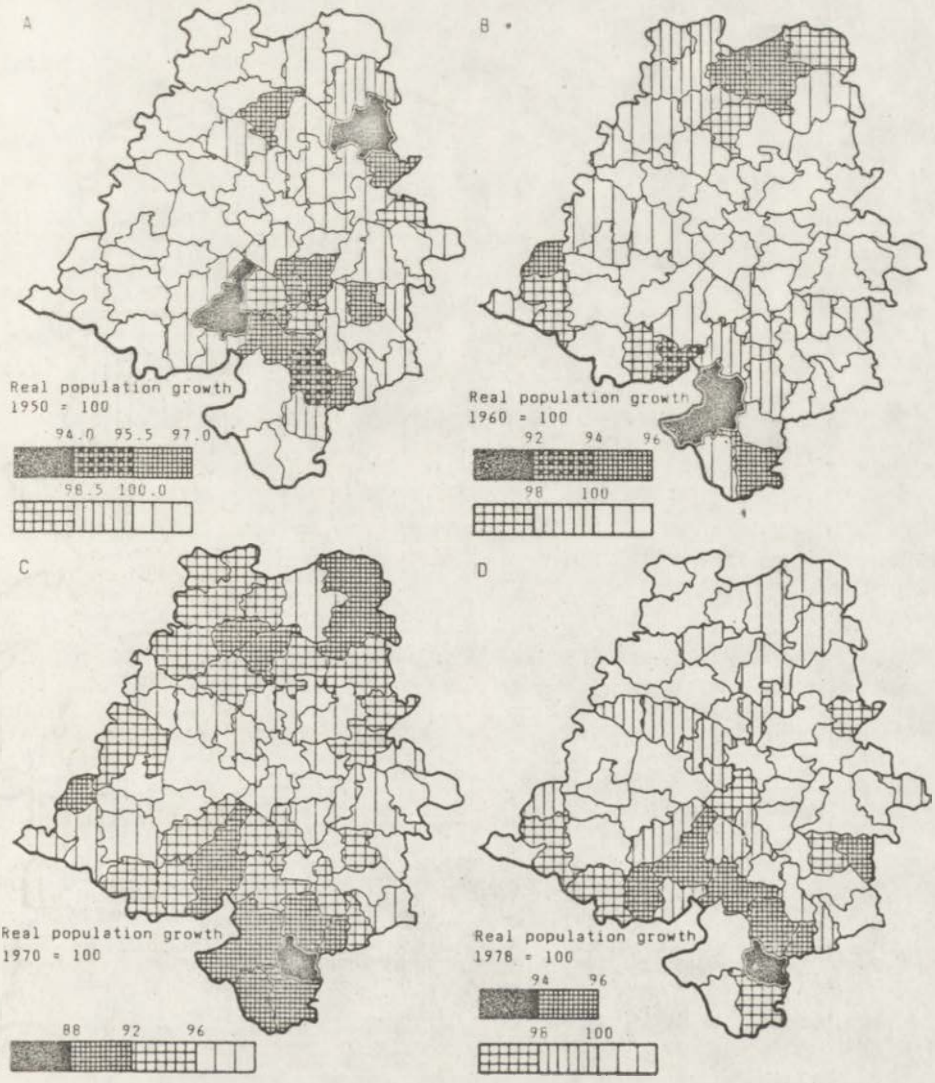

Fig.2. Rural areas with population decrease in Opole region
A - 1950-1960; B - 1960-1970; C - 1970-1978; D - 1978-1986

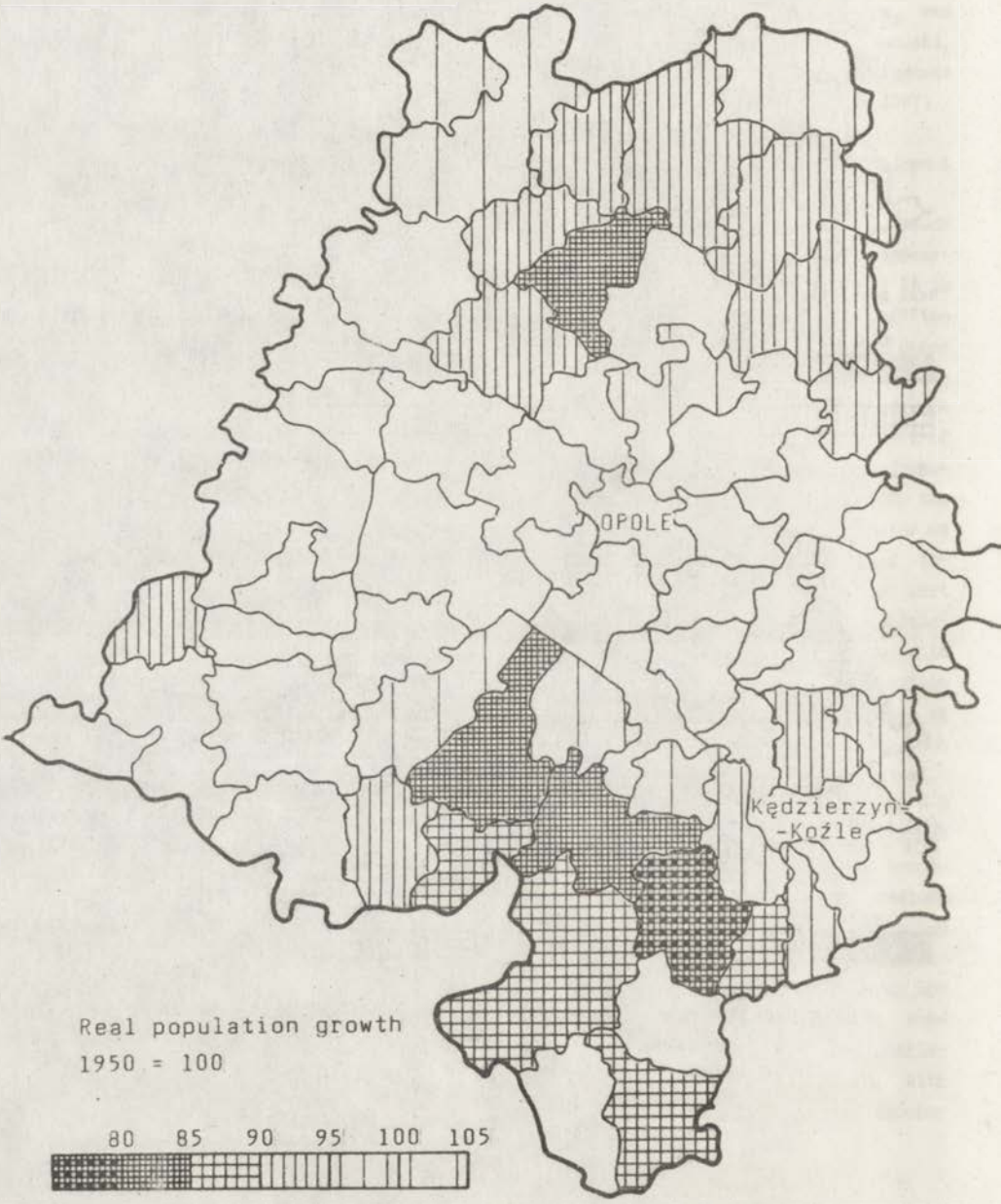

Fig.3. Rural areas with population decrease in Opole region, 1950-1986

lated localities (Fig. 2 and 3).

The process of progressive decrease of population and of the built up areas is taking place, on the other hand, in the western zone of the Opole region. This concerns the smallest hamlets, especially those with worse transport conditions and located peripherally with regard to regional and local urban centres. On the other hand, high collectivization level contributes to intensification of construction of new buildings in greater villages and is causing creation of compact estates of agricultural workers with urban features.

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COMPONENTS OF CHANGE OF RURAL POPULATION IN THE RUSSIAN SFSR: REGIONAL DIFFERENCES

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The absolute number of rural population in the Russian SFSR declined from 55.9 million in 1959 to 49.1 in 1970 and to 42.5 in 1979. At the beginning of 1985 as little as 39.2 million people lived in the countryside /1/. Over the period from 1959 to 1970 the average annual rate of decrease was 1.1%, then it rose to 1.7% between 1970 and 1984, remaining at the same level in subperiods 1970-1978 and 1979-1984. The absolute decline averaged 618 thousand persons annually in 1959-1969, 733 thousand in 1970-1978 and 666 thousand in 1979-1984. The decline over the whole period 1959-1984, caused by all the components of change (natural movement of rural population, migration and administrative changes of boundaries of rural areas), totalled 16.7 million. At the beginning of 1985 the number of rural population dropped to 70% of that in 1959. The volume of absolute decline may be compared with population of 30 fairly large cities - capitals of provinces (oblast').

Data on population dynamics by single years over the whole period from 1959 to 1985 allow to distinguish with sufficient credibility the typical "average-provincial" patterns of relationship between two interrelated processes: population dynamics and settlement network changes. The most typical were the following situations:

1. The increase of rural population was replaced by its decline. The settlement network is experiencing an essential transformation due to accelerated urbanization and to granting of urban status to some larger villages.

/1/ According to data from the last census of population (January 12, 1989) the rural population number in the RSFSR was 38,967 thousand. (Preliminary results of the All-Union Census of Population taken in 1989. Pravda, 1989, No 119).

2. The rate of population decline was growing. Causes and consequences of such dynamics are generally the same as in the first case.
3. The population numbers were decreasing at a constant rate. The settlement network remains relatively stable with slightly increasing share of larger settlements; the average population of the latter grows while that of the medium-size and small settlements declines (the number of population in small settlements is usually more stable than in the medium-size ones).
4. The rate of population decline was slowing down. Changes of the settlement network are similar to the ones mentioned previously. The main difference: there are more settlements showing population growth and relative stability.
5. Population decline was replaced by increase. This pattern is usually characteristic for provinces experiencing either a) - a rapid concentration of population in larger settlements at the expense of a considerable decline of both the number and the population of medium-size and smaller localities, or b) - a moderate concentration of population in larger settlements accompanied by population stabilization in smaller ones and population losses - in both directions - medium-size localities.
6. The rate of population increase was slowing down. Most often this resulted from stabilization of larger and smaller settlements as well as from a slight decrease in the number of medium-size localities.
7. The rate of population increase was growing. A stabilization, and sometimes a moderate expansion of the settlement network is taking place together with a growth of population, predominantly in larger localities.

Now we would like to characterize some typical features of regional distribution of patterns described above.

- The central provinces of the European part of Russia form a fairly compact nucleus characterized by constant or growing rate of decline of rural population, and by a clear-cut peripheral area where the rate of decline is slowing down.
- In the rapidly urbanized new frontiers of the North Siberia and Far East the growth of rural population was replaced by decline; the same pattern is noted in the Murmansk province which is approaching a kind of optimal distribution of rural nonagricultural population.
- In the North Caucasus and South Siberia two groups of provinces are more and more closer to the pattern of zero population growth in rural areas.
- In southern parts of the Eastern Siberia and Far East a conglomerate of

provinces shows very different pattern of population dynamics reflecting the diversity of stages, methods and rates of industrial, transport and demographic development of these areas.

To carry out a more detailed analysis of population dynamics aimed at determining the role played by particular components of change in various subperiods, one have first to decide what time intervals ought to be chosen.

Table 1. Percentage shares of provinces with particular levels of population dynamics

Period	Percent of decline					Percent of growth			Total
	20 and more	15-20	10-15	5-10	less than 5	less than 5	5-10	10 and more	
1960-1964	2.0	6.0	17.0	23.1	20.6	12.1	10.8	8.4	100.0
1965-1969	-	6.0	27.6	18.1	14.5	13.3	12.1	8.4	100.0
1970-1974	4.8	26.5	30.1	12.1	14.5	3.6	4.8	3.6	100.0
1975-1979	-	-	20.5	26.5	27.7	12.1	4.8	8.4	100.0
1980-1984	2.4	2.4	21.9	29.1	21.3	18.1	6.0	4.8	100.0

Apparently, almost every subdivision of a time-series is always conventional: the boundaries of periods separating different types of population dynamics are not always alike in various regions, the time-series usually do not have clear-cut turning points, the statistical data on population dynamics often need significant amendments, different in various regions etc.

Taking this into consideration the present author decided to subdivide the whole period into 5-year intervals: they are large enough to allow for reliable subperiod averages and sufficiently small to produce some 4-5 points needed for drawing a curve for the whole period. The classification of the Russian SFSR provinces (including territories and autonomous

republics) by subperiods and by types of dynamics of rural population, shown in Table 1, allow to distinguish the following main patterns.

1. The share of provinces showing decline of rural population is fairly constant and accounts for approximately half of all provinces. Their highest share was noted in 1970-1974.

2. The share of provinces in which population was changing in both directions at the average rate of up to + - 1% annually fluctuated in particular subperiods from 1/5 to 2/5. The lowest share of provinces with such a pattern occurred during the years 1970-1974.

3. The share of provinces showing population growth appeared to be the highest prior to 1970, then dropped sharply in 1970-1974 and somewhat increased afterwards (to 11-13%).

This ends our review of main population trends in rural areas classified according to subperiods and provinces.

* * *

Most studies on population dynamics take into consideration, as a rule, only two components of change, viz. natural movement of population and migration; much less attention is given to the administrative changes. However, their impact is sometimes so strong that they may change not only the pace but also the direction of population dynamics /2/.

Adding to the effects of natural and migratory movement, the administrative changes create a variety of new situations. They may:

- amplify the increase of population (Fig. 1,1)
- diminish the increase of population (Fig. 1,2)

/2/ The specific nature of administrative changes is worth noting: contrary to migration they represent no actual population transfers, they neither increase no decrease the number of inhabitants in a given area. It is only a change of the label: inhabitants of rural settlements are instantly transformed into townspeople (less frequently the other way around) abruptly increasing (or decreasing) the urban population. Such sudden transformations are fictitious to some extent: there is considerable time lag between the "label change" and the actual restructuring of the material conditions of the habitat as well as of the social organization and attitudes of population. Sometimes there is no such transformation at all.

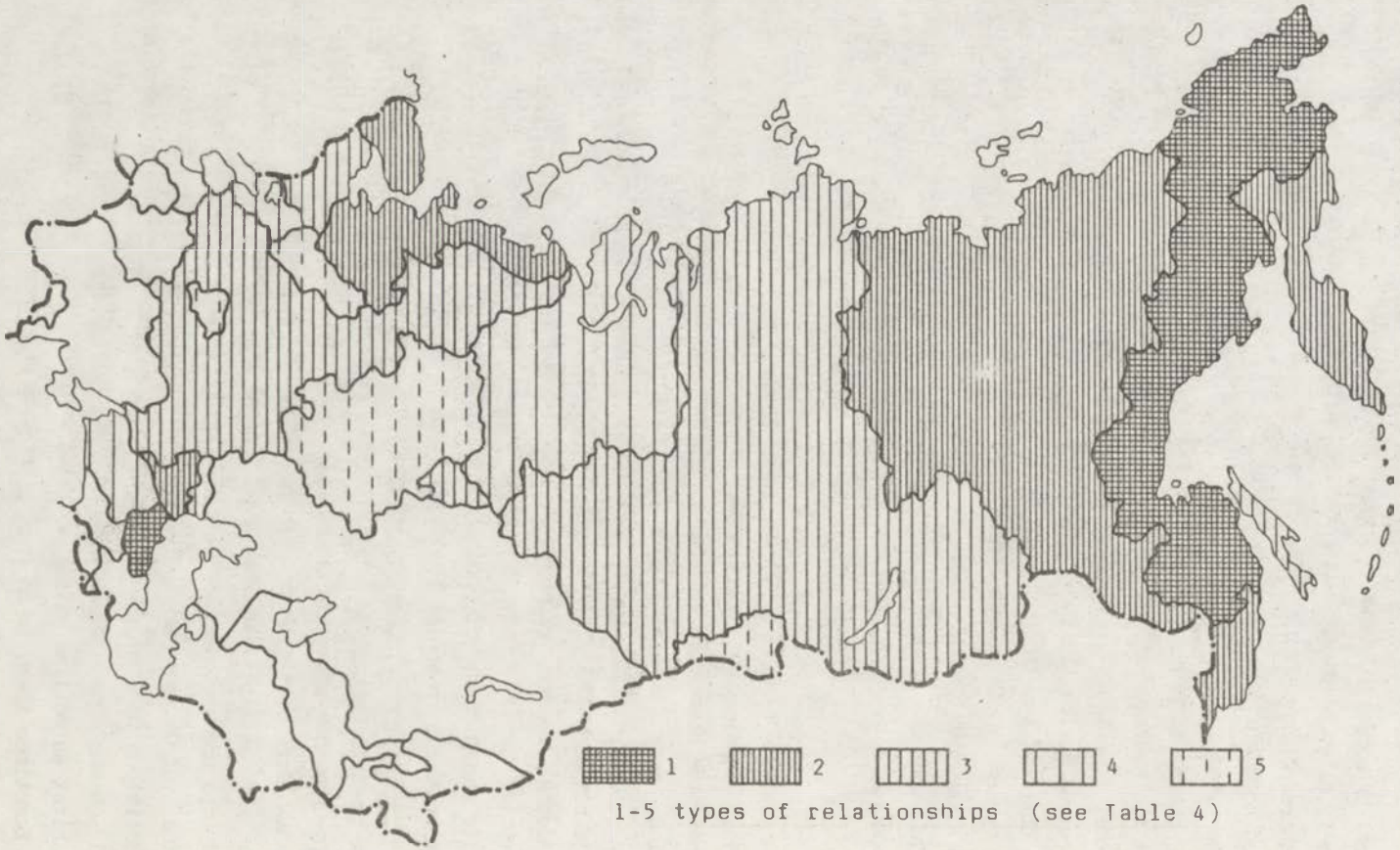

Fig.1. The role of administrative changes in the dynamics of rural population, 1965-1985
Administrative changes: 1 - amplify the increase of population, 2 - diminish the increase, 3 - generate the decline, 4 - amplify the decline, 5 - exert no influence on population dynamics

Table 2. Growth or decline of rural population due to administrative changes (in 1000)

Province	1966-1970		1971-1975		1976-1980		1981-1984		1966-1984	
	1	2	1	2	1	2	1	2	1	2
Magadan	+5.7	+14.8	+5.5	-5.6	+2.5	-3.3	+1.3	0.0	+33.9	+5.9
Murmansk	+4.1	+18.8	+4.2	+2.5	+8.9	-15.2	+6.2	-17.5	+24.6	-11.4
Pskov	-29.0	-16.9	-65.1	-3.3	-48.8	-7.5	-25.8	0.0	-204.2	-27.7
Tumen	-8.8	-1.9	+22.3	-16.3	+71.3	-82.4	+70.7	-53.8	+176.2	-177.2
Tatar ASSR	-109.8	-11.8	-166.2	-5.9	-131.8	-2.5	-125.6	-3.7	-563.1	-23.9

1 - the balance of migration and natural increase

2 - the effect of administrative changes

- generate a decline of population (Fig. 1,3)
- amplify the decline of population (Fig. 1,4)
- exert practically no influence on population dynamics (Fig. 1,5)

In our computations and on the map (Fig. 1) the latter group includes provinces in which the administrative factor is responsible for less than 5% of total population change.

Let us now give some examples showing the impact of administrative changes on dynamics of rural population in various regions. Over the period from 1966 to 1984 the number of rural population in the *Central Economic Region* decreased by 3.5 million. All components contributed to the decline: the natural decrease to the amount of 326 thousand, net out-migration to 2.6 million and administrative changes to 547 thousand (16% of the total decline). The urban population increased over the period by 4.2 million. As much as 13% of that increase can be attributed to "label changes": a series of villages were granted urban status and many other were annexed by towns and cities (especially by Moscow). In the Moscow province, the administrative transformations were responsible for 19% of the total increase of urban population: in rural areas of the province the population losses caused by this factor amounted to 319 thousand surpassing by the factor of one and a half the negative balance of the natural and migratory movement of rural population (220 thousand).

In the *Central Chernozem Region* the total decrease of rural population over the same period exceeded 2 million. The structure of this decline was as follows: natural decrease 6.8%, net out-migration - 80.0%, administrative changes - 13.2% . The urban population of the region grew by 1.7 million, of which 16% was due to the administrative factor.

In the *Tumen* province the contribution of administrative changes to the urban population growth amounted to 12.5% . In rural areas the increase of population over the period from 1966 to 1985, caused by natural increase and net in-migration, totalled 176.2 thousand (142.6 thousand and 33.6 thousand, respectively). This, however, was balanced by administrative transformations which "swallowed" 177.2 thousand inhabitants who lived in rapidly growing new frontier settlements and turned urban dwellers after being rural residents for a very short time.

In the *Stavropol Territory* many large stanitsas (large Cossack villages), particularly the rural district centres, received urban status; 26% of the total growth of urban population can be attributed to this

change. In rural areas of the territory the proportion between net out-migration and the administrative losses over the period from 1966 to 1984 was as 1 to 1.3.

As far as the scope of administrative changes is concerned, there is no continuity over successive subperiods. Everywhere, they are carried out once in a time, without any regularity. This lack of continuity confirms once again that the administrative changes deserve more attention and have to be thoroughly registered.

The following examples (Table 2) illustrate how different the scope of administrative changes may be in particular periods and regions; they also give an idea about some typical reasons and mechanisms of these changes. The sharp increase of rural population in the *Magadan* province in 1966-1970 was caused mainly by transformation of a range of mining and so-called "infrastructural" townlets having 1-2 thousand inhabitants into rural settlements. This produced almost 3/4 of the total increase of rural population in this subperiod and affected the population dynamics through the whole 20-years period under consideration (during which the administrative changes yielded 15% of the total increase of rural population despite the fact that in 1971-1980 they acted in the opposite direction).

In the *Murmansk* province the transformation of mining townlets into rural settlements lasted longer (from 1966 to 1975) and produced 82% of the increase of rural population during the first 5-year period and 37% during the second. The reversal process (conversion of rural industrial villages into urban localities) which started after 1975 was much stronger. Ultimately, although over the whole period 1966-1984 the net result of natural and migratory movement has increased the number of rural population by 25 thousand, the sum was ultimately cut by half due to administrative changes.

In the *Pskov* province both the natural and migratory movements as well as the administrative changes steadily contributed to the decrease of rural population. In various subperiods the administrative factor produced from 5% to 37% of the total decline (over the whole period - 12%). There were no administrative changes in 1981-1984 what can be explained by a temporary exhaustion of sources for such changes.

In addition to what has already been said with regard to the *Tumen* province we would like to note that the scope of administrative changes clearly reflected the stages and pace of growth of the newly-developing frontiers in the northern part of the province. In 1971-1975 the rural

population administratively converted into urban residents were 9 times higher than in 1966-1970, in 1976-1980 the numbers were 48 times higher and in 1980-1984 - as many as 28 times (a unique proportion in the whole country). In each of the selected subperiods the course of population change caused by the administrative transformations was different: in 1966-1970 it followed the pattern (situation) 4, in 1971-1975 - the pattern 2, in 1976-1980 - the pattern 3 and in 1981-1984 - again the pattern 2; over the whole 20-year period the change was in accordance with pattern 5.

The *Tatar Autonomous SSR* may serve as an example of more homogenous dynamics. The average situation over the whole 20-year period when administrative changes, together with the balance of natural increase and net rural out-migration, contributed to the decline of rural population was also representative for all 5-year subperiods (in each subperiod the share of administrative changes was close to the 4% average). Such a type of situation (administrative changes enlarge the decline of population) is the most widespread in the Russian SFSR.

The geographic boundaries of the ditinguished situations are quite clearly delineated (Fig. 1) reflecting the regional differences in the direction and scope of administrative transformations. In the *European* part of the Russian SFSR the zones representing different kinds of situations are, as a rule, shaped concentrically while in the *Asian* regions they have fairly well expressed longitudinal dimensions.

In most of European regions the administrative changes contributed to the decline of rural population. The only exceptions are constituted by the peripheries: the entire territory of the North Caucasus and considerable parts of northern and south-eastern regions. The Ural region and some provinces along the Volga river constituted a large zone where the administrative changes were rather small and practically exerted no influence on the dynamics of rural population.

In the Asian part of the Russian SFSR the longitudinal zones were changing their pattern consecutively to the eastward, beginning from the Tumen province where the administrative changes contributed to the decline of rural population up to the Magadan province and Khabarovsk Territory where they acted in the opposite direction. In the Maritime provinces ard in Kamchatka only a limited number of rural settlements were granted an urban status; the change slightly retarded the growth of rural population in this region.

Changes of administrative boundaries between particular provinces carried out during the period considered (1965-1984) exerted no appreciable influence on dynamics of rural population. Therefore we will neglect them and pay attention only to the inter-provincial changes of administrative divisions. Different roles played by these changes in shaping the dynamics of rural population will be shown on the example of Kursk province which is representative for the whole Central-Chernozem region /3/.

At the beginning of 1959 the territory of the province was subdivided into 33 rural administrative districts of which only 14 had urban settlements: 8 towns and 6 townlets. In 21 cases the centre of the district was a rural settlement. As a result of administrative changes introduced in 1970 the number of districts has been cut by 1/3 (down to 22), nine rural districts centres received urban status and the total number of urban settlements grew to 24. The enlargement of rural administrative districts and the fact that 11 former district centres lost their administrative and, partly, economic functions strengthened the "peripheriality" of some rural areas and sharply intensified outflow of population from these areas.

A reversal process took place in 1970-1979 when several districts were divided into smaller units (their number rose to 28). The result was that 5 district centres which formerly "fell into disgrace" regained their functions; besides that in one of the newly established districts its centre was transferred to another locality (from village Ivanovo to townlet Kurchatov).

Over the period from 1959 to 1986 the number of rural settlements decreased by 21% . A number of villages vanished because they lost all their population, many were combined into one unit, and many annexed by towns, some larger villages were granted urban status. Although "dying out" of villages is undoubtedly the main reason why their number shrinked, the administrative changes also played an important role. From 1970 to 1979 the overall number of rural settlements decreased by 168, of which 87 tiny villages were liquidated because there was no one left living in them,47 merged with larger villages, 6 large villages were transformed into urban settlements and 21 other villages were incorporated into towns.

Especially deep changes in the rural settlement network were going on

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/3/ All computations for the Kursk province have been made by T.L. Borodina

in 1959-1970. Along with the decrease of rural population in that period many criteria of settlement delimitation were revised, and intensive process of village mergers, status changes, renaming etc. have taken place. All these generated a considerable decrease in the number of rural settlements which accounted for 75% of the decline during the whole period under consideration. The number of tiny villages (up to 50 inhabitants) have decreased. At the same time there was a sharp increase of population in larger villages and in those which absorbed population from the "administratively liquidated" villages.

* * *

Out of the 71 Territorial Administrative Units (TAUs) - provinces, territories, autonomous republics, for which data on population dynamics in rural areas over the period from 1965 to 1984 were computed, in 18 TAUs there was an increase of the population during the period and in 53 a decrease. Such a proportion was obtained when computations were made by the so-called "unrefined method" which took into account all components of population change, including the administrative transformations. Employing the so-called "refined method" which eliminates the influence of the latter factor, the numbers of the TAUs in which rural population was increasing and decreasing are 12 and 59, respectively.

Despite the significance of administrative changes in shaping the dynamics of rural population, only in 6 out of 71 TAUs (8%) they were strong enough to reverse the course of population change. It is also worth noting that the TAUs where such a reversal has taken place did not constitute a compact area.

Of the two main components of change - migration and natural movement of population - the first appeared to be the most important in the rural areas of the Russian SFSR. At the same time, the distribution of provinces by migration rate was very different in successive subperiods, much more so than the distribution by the rate of natural movement (Fig. 2). From 1965 to 1985 the numbers of TAUs displaying net rural in-migration were as follows: in the first 5-year period - 2, in the second - 3, in the third - 7 and in the fourth - 8. The difference between particular subperiods were more evident in the case of net rural out-migration. In the first 5-year period the number of TAUs in which the rate of this migration averaged 2% or more was

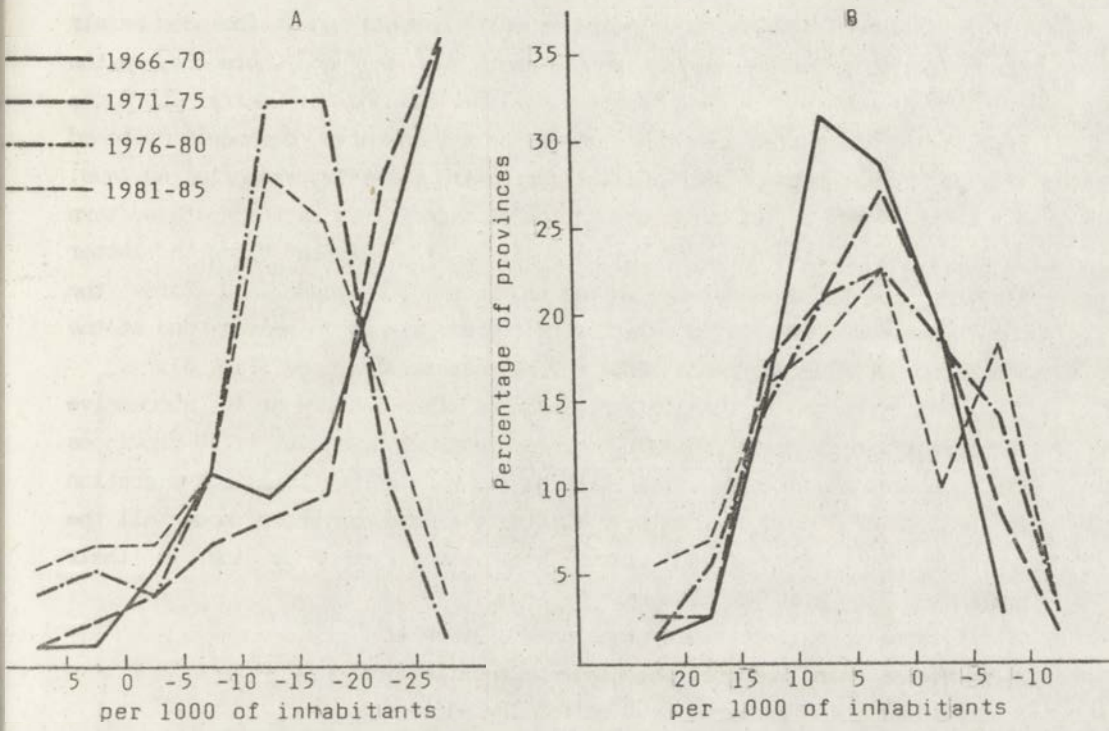

Fig.2. Percentage shares of provinces in the Russian SFSR for various rates of migratory (A) and natural (B) movement of rural population

41, in the second - 47, in the third - 9 and in the fourth - 13.

Provinces displaying natural decrease of rural population constituted in particular subperiods from 12% to 40% of all TAUs. It is quite possible that the share of such provinces will continue to grow although probably at a much slower pace than in 1960s and 1970s.

The present area of provinces which show negative balance of the natural movement of rural population is quite compact and it includes mainly the central part of Russia: a sizeable share of the Non-Chernozem region (without its northern and eastern peripheries) and the Central-Chernozem region. In the latter area the sign of the net natural movement switched from /+/ to /-/ between 1970 and 1975. From its initial territorial nucleus, the natural decrease of rural population expanded first in the south-western direction and afterwards to the North-East. The movement along the latter line appeared to be temporary: in the provinces of Vologda and Kirov the natural decrease of rural population lasted for almost 10 years, and at the beginning of 1980s was replaced by a frail natural increase (Fig. 3).

Shifts in the regional distribution of migration trends in successive subperiods are shown in Table 3. For each subperiod, a list of 10 provinces (TAUs) ranked the highest with regard to the rate of net rural out-migration is presented. To describe the shifts in a more synthetic manner all the provinces have been divided into three categories according to their presence on the list of "leaders":

1. provinces which lost their place on the list /4/
2. provinces which acquired the place on the list
3. provinces which appeared on the list "by accident".

The Karelian Autonomous SSR and provinces of Kostroma, Perm and Kemerovo fell into the first category; the Autonomous Republics of Mordovia, Tatar and Bashkir as well as Kursk province - into the second, and all other provinces, particularly the provinces of Orel and Sverdlovsk and the Tuvinsk Autonomous SSR - into the third.

/4/ The sequence of provinces in each subperiod corresponds to the order according to which they are usually listed in the subdivision by economic regions. All provinces in a particular subperiod are equal as far as their place as leaders is concerned. Differences of the rate of migration within every series of ten are not taken into account.

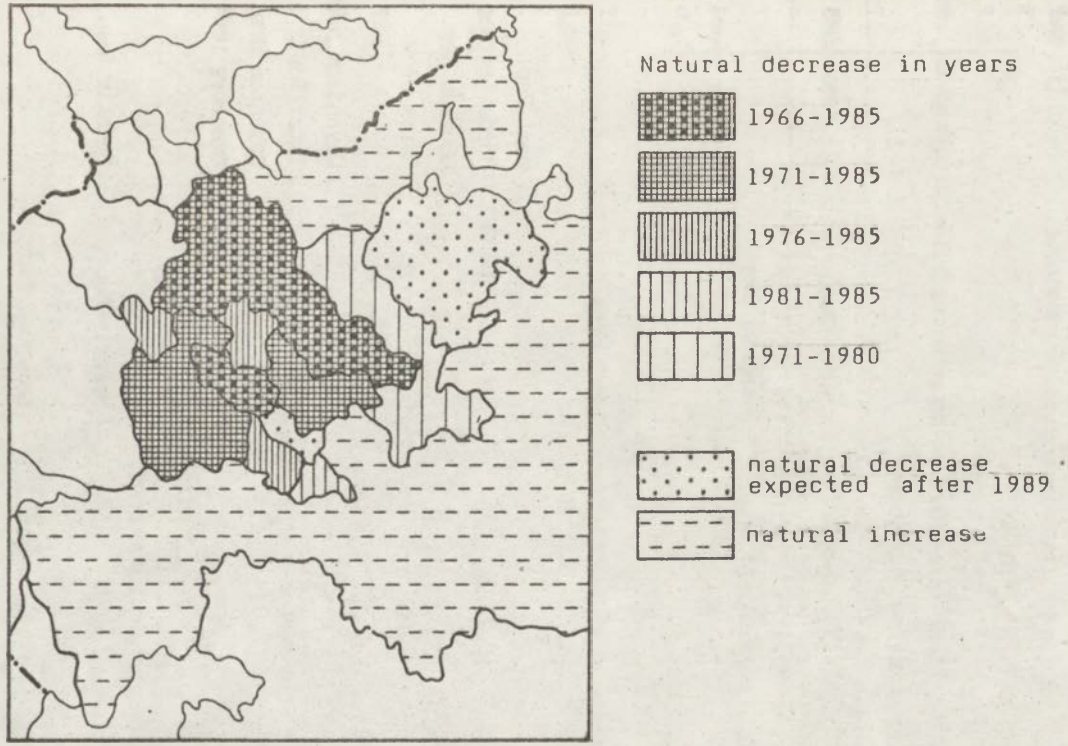

Fig.3. Formation of a region embracing provinces with permanent natural decrease of rural population

It is worth noting, and devoting more attention in further studies, that the structure within the leader's group underwent a specific change: in the last subperiod the group included 6 autonomous republics and 4 provinces, while in the initial subperiod: 7 provinces, 1 republic and 2 territories.

Table 3. Provinces, territories and autonomous republics with highest rate of net rural out-migration

1966-1970	1971-1975	1976-1980	1981-1985
Karelian Republic	Karelian Rep.	Karelian Rep.	
	Bryansk prov.		Bryansk prov.
Ivanovo province			
	Kostroma prov.		
	Orel prov.	Orel prov.	
Kirov province	Kirov prov.		
			Mari Rep.
	Mordovian Rep.	Mordovian Rep.	Mordovian Rep.
			Chuvash Rep.
Kursk province	Kursk prov.	Kursk prov.	Kursk prov.
		Tambov prov.	
			Ulyanovsk prov.
		Tatar Rep.	Tatar Rep.
			Dagestan Rep.
			Orenburg prov.
Perm province	Perm prov.	Perm prov.	
	Sverdlovsk prov.		
		Bashkir Rep.	Bashkir Rep.
Altai territory			
Kemerovo province	Kemerovo prov.	Kemerovo prov.	
Omsk province			
Krasnoyarsk territory			
		Tuvinska Rep.	
Sakhalin province			

The subsequent analysis of components of population dynamics will be carried out by employing the refined method, that is by excluding the impact of administrative changes. Only relationships between the natural and migratory movement of rural population will be taken into consideration. Five simplest types of such relationships are characterized in Table 4. Each type was given a code number indicated in the last column of the table. The same codes are used in Fig. 4.

Table 4. Types of relationships between natural and migratory movement of rural population

The course of population dynamics /x/	Type of relationships	Code numbers (in Fig. 4)
The population is increasing	Net rural in-migration offsets the natural increase	1
	Net rural in-migration is equal to or lower than natural increase	2
	The natural increase offsets net rural in-migration	3
The population is declining	The natural increase is equal to or lower than net rural out-migration	4
	The natural decrease is equal to or lower than net rural out-migration	5

/x/ Excluding the impact of administrative changes.

The geographical boundaries of the distinguished types are delineated quite clearly. In the central area, together with the adjacent provinces of the North-West and of the Chernozem region, the decline of rural population can be attributed both to the natural decrease and to net out-flow of the population. For the southern region of the European part and for the Far East provinces are typical in which the natural increase exceeds the net rural out-migration. A fairly balanced relationship between the two components can be found in a range of newly developing areas, particularly in the northern part of the Tumen province, in a group of northern provinces of

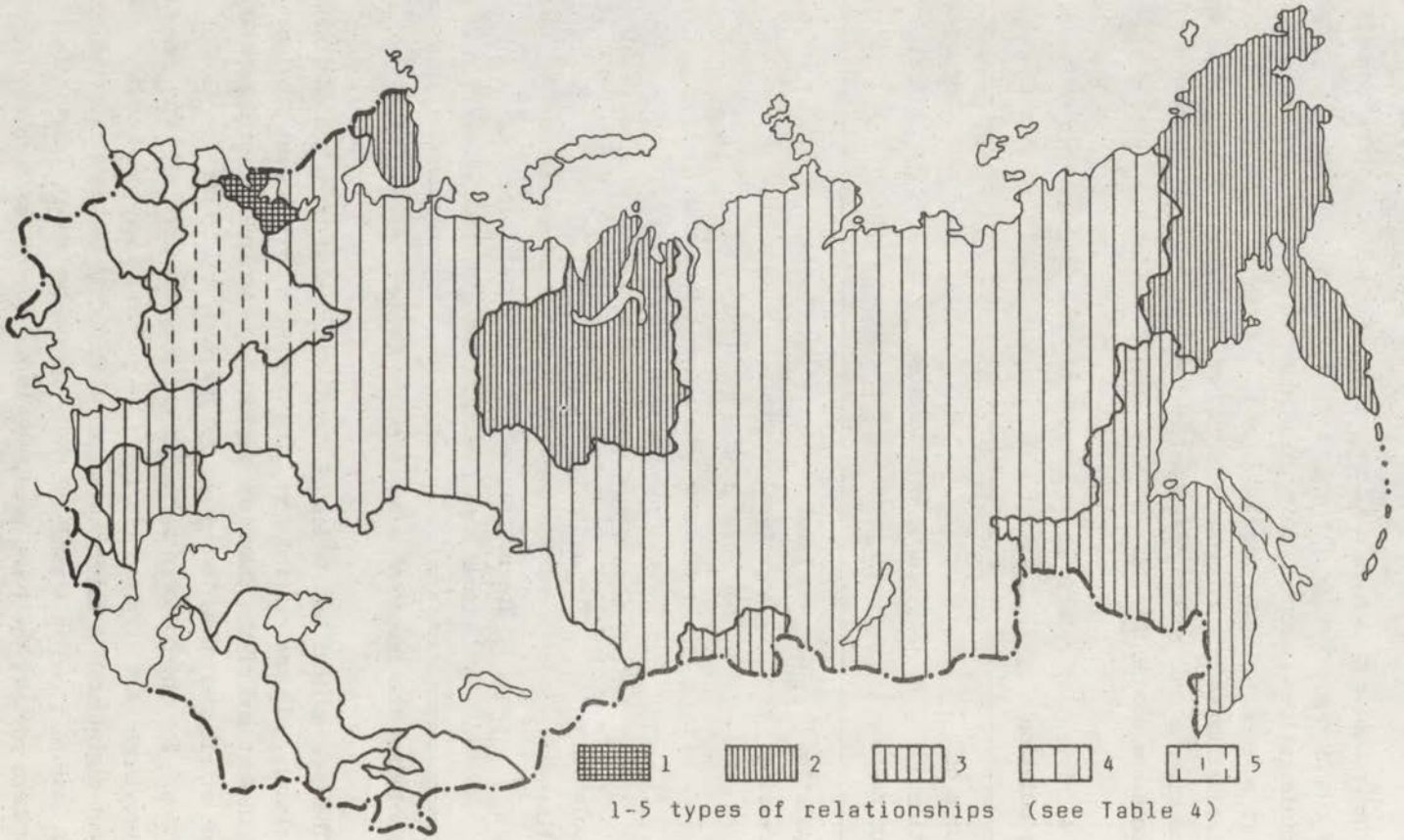

Fig.4. Relative significance of the natural and migratory movement of rural population, 1966-1985

the Far East and in the Murmansk province. In all other parts of the Russian SFSR the net out-migration from rural areas is higher than the natural increase. The only exception is the Leningrad province where rural population is growing due both to the natural increase and to net rural in-migration; the role of the latter is clearly predominant.

The proportions between particular types as shown on the map (Fig. 4) refer to the whole 20-year period (1965-1984). Within this period the proportions were often quite different. Although type 4 prevailed in all subperiods, its shares have been decreasing since 1965 till 1975 and remained stable afterwards. In 1971-1975 type 2 was non-existent (not in a single province the natural increase was higher than the net rural in-migration). The share of the type 3 was more or less constant over the whole period while with regard to the type 5 the share was growing during the first three subperiods and decreased in 1981-1985.

As a rule, if at the beginning of the period considered a province belonged to a given type of relationships between the natural and migratory movement, it stuck to it all the time. Of 71 TAUs 36 followed such a pattern.

The most stable situation has been noted in the Ural region (all seven provinces of the region retained their initial position throught the whole period). As relatively stable can be regarded the provinces of the northern region and of the Volga-Viatka region (in both regions 3 provinces out of 5 maintained their initial type). The evolution was quite specific in the Central-Chernozem region where all its five provinces belonged in the first subperiod to type 4 while in all the subsequent subperiods - to type 5. The most unstable situation was noted in the Far East: all 7 provinces of the region experienced a change of type, and 3 of them - threefold.

Against the background of results presented in this paper the author is of the opinion that further research on population dynamics in rural areas should be aimed primarily at:

1. Identification of the social and economic determinants of particular patterns of rural population dynamics, estimation of their strength in concrete circumstances, and search for general and region-specific regularities of the dynamics,
2. Analysis of configurations and geography of boundaries between zones characterized by stable homogeous rural population dynamics as well as determination of the degree of convergency between these boundaries and

those of background characteristics. The latter may include:
- natural environment
- ethnic characteristics
- proportions between the indigenous population, old residents and new settlers
- transport availability differentials (particularly in the case of sharp differences in the intra-regional and inter-regional communication possibilities).

The third line of research, founded upon a synthesis of the two mentioned above, refers to projections of population and settlement network in rural areas. Both projections should be interrelated and based on a clear idea regarding the likely prospects of various types of settlements and the quantitative and qualitative characteristics of their population. For making such projections it is also important:
- to select significant characteristics for a representative ranking of main and auxiliary types of population and settlement structures and dynamics,
- to work out a possibly detailed typology of rural areas according to their functions and settlement patterns,
- to carry out retrospective studies of particular, fairly large, areas and settlement systems; the studies should cover a time-period which will be long enough to get an idea regarding the degree of stability of recent trends and/or to have a chance of including events which have clearly entailed a change of the existing situation.
- to work out methods of extrapolation allowing to apply the obtained results to analogous - regarding their main parametres - settlement systems,
- to work out variants of population dynamics and settlement systems in rural areas within a range of possible socio-economic changes.

RURAL DEPOPULATION TRENDS IN THE UKRAINIAN SSR: THE DETERMINANTS AND SPATIAL DIFFERENTIATION

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A decrease of population is considered an important factor affecting adversely the economic development trends. This can be shown not only theoretically but also actually in the countries with shrinking population, such as e.g. FRG (Borodkin, 1989). The decline of population may result from the natural decrease and/or migration. The role of migration is of particular importance with regard to small settlements, especially in rural areas.

The term "depopulation" refers mainly to the situation in which the number of deaths is higher then the number of births. Such interpretation of the term is in conformity with the classical approach which assumes that the definition of depopulation should be based on presumption of a prolonged lack or small size of migration. Similar understanding of depopulation is still used in literature. Also in population projection models, such as "depopulation" model and "stabilization" model, the notion of depopulation is defined as a situation in which deaths outnumber births and migration is insignificant or non-existent (Ushkalov, 1989). The depopulation tendency appears when the social organism is "ageing", when the system of production is hampering the progress of productive forces (Piskunov, 1989).

Intensive rural outmigration is the main cause of the decrease of population in rural areas of the Ukrainian SSR. During 1979-1988, the average rate of net rural outmigration was 10.7 per 1000 inhabitants annually. The majority of migrants from rural areas are young people aged 16--29 years (76% in 1987). The rate of migration is higher for women than for men. Such proportions adversely affect the age and sex structure of the rural population. The significance of the rural outmigration is not limited to its influence on the natural decrease and changes in the age-sex structure of the rural population. Mass rural-to-urban migration also exerts a

strong impact on attitudes towards family size, health etc. /x/

Sharp increase in rural outmigration was partly related to the concept of rural population concentration which was implemented in territorial planning. According to this concept all rural settlements were divided into two categories: potentially growing settlements (mainly the bigger ones for which further development of social infrastructure, housing construction etc. was envisaged) and those without such a potential. It has been assumed that the population will be resettled from the latter to the former. It appeared, however, that the majority of migrants from the potentially non-growing settlements moved to towns and cities instead. At the same time, there was no decline or only a slight decrease in the rate of outmigration from the potentially growing rural settlements.

The notion that the resettlement could have taken place only within the rural settlement network (from small to large villages) reflects the idea of an autonomous and isolated development of the rural and urban populations. According to Z.Zayonchkovskaya (1986), the rural settlement network, which prevailed before the demographic transition and was formed in the preurbanization period and the new permanently growing network of towns and cities (formed at another time and according to different rules), have existed until recently virtually in separation. Many researchers point out that the "rural-urban" settlement system started to be shaped only in the recent period (Nikiforov, 1982, Strongina, 1984).

The subdivision of villages into potentially growing and non-growing ones as well as the whole concept of concentrating the rural population was based on the idea that the rural settlement network which embraced hundreds of thousands of small and very small settlements did not comply with the needs of the large-scale socialist economy and reflected the heritage of small-scale peasant economy and landed estate system in agriculture. The settlement system is very closely related to its material base (enterprises, industrial and social infrastructure etc.) and often is changing slowlier than the system of production. Thus, it lags sometimes behind the latter (Aitov, 1987).

It seems that the concept of rural population concentration does not take into account the emergence of relative labour shortages in the

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/x/ The medical aspects of the relationship between depopulation and the size and rate of migration are thoroughly discussed by V.Kaznacheyev, 1989.

countryside nor the sharp regional differentiation in this field. In regions with labour surpluses, as for example in Moldavya, the differences in social conditions of life between central and other settlements are prompting the inhabitants of the latter to move to larger villages; the attractiveness of the central villages for the category of migrants here considered is in any case higher than the attractiveness of towns and cities (Zurkanu, 1989).

The idea that the process of concentration of rural population represents a universal tendency in a socialist society is not generally accepted. Its opponents emphasize that first of all the idea is a product of the voluntaristic approach applied very frequently when solving agricultural problems in the USSR (Karyakin, 1989). The trends and patterns of development of the rural settlement network are a specific reflection of this voluntarism.

In the Ukrainian SSR the number of deaths exceeded the number of births for the first time in 1979. This was also the case in all the subsequent years with only one exception, i.e. 1986. During the intercensus period (1979-1988) the average natural decrease of rural population amounted to -0.8 per 1000 annually. In general, the downward trend of the rural population natural increase rate was very strong in the 1970s and somewhat weaker in the 1980s.

In 1988, the natural decrease of rural population was observed in 15 out of 25 provinces (oblast) (Table 1). In Chernigovskaya, Sumskaya, Kirovogradskaya, Poltavskaya, Khmelnitskaya, Vinnitskaya and Kharkovskaya provinces the rate of decrease was -5.5 per 1000. In 1970-1988, the downward trend of the natural increase rate of the rural population was evident in all provinces of the Republic. It was the strongest in provinces with the lowest rates and in the Volynskaya province.

Because of large territory and population, data for provinces do not reflect properly the spatial differentiation of the natural reproduction of population in rural areas. Therefore, smaller units should be considered. In the reality of the Ukrainian SSR the following may be possibly taken into account: 1. economic microregions (3-4 administrative regions united on the assumption that they have best prerequisits for rational integration of economic activity as well as for active integration of the urban and rural population (Leyzerovich, 1989), 2. rural communes and 3. rural administrative regions. Of these three types the latter one seems to be the most appropriate. In 1988, the average number of population in the rural ad-

Table 1. Rates of Natural Increase of Rural Population by Provinces, 1970-1988 (per 1000)

Provinces	1970	1979	1988
Voroshilovgradskaya	3.4	-1.0	-3.4
Dniepropietrovskaya	1.4	-2.8	-3.3
Donetzkaya	3.2	1.5	-1.8
Zaporozhskaya	1.8	-0.8	-2.6
Kirovogradskaya	1.2	-5.7	-6.7
Poltavskaya	-0.7	-6.6	-6.7
Sumskaya	-0.9	-6.8	-9.6
Kharkovskaya	1.6	-4.3	-5.6
Vinnitskaya	1.8	-4.3	-6.2
Volynskaya	8.1	3.6	1.0
Zhitomirskaya	4.6	-1.0	-4.0
Zakarpatskaya	13.3	10.1	8.9
Ivano-Frankovskaya	8.2	5.6	4.2
Kievskaya	2.8	-1.4	-3.2
Lvovskaya	7.2	3.3	1.9
Rovenskaya	10.8	6.0	3.8
Tarnopolskaya	4.5	0.1	-2.4
Khmelnitskaya	2.9	-2.8	-6.6
Cherkasskaya	0.6	-5.2	-7.6
Chernovitskaya	8.2	5.1	4.5
Chernigovskaya	-1.0	-6.4	-10.1
Crimean	11.5	7.8	5.4
Nikolaevskaya	4.2	1.3	0.9
Odesskaya	4.8	0.1	0.4
Khersonskaya	6.2	5.2	3.6

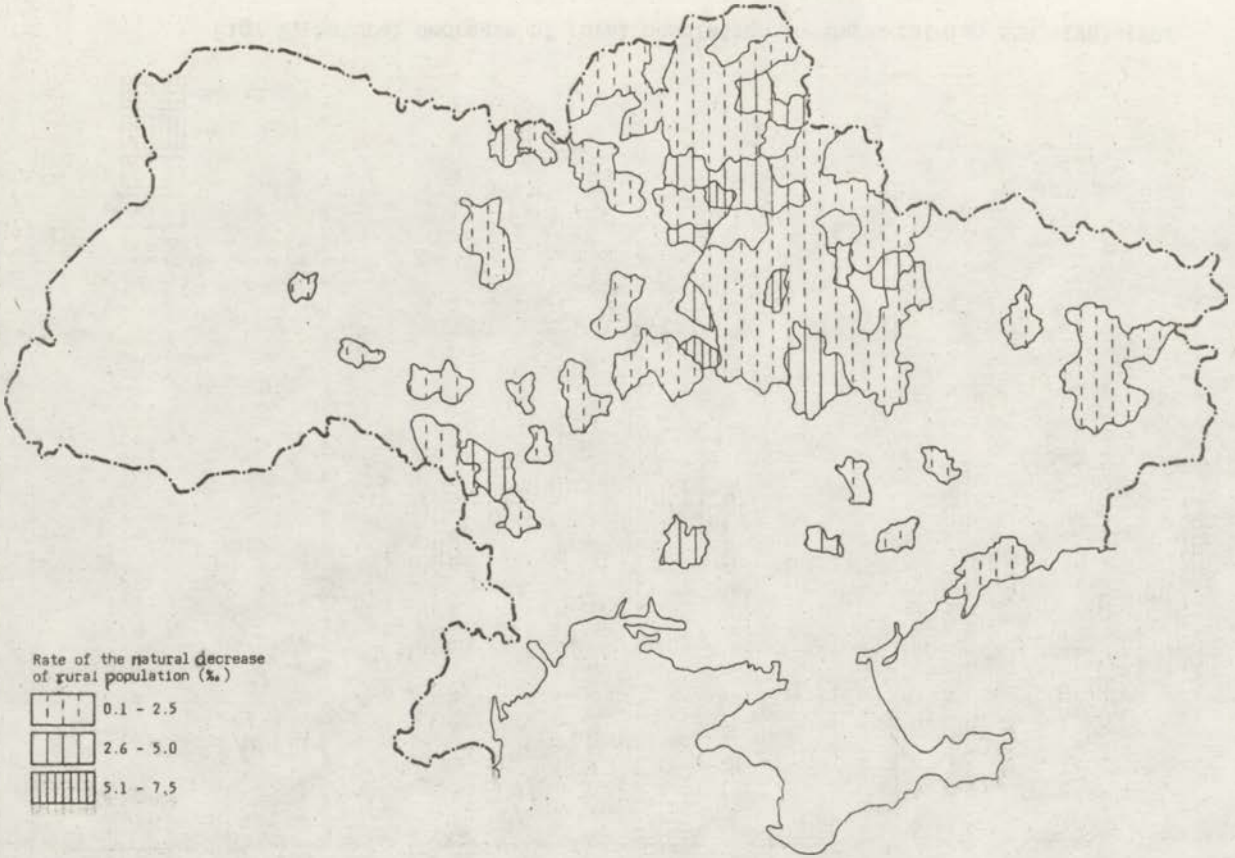

Fig. 1. Natural decrease of rural population in the Ukrainian SSR, 1970

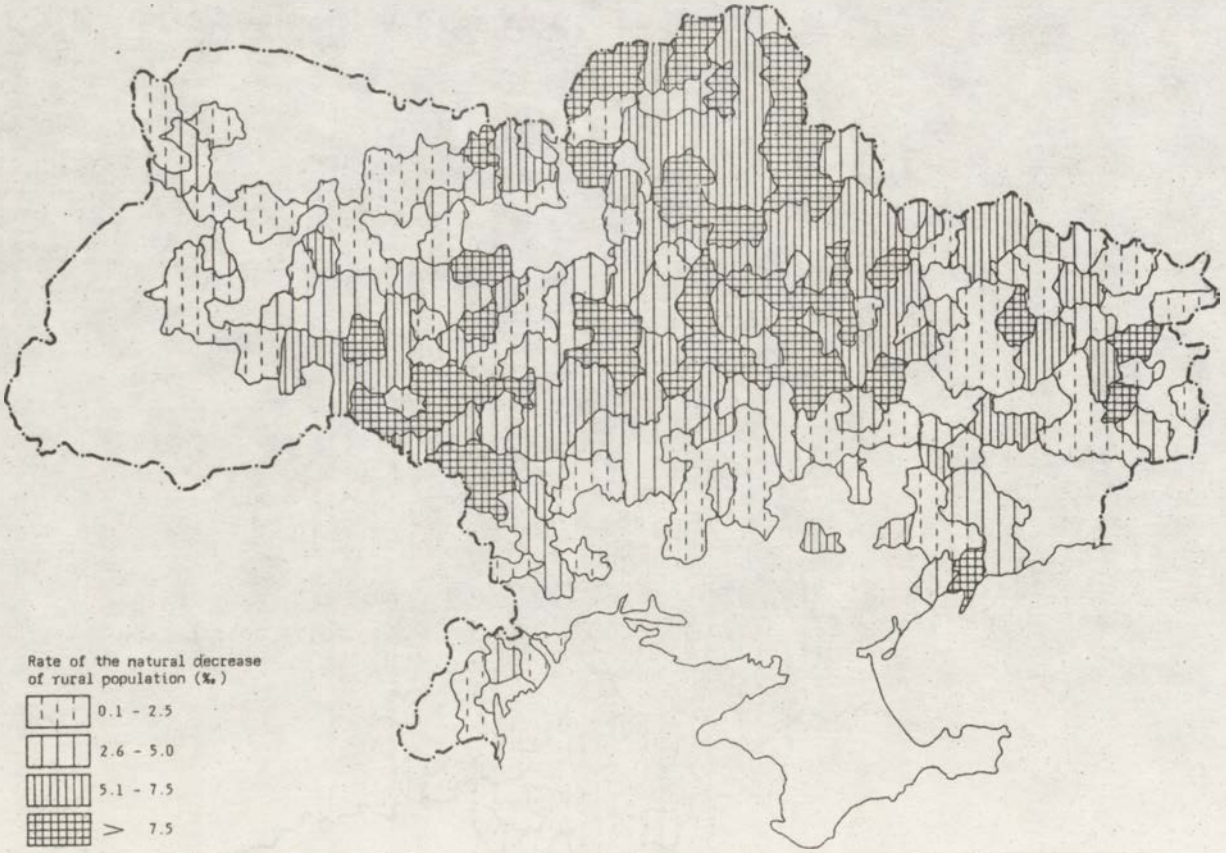

Fig. 2. Natural decrease of rural population in the Ukrainian SSR, 1983-1984

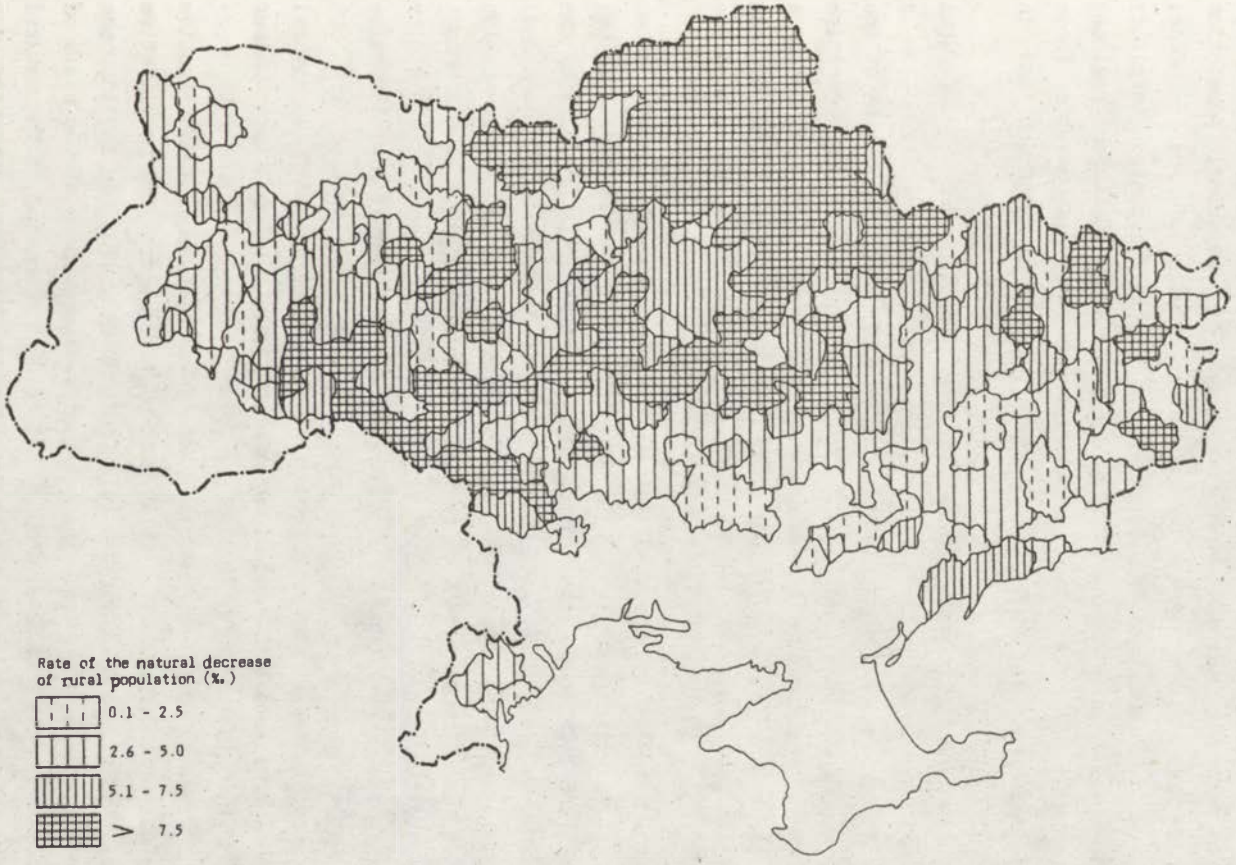

Fig. 3. Natural decrease of rural population in the Ukrainian SSR, 1988

ministrative region amounted to 34.5 thousand, and the average territory was 1.26 thousand sq. km.

The most unfavourable characteristics of the rural population reproduction were observed in the north-eastern region of the Republic, along the central stretch of the Dnieper river, and in the central territory between the rivers Dniester and Bug. As one moves away from these regions, the characteristics of population reproduction become more favourable. There is essentially no natural decrease of rural population in the South and in the Carpathian region.

When looking at the maps showing the rate of natural decrease of rural population in years 1970, 1983-1984 and 1988 (Figs 1-3) one may notice a clear, although regionally differentiated, tendency towards widening of the area with such a decrease. While in 1970 there were no administrative regions where the decrease rate was high (below -0.75%), in 1988 nearly a third of the regions had such a high rate. In 1970, regions with natural decrease were rare and scattered, but already in 1983-1984 they embraced almost entire territory.

Taking into account the traditional unity of the rural and urban settlements networks and the substantial strengthening of mutual ties between rural and urban population in recent times, a separate analysis of the natural movement of rural and urban population would rather be one-sided. Besides that, because data on the movement refer to the administrative units, it is often difficult to reveal specific features of that movement for the whole territory. For instance, the zone of influence of a big city goes far beyond the boundaries of the neighbouring rural administrative region. Nevertheless, also in this case the general regularities are observed. In particular, most unfavourable characteristics of the natural movement of population are found along the central part of the Dnieper river.

Achieving a positive natural increase in each rural administrative region is not an end in itself; it is needed to improve the qualitative characteristics of state of rural population. However, unless the increase is obtained in the near future, the qualitative improvement of the state of rural population will be slowed down. That is why overcoming of the natural decrease of this population should be considered a necessary condition for optimization of human reproduction.

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RURAL-TO-URBAN MIGRATIONS IN LATVIAN SSR AND THEIR DYNAMICS

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According to approximate data of the All-Union census of 1989 the population number of Latvian SSR is at present at 2880.6 thousand, with 1906.3 thousand of urban population and 774.3 thousand of rural population.

Since 1950 the size of rural population has decreased by 27.2% and urban population has increased 2.1 times. Consequently, proportions of urban and rural population have changed: in 1950 urban population constituted 45%, while in 1989 - 71.2% of the total. The degree of urbanization is higher only in the Russian federation - 74% and in Estonian SSR - 72% .

The urban development of Latvia has for a long time been seriously influenced by migration, in particular by rural-to-urban migratory flows. According to the data of the All-Union census of 1979 there are, among the within-the-republic migrants who live in towns of Latvia about 38% of those who have moved from the countryside.

In migrations of rural population to towns of Latvia three periods can be pointed out:

1. from the 1st quarter of the 19th century to the beginning of the World War I;
2. from 1920 to 1940 - the interval between two wars;
3. from 1945 on, - i.e. after World War II.

The first period was characterized by rapid growth of urban population with simultaneous increase of rural population. Migrations of country people to towns gained particularly in magnitude during the second half of the 19th century - after the abolition of serfdom in Russia (in Vidzeme and Kurzeme this occurred already in the first half of the 19th century) in 1861 and successive selling off of landed estates. This caused stratification of the peasantry. The land was very expensive, not available to everybody: one "desyatina" costed 61 roubles in Vidzeme, 88 roubles in Kurzeme, but in the

provinces of black soil regions the price was 35.5 roubles. People went searching for land and work to the distant parts of Russia or went to the developing industrial towns, trying to settle in larger cities. From 1881 to 1897 Riga expanded by 40% and more than 19 thousand country people left the Riga region. At the end of the 19th century annual natural growth in Riga was 2.5 thousand people, but the increase of jobs was much greater: in 1884 there were 23.8 thousand employed people, in 1900 - 56.2 thousand. In 1913 65% of inhabitants of Riga were migrants, half of them former country people of Latvia. Riga was the third largest town of Russian Empire after Petersburg and Moscow (520 thousand inhabitants), and the share of urban population of the country hac already reached 40.3% .

After World War I migration from the countryside was regulated by two factors: the agrarian reform and the establishment of town economy.

Latvia lost about 27% of its population during the war - the greatest losses in Europe. In towns the remainder of the population was about 41%, in the country - 74% . Economy was destroyed. At this period which was very hard for the young state the agrarian reform was carried out as an attempt to stabilize agriculture as the basis of economy and therefore leaving of the countryside was considered to be an undesirable phenomenon. To carry out the agrarian reform manpower was required in the villages, and the reform was aimed at keeping people in rural areas. It performed an important function: people were given psychological satisfaction after the injustice of the past. In this aspect the reform attained its goal. On the other hand, the agrarian reform could not meet everyone´s wishes, solve all problems of the country, and caused a flow of rural population to towns despite the shortage of manpower in agriculture. The return of refugees after 1920 added to continuation of the process of rural-to-urban migration. Only 7% of these who returned settled to live in the country.

Under the circumstances when inmigration was practically non-existent the influx of country population to towns played an important role in urban development. Riga remained the centre of attraction.

In the course of 5 years (1925-1930) from Latgale alone some 17 thousand people came to Riga and about 20 thousand arrived from other regions of the republic. Migrations from Vidzeme were very intensive: the numbers of rural population living there decreased by 7% during these 5 years. Migrants from the countryside constituted in 1920 some 23.5% of the total growth of town population, but in 1930 this figure attained already

36.5% . This happened at the time when the natural growth in towns was low, particularly in Riga: 2.3 per 1000 in 1920, 0.5 per 1000 in 1929.

Contrary to the pre-war period, due to insufficient development of industry, migrants from the countryside were mostly employed in other branches; the goverment attempted to make use of the outflow of country people in favour of developing industry. But the main tendency of the 1920s led in the opposite direction - that of preserving an agrarian country.

During this period (1920-1940) for the first time in the history of Latvia the flow of rural population to towns was in certain years not compensated by the natural growth in the country - from 1925 to 1930 the overall size of rural population decreased by approximately 2 thousand.

The present period of migrations of rural population to towns has much in common with the previous periods and is a continuation of the expanding migration process. A number of specific traits that are characteristic of the past decades manifested themselves more intensively in the years after the Second World War. Attraction exerted by Riga has remained true and has even grown. Just as in the 20th century in the years before the World War I Latvia was, in relation to other republics of the USSR (at that time - provinces of Russia) an open system, and the migration of rural population to towns mixed with the interrepublic migrations.

Decrease of rural population as a result of migrations - the tendency of the 1920-1940 period - has become more intensive and since 1950 the size of rural population has been steadily declining.

The development of the republic was seriously hindered by the heavy human losses of the 1940s. According to some sources these losses amount to 36% . This served as a pretext for intensifying republican migration, which played a certain role in the territorial redistribution of population in the republic. This was carried out under the banner of industrialization of national economy.

During the post-war period (statistical information dates from 1950) rural population has decreased by 283 thousand; 86% of this reduction is constituted by those who have gone to towns. During all these years up to 1984 the countryside has had a negative net migration with important fluctuations in some particular years. An exception occurred in 1956 and in a few successive years when the number of the people coming to the countryside exceeded the number of those moving to towns - a process reverse to the coercive migration of 1949.

Particularly high negative net migration of the countryside occurred at the beginning of the 1960s when the course of intensified industrial development was set forth for the republic.

During the period of 1951-1955 about 17 thousand people moved from the countryside to towns, then in 1966-1970 this number was about 10 thousand, in 1976-1984 it was 7.7 thousand. Since 1984 to the present the rural areas have so far lost no more population in favour of towns.

During the reorganization period of the country the outmigration of rural population was greatly stimulated by total collectivization and system of priorities granted to villages in which communities were proclaimed as the basic type of country settlements. Resettlement of village inhabitants from private farms to community settlements was accompanied by intensive migration to towns. At the same time numerous industrial enterprises were built in towns thus drawing in workers from enormous territories.

The share of rural population in the migration-based growth of towns has gradualllly changed (Table 1).

Similarly, the significance of rural inhabitants in the growth of Riga population has been decreasing - during the 1970s their share in the migrational growth of the capital of Latvia has dropped from 1/3 to 1/5.

A significant part of the flow of rural migrants is constituted by the interrepublican migrants: about 1/5 of them first settle in villages with the intention of moving to towns in future.

Since the beginning of the 1970s the outflow of rural population finds its reflection in the increase of the total losses of rural population, so that for 14 years migration in the country has proceeded side by side with negative natural growth (see Table 2).

People have left (and are still leaving) the backward collective farms, and settlements which are situated far from the centres of large farms, villages or regions. The decrease has been most intensive in the countryside of Latgale - since 1960 some of its regions have lost about a half of rural population and more than 80% of migrants have moved to towns.

More than 60% of the former village dwellers settle in small towns.

The larger the city, the wider the area of the inmigration flows attraction from the countryside. For Riga, as far as republican migration is concerned, this area is constituted by the whole republic; other towns of republican subordination attract rural inhabitants mostly from the surrounding region, the district centres - from the respective districts, small

Table 1. Breakdown of the migration-based growth of towns of the Latvian SSR according to the migrants' former residence (%)

Years	Total growth	In that:	
		from rural areas of the republic	from other republics
1951-55	100	83	17
1956-60	100	22	78
1961-65	100	42	58
1966-70	100	42	58
1971-75	100	43	57
1976-80	100	46	54
1981-83	100	17	83
1984-87	100	-3	103

Table 2. Coefficients of the natural demographic processes of rural population of the Latvian SSR (%)

Years	Birthrate	Mortality	Natural growth
1970	14.3	14.4	-0.1
1975	14.0	15.7	-1.7
1980	14.8	17.0	-2.2
1985	16.4	17.2	-1.2
1987	18.3	15.6	2.7

towns and urbanized villages from the surrounding farms. These areas cover one another, furthermore, the republican migration has a step-by-step character: the first chosen town serves as a "springboard" for migration to a larger or a more distant city.

Migrations of rural population towards the centres of different subordination degrees together with inter-republican migration have led to a high concentration of population:

1/ in towns on the whole,

2/ in relatively large towns,

3/ in the central part of the republic.

Urban population is concentrated in a small number of towns: about 3/4 of the town dwellers live in 7 cities (out of 56), that is Riga, Daugavpils, Liepāja, Jūrmala, Ventspils, Rēzekne. By the size of population Riga exceeded the second largest city - Daugavpils - more than 7 times. The capital of the republic holds 34.1% of its population and 47.9% of the urban population.

Urban population is concentrated in the central part of the republic - that is in Riga region (Table 3), which accounts for more than 60% of townspeople. Such situation brings forth many problems of economic, ecological and social character. In the recent years attempts are being made to correct the mistakes that have been made and to avoid the new ones.

The process of population concentration in towns within each of the 8 districts is going on, and the significance of the district centre is simultaneously growing (see Fig. 1). An exception is constituted by the Riga region where the share of Riga has slightly decreased.

On account of the enormous outflow of rural population and the distinct trend of inter-republican migration to select the largest towns, the size of population has increased during the postwar period in only 4 regions - Riga, Daugavpils, Liepāja and Ventspils regions, while other regions have lost some of their population (see Table 4).

In certain regions of the eastern and northern part of the republic the process of population decrease has been going on till the present.

The rural population number has grown only in Riga region, accounting for more than 1/3 of rural population of the republic. Conversely, the regions which are more distant from the central part of the republic still remain a reserve of rural-to-urban migrations.

The outflow of countryside dwellers to towns from the peripheral regions to the central parts resulted in the changes of the density of rural population (Table 5). The highest density of rural population occurs in the countryside of the Riga region where it attains 37 persons per 1 sq. km. In Ludza region where in 1935 the density of country population was 35.9 persons per 1 sq. km, the present density is lower than 10 persons per 1 sq. km.

Migration from the countryside which has been proceeding for tens of

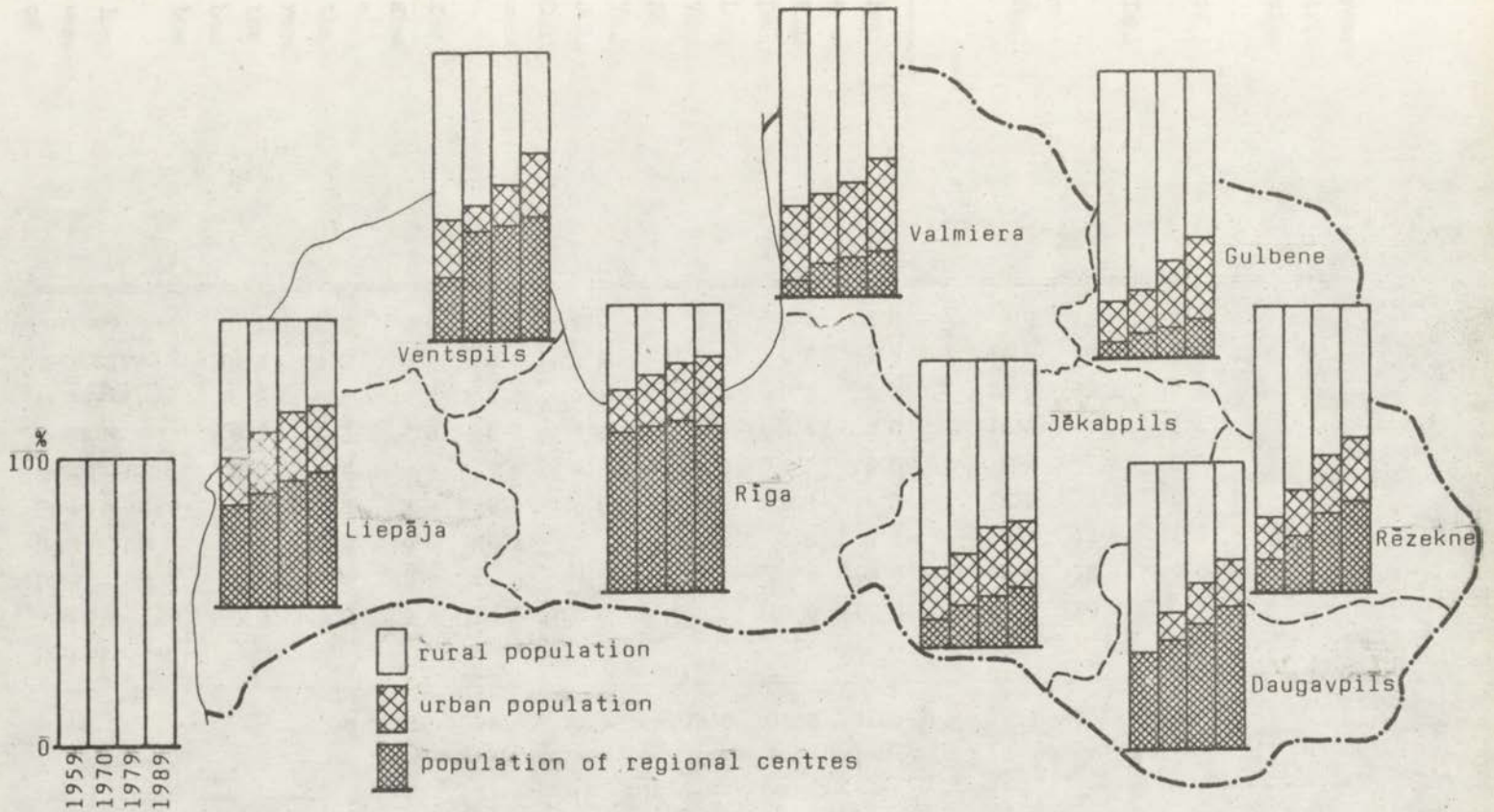

Fig.1. Changes in the shares of urban and rural population in particular regions of the Latvian SSR, 1959-1989

Table 3. Distribution of urban and rural population of the Latvian SSR among various economic regions (%)

Regions	Total population				Urban population			Rural population		
	1959	1970	1979	1989	1970	1979	1989	1970	1979	1989
Republic as a whole	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Riga	20.1	45.3	49.9	52.9	54.9	63.4	63.4	63.4	27.4	30.7	34.0
Daugavpils	10.7	11.3	10.6	10.2	9.7	8.6	8.8	8.9	13.8	13.0	11.7
Liepāja	12.8	9.9	9.8	9.5	9.3	9.6	9.3	8.9	10.0	9.9	10.0
Ventspils	8.2	4.6	4.5	4.4	4.3	4.0	4.1	3.9	5.4	5.2	5.2
Rēzekne	8.1	7.3	5.9	5.3	4.8	3.4	3.4	3.6	10.2	9.2	7.7
Valmiera	16.2	8.9	8.4	7.9	7.7	5.2	5.2	5.2	13.8	13.7	13.8
Jēkabpils	13.8	7.3	6.5	6.0	5.8	3.9	3.8	4.2	10.9	10.4	9.8
Gulbene	10.1	5.4	4.4	3.8	3.5	1.9	2.0	1.9	8.5	7.9	7.8

years and has at present merged with the inter-republican migration has contributed to the attraction of centres and caused a great difference in the size of population in various regions (see Fig. 2).

The countryside has mostly lost the able-bodied population: about 3/4 of the negative net migration is constituted by relatively young people fit

Table 4. Changes in the size of population in the regions of the Latvian SSR 1970-1989 (1979=100%)

Regions	Total population		Urban		Rural	
	1970--1979	1979--1989	1970--1979	1979--1989	1970--1979	1979--1989
Republic as a whole	106.6	106.3	116.8	110.4	89.5	97.4
Riga	113.3	110.0	116.4	110.5	101.4	107.7
Daugavpils	102.5	102.5	119.3	112.4	85.1	88.1
Liepāja	103.7	104.3	113.9	106.7	87.5	99.3
Ventspils	104.1	104.6	118.6	108.0	86.3	98.7
Rēzekne	92.9	97.4	123.8	107.0	75.3	97.3
Valmiera	99.5	103.6	117.5	108.5	88.1	99.5
Jēkabpils	97.1	103.8	118.2	117.9	84.7	92.2
Gulbene	93.0	96.3	120.4	109.3	82.7	89.2

for work. At the beginning of the 1980s another trend became important - a greater outflow of rural population above the retirement age. In 1975 elderly people constituted 1/3 of the outmigrating population, but in 1983 their share was 3/4; grown-up children who have left the countryside 20 years before now take to their households their elderly relatives. During the latest years the positive share of persons of 20-30 years of age has been increasing in the migration balance on account of those who return from towns after their study period.

In the migrational outflow from the country the dominating share for a long time was that of male population, but since the 1970s the share of women, young persons in particular, has been increasing. In 1980 the share of women in the negative migration balance was twice as large as that of

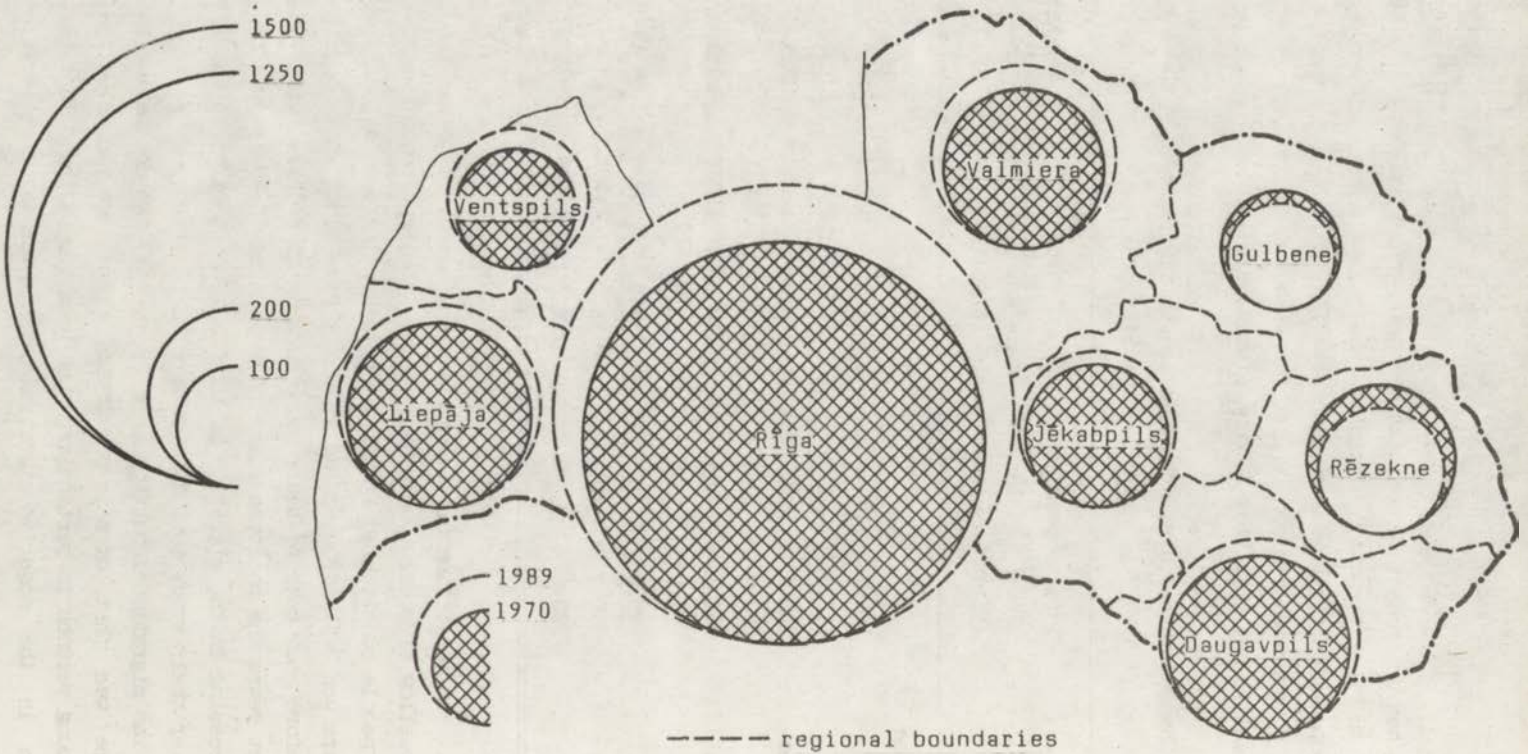

Fig.2. Population numbers in particular regions of the Latvian SSR (in thousands)

men, but among the persons of working age it was 3.2 times as large. Only 1/4 of the women who study in towns return to the country, whereas half of the young men returning from the army service go back to the rural areas.

Table 5. Density of rural population in various regions of the Latvian SSR, persons per sq. km (1959-1989)

Regions	1959	1970	1976	1979	1989
Latvian SSR as a whole	15	14	13	12	12
Riga	18	19	20	20	21
Daugavpils	22	18	16	15	13
Liepāja	12	11	10	9	9
Ventspils	10	9	9	8	8
Rēzekne	22	17	16	14	13
Valmiera	12	12	11	10	10
Jēkabpils	12	11	10	9	8
Gulbene	14	12	11	10	10

There are plenty of reasons that contribute to persistence of migration from countryside. They involve hard working conditions, poor arrangement of work, a low level of social infrastructure, insufficient medical service, bad roads, lack of acceptable cultural life etc.

One of essential reasons for migration is the desire to attain particular type of education. According to the questionnaire data, the education level (judging by the total number of years of studies of a given person) of migrants from rural areas is slightly higher than of the permanent urban population, especially in the age group of 25-39 years.

The migrants from rural areas do not always adapt themselves easily to the townslife. Their living conditions are improved after 10 years on the average: starting a family and developing it is often rather problematic for them on account of various circumstances, and this is so for people with university education in particular.

Migrations from the countryside change the age-sex structure of urban population, and this frequently leads to undesirable consequences of social and demographic character as is the case in a number of towns where large

plants have been erected requiring mostly female labour (for instance - Valmiera, Liepāja, Ogre).

Heavy disproportions in the age-sex structure have developed in the countryside affecting thereby the indices of natural demographic dynamics of the population. In some rural regions the number of women aged 20-29 is much lower than the number of men of the same age: in Balvi region there are 64 women per 100 men, in Ludza region - 66, in Preili region - 67.

The territorial redistribution of population between the countryside and town has resulted in ageing of the country population. In certain regions which are traditionally being abandoned by the country dwellers the shares of people in the retirement age has increased during the period of 1970-1979 in the following way: in the Rezekne region from 29.5% to 31.4%, in Daugavpils region - from 28.1% to 29.2% (in the whole republic this age group takes 25.3% of population). The population is the oldest in the rural areas of Ludza region with the average age of 43.8, while it is the youngest in Riga region with 30 years on the average. The overall average age of the urban population is 35.4 years whereas that of the rural population is 38.2 years.

Mortality rate is 1.5 times higher in the countryside than in towns, which is to a certain extent the result of the ageing of countryside population. The intensity of birthrate in the country is 1.3 times higher than in towns, but the general level of birthrate in the country is lower than in towns.

Ageing affects also the structure of labour resources in agriculture. In the course of migration the total amount of those engaged in agriculture has decreased by 25% since 1970; among those who are engaged in it the share of young people (up to 30 years of age) is low: in collective farms this share is at less than 19%, but in Ludza region it falls down even to 9% .

The decrease of rural and aricultural population proceeded faster than the growth of labour productivity in agriculture. This has an undesirable influehce upon the volume of agricultural production, and upon the general development of the country.

Awareness of the present critical demographic situation in the republic, the countryside included, and a number of undesirable consequences caused by this situation (shortage of labour resources, losses of moral nature, decline of cultural life in the country, aggravation of the ecological situation etc.) has provided grounds for working out of a system of measures

for the development of population.

The measures chosen can be classified as follows: 1) those of local character which function only within a definite farm community; 2) republican and regional measures that embrace certain regions (and are worked out at the republican level) or the whole republic; 3) All-Union measures which involve the Latvian SSR alongside the other republics (demographic policy).

The decisive role in reducing the intensity of population outflow from rural areas is played by the measures affecting collective farms and regions.

The first attempts to keep people in the country and to draw in educated youth were made by certain collective farms already at the beginning of 1970s in order to provide local personnel and preserve proper intergeneration relations in the countryside. At the beginning of the 1980s measures were taken at the republican level to stabilize the economically weaker collective farms and to limit the number of jobs in industry; the new demographic policy was put into practice providing better results at those collective farms where additional benefits were introduced and families were granted advantages at all stages of development. This helped to improve the situation to a certain extent as regards outmigration from the countryside.

Since 1984 the migration balance of rural areas has become positive for the first time during the last 26 years: 1984 - 0.4 thousand, 1985 - 0.5 thousand, 1986 - 0.1 thousand, 1987 - 0.8 thousand and 1988 - 0.3 thousand.

This increase, however, was at the beginning due to the inflow to some parts of Riga region. In the latest years the positive net migration was attained also in Liepāja and Valmiera regions. In 1988 there were only 8 regions (out of 26) which were losing people in the migrational exchange with towns.

On February 14, 1989, the Council of Ministers of the Latvian SSR and the Republican Council of trade unions issued regulation No 46 "On the measures for stopping unjustified mechanical increase of population and for regulating migration processes in the Latvian SSR". This regulation has sized up the present situation in the republic and set the principal ways to normalize it at the given moment and in future; it envisages a system of administrative, economic, organizational and ideological measures. Basically, this regulation intends to stop the unjustified inter-republican migration, but provision is also made for the development of towns and the countryside

meaning curbing of groundless migrations within the republic without restricting thereby the freedom of movement.

The principal factor that caused the outflow of people from the countryside to towns were existing production relations. During the postwar years an extensive development of industry and other branches was carried out, as well as zealous transformation of the management system and distribution of population in the country, transformation of the traditional pattern of country life. Without purposeful and consistent changes in the social and economic life of rural areas, by administrative measures alone, it is actually impossible to reduce the intensity of the population outflow from the countryside.

The process of transforming the migration flows in favour of the countryside coincides at present with the rise of national self-awareness, and this requires immediate economic support. There is a need for an agrarian reform which would serve as the basis for the development of rural areas in the whole republic.

In the case of successful development of the countryside a new wave of migrations can be expected after 15-20 years, and this must be provided for in the prospective plans for the social and economic development of Latvia.

Favourable changes in the countryside regarding the natural and migrational demographic dynamics, which would be brought about by common efforts of rural population, different farm communities, organizations and the government, may provide a useful lesson for other regions which have experienced an analogous situation to that of Latvia during the period from 1950 to the mid-1980s.

DEPOPULATION OF THE RURAL SETTLEMENTS IN CZECHOSLOVAKIA, 1869-2040

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1. Introduction

One of the least favourable consequences of the urbanization process is an extensive depopulation of rural settlements. In Czechoslovakia the depopulation of the so-called "non-central" settlements (i.e. small villages) has intensified in the last 25 years due to the implementation of the "central settlements concept". In accordance with this concept, adopted in 1963, developmental investments have been localized preferentially in the "central settlements" (settlements with central function, i.e. district service-centres (DSCs)/x/ and local service-centres (LSCs)). As a consequence of this measure, induced by economic considerations, services and civic amenities have gradually concentrated in DSCs and LSCs.

2. Settlement categories

2.1. *Settlement Categories in Territorial Planning*

The settlement network in Czechoslovakia is divided since 1963 into several categories (see Table 1, Fig. 1). This categorization is based on:
a/ delimitation of large and small *urban agglomerations* (i.e. urban agglomerations /UAs/ and urban regions /URs/),
b/ delimitation of the *hierarchy of central settlements* (districts service-centres /DSCs/, local service-centres /LSCs/, non-central settlements with permanent importance /NCS-Ps/, and non-central settlements without permanent importance /NCS-NPs/).

/x/ List of Abbreviations - see at the end of the paper.

Table 1. Settlement Categories in Czechoslovakia, Their Average Size in Thousand Inhabitants (1980, 1985) in the CR and the SR and in the Study Area

Settlement Categories	CR			SR			Our Study Area (consisting of 7 Czech districts)	
	1980	1985	Number of cases	1980	1985	Number of cases	1980	Number of cases
Urban agglomeration (UA):	528.0	543.3	11	255.8	275.9	7	x	x
Core (C-UA)	132.5	135.7	26	108.9	121.6	9	x	x
Adjacent centre (AC-UA)	14.3	14.7	44	14.3	16.3	13	x	x
Outer zone (OZ-UA):								
Local service-centres (LSC-UA)	ca 1-4		.	ca 1-4		.	x	x
Non-central settlement (NCS-UA)	less than 1		.	less than 1		.	x	x
Urban region (UR):	58.6	60.5	23	187.7	190.0	6	45.0	5
Core (C-UR)	29.4	31.5	24	36.2	41.6	6	28.3	5
Adjacent centre (AC-UR)	13.0	13.7	12	20.8	23.5	13	10.0	1
Outer zone (OZ-UR):								
Local service-centres (LSC-UR)	ca 1-4		.	ca 1-4		.	2.4	12
Non-central settlement (NCS-UR)	less than 1		.	less than 1		.	ca 0.01-1	ca 250

Other district service-centre (O-DSC), i.e. DSC located outside UA and UR	10.7	11.2	82	14.4	16.4	36	8.7	14
Other local service-centre (O-LSC), i.e. LSC located outside UA and UR	ca 1-4	.		ca 1-4	.		2.1	67
Other non-central settlement (O-NCS), i.e. NCS located outside UA and UR:	less than 1	.		less than 1	.		ca 0.01-1	ca 2100
O-NCS with permanent importance (O-NCS-P)	ca 0.2-1	.		ca 0.2-1	.		ca 0.2-1	ca 700
O-NCS without permanent importance (O-NCS-NP)	less than 0.2	.		less than 0.2	.		less than 0.2	ca 1400

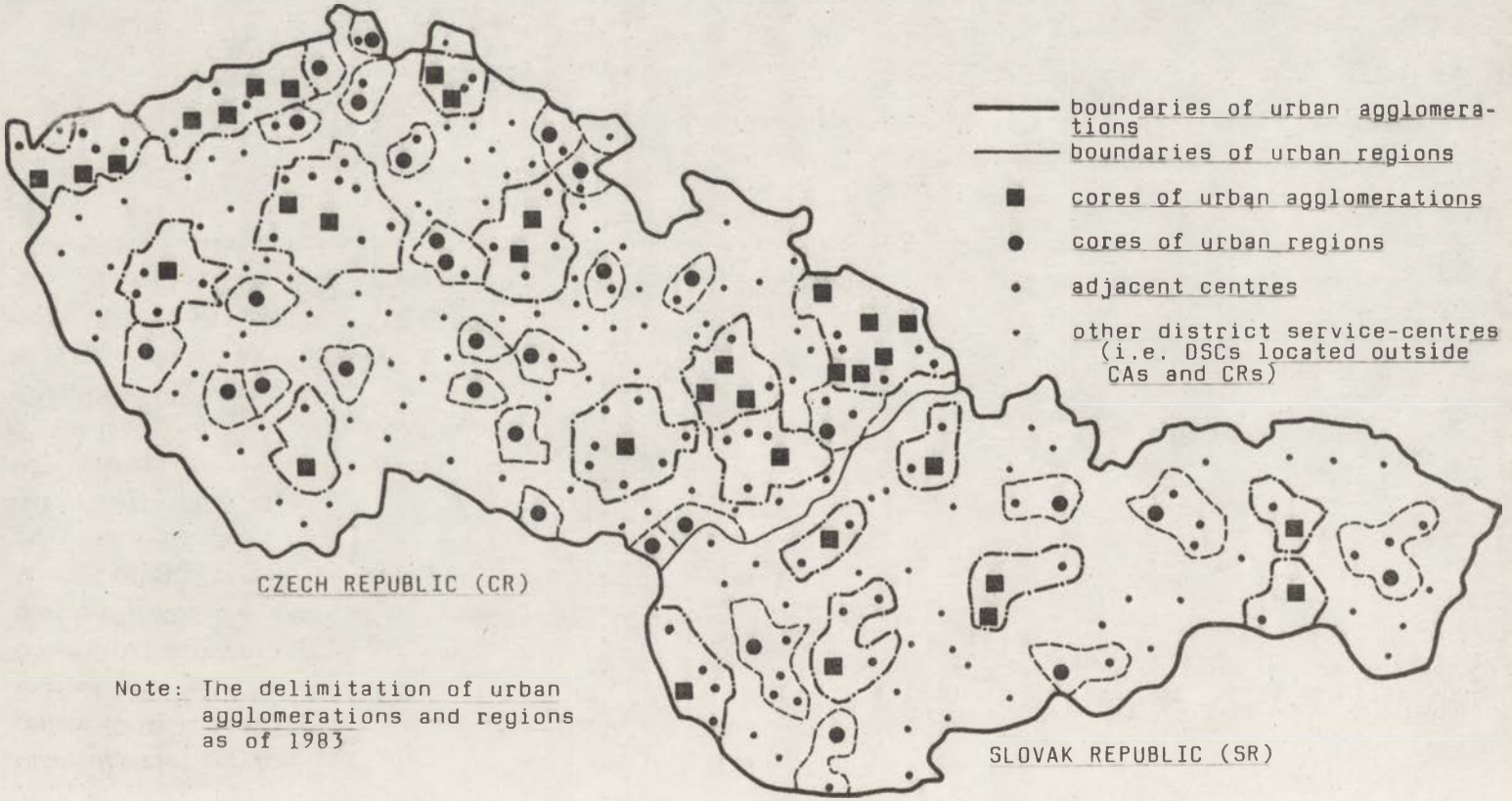

Fig.1. The settlement system in Czechoslovakia

For a review of settlement categories including their average sizes see Table 1.

2.2. *Delimitation of the Rural Settlements*

The *rural settlements* are not officially delimited in Czechoslovakia. For the present paper and in accordance with general practice we shall define rural settlements in the following manner/x/:

A/. *Non-urbanized rural settlements*, i.e. rural settlements *located outside UAs and URs:*

Aa/. *Other/xx/ local service-centres* (O-LSCs), i.e. small towns and large villages with 1 to 4 thousand inhabitants;

Ab/. *Other/xx/ non-central settlements* (O-NCSs), i.e. medium-sized and small villages with less than 1 thousand inhabitants.

B/. *Urbanized rural settlement*, i.e. relatively "urbanized" rural settlement *located within UAs and URs* constituting "outer zone of UAs and URs (OZ-UAs, URs)":

Ba/. *Local service-centres located within UAs and URs* (LSC-UAs, URs), i.e. small towns and large villages with approximately 1 to 4 thousand inhabitants, (i.e. of the same size as in the /Aa/ group);

Bb/. *Non-central settlements located within UAs and URs* (NCS-UAs, URs), i.e. medium-sized and small villages with less than 1 thousand inhabitants (i.e. of the same size as (Ab) group).

In accordance with the central settlement concept the category of "non-central settlements" (NCSs, i.e. villages with less than 1 thousand inhabitants) is further divided as follows:

- *NCSs with permanent (residential) importance* (NCS-Ps, i.e. villages with approximately 200-1000 inhabitants),
- *NCSs without permanent (residential) importance* (NCS-NPs, villages with approximately, less than 200 inhabitants).

NCSs (and especially NCS-NPs) have been developed only to a limited extent (first of all public transport to the central settlement and to work is ensured there).

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x/ In Czechoslovakia no explicit criterion of the *number of inhabitants* is used for the official categorization of settlements; we only give here the approximate values. This categorization is based, mainly, on the criterion of the existence of "central function" in a given settlement.

xx/ "Other" means "located outside UAs and URs".

Table 2. Development of the settlement structure in CR, 1869-2040

Settlement structure	Population living in UAs, URs, other DSCs and other settlements, as percentages of CR population									
	Actual data								Estimated data/x/	
	1869	1910	1930	1950	1961	1970	1980	1985	2000	2040
Urban agglomerations (UAs):										
Cores	11.0	20.6	24.7	29.6	30.6	32.3	33.5	34.1	34.2	34
Adjacent centres	4.1	5.3	5.6	5.9	6.5	7.3	7.8	7.9	8.0	8
Outer zone (urbanized rural settlements)	17.6/x	17.7/x	17.9/x	17.5/x	17.2/a	16.1/a	15.2/a	14.8/x	15.6	16-17
Subtotal	32.7	43.6	48.2	53.0	54.3	55.7	56.5	56.8	57.8	58-59
Urban regions (URs):										
Cores	4.0	4.9	5.0	5.4	5.6	6.1	6.9	7.3	8.0	8
Adjacent centres	1.2	1.2	1.2	1.2	1.2	1.4	1.5	1.6	1.7	2
Outer zone (urbanized rural settlements)	5.8/x	5.8/x	5.8/x	5.8/x	5.5/a	5.1/a	4.7/a	4.6/x	4.7	5
Subtotal	11.0	11.9	12.0	12.4	12.3	12.6	13.1	13.5	14.4	15
UAs+URs = total	43.7	55.5	60.2	65.4	66.6	68.3	69.6	70.3	72.2	73-74
Other district service-centres (DSCs outside UAs and URs)	7.5	7.4	7.1	7.2	7.3	7.8	8.5	8.8	9.6	10-11
UAs+URs+other DSCs = total	51.2	62.9	67.3	72.6	73.9	76.1	78.1	79.1	81.8	83-85

Other settlements (i.e. local service centres (LSCs) and rural settlements outside CAs and CRs) - non-urbanized rural settlement	48.8	37.1	32.7	27.4	26.1	23.9	21.9	20.9	18.2	15-17
Total population of the CR	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total population of the CR in 000s (=100%)	7,557	10,079	10,673	8,896	9,572	9,808	10,292	10,343	10,500/b	10,750/x

Note: All data refer to the stable delimitation of all urban systems under study in the entire period of 1869-2030 (delimitation of UAs and URs of 1983, delimitation of DSCs of 1985).
x = own estimates, a = data by Z.Vokoun et al. (1985), b = Prognosis by Federal Bureau of Statistics (1987).

Reprint from Ryšavý, 1987a, p.20, data for 2040 corrected.

3. Depopulation of the rural settlements in Czechoslovakia

3.1. Process of Depopulation

3.1.1. Czech Republic (CR, see Tables 2, 4, Fig. 1, 2)

The total *absolute* number of rural population had been growing till 1910, namely from 5.5 million (1869), to 6.1 million (1910). After 1910 a regular decline started through 6.0 (1930), 4.5 (1950) down to 4.4 million (1970). After 1970 this decline accelerated considerably so that in 1985 there lived altogether less than 4.2 million inhabitants. This acceleration is connected, on the one hand, with the quicker advance of urbanization in the period of 1970-1980 (the highest volume of housing construction in the last 45 years being situated mainly in the cities), and on the other hand with the less favourable age structure of rural population.

A considerable *population loss in the 1930-1950 period* was caused, above all, by war losses and by the outflow of German population at the end of World War II. The war losses amounted to 240 thousand Czechoslovak citizens, in that number 180 thousand Jews. These losses relate mostly to urban population. In connection with the end of the war some 2.4 million Germans left Czechoslovakia (out of this number 1.9 million through the forced transfer). 95% of this population loss concern the CR, 5% the SR, i.e. Slovak Republic (see Korčák, 1960, pp. 231-233). The transfer mentioned included, proportionally, both the urban and the rural population. However, subsequent Czech re-settlement streams preferred, to a certain extent, urban settlements. The transfer thus contributed to depopulation of rural settlements in the CR (decrease of the absolute number of rural inhabitants). The relative proportion of the rural population of the CR population also declined (from 56% (1930) to 51% (1950)); however, this decline fully corresponds to the general trend of diminishing proportion of the rural population in the CR during the 1869-1985 period.

The *relative* proportion of rural population in the total CR population has been falling down during the last 116 years continuously, from 72% (1869) to 40% (1985).

The absolute as well as the relative population decrease concerns above all the *non-urbanized* rural settlements (1869: 49% of CR population, 1985: 21%); the relative proportion of the urbanized rural settlements (1869: 23%, 1985: 19%) and their absolute numbers have only slightly decreased in the whole time span of 116 years. The evolution of the absolute number was, of course, influenced by war losses and by the transfer of Ger-

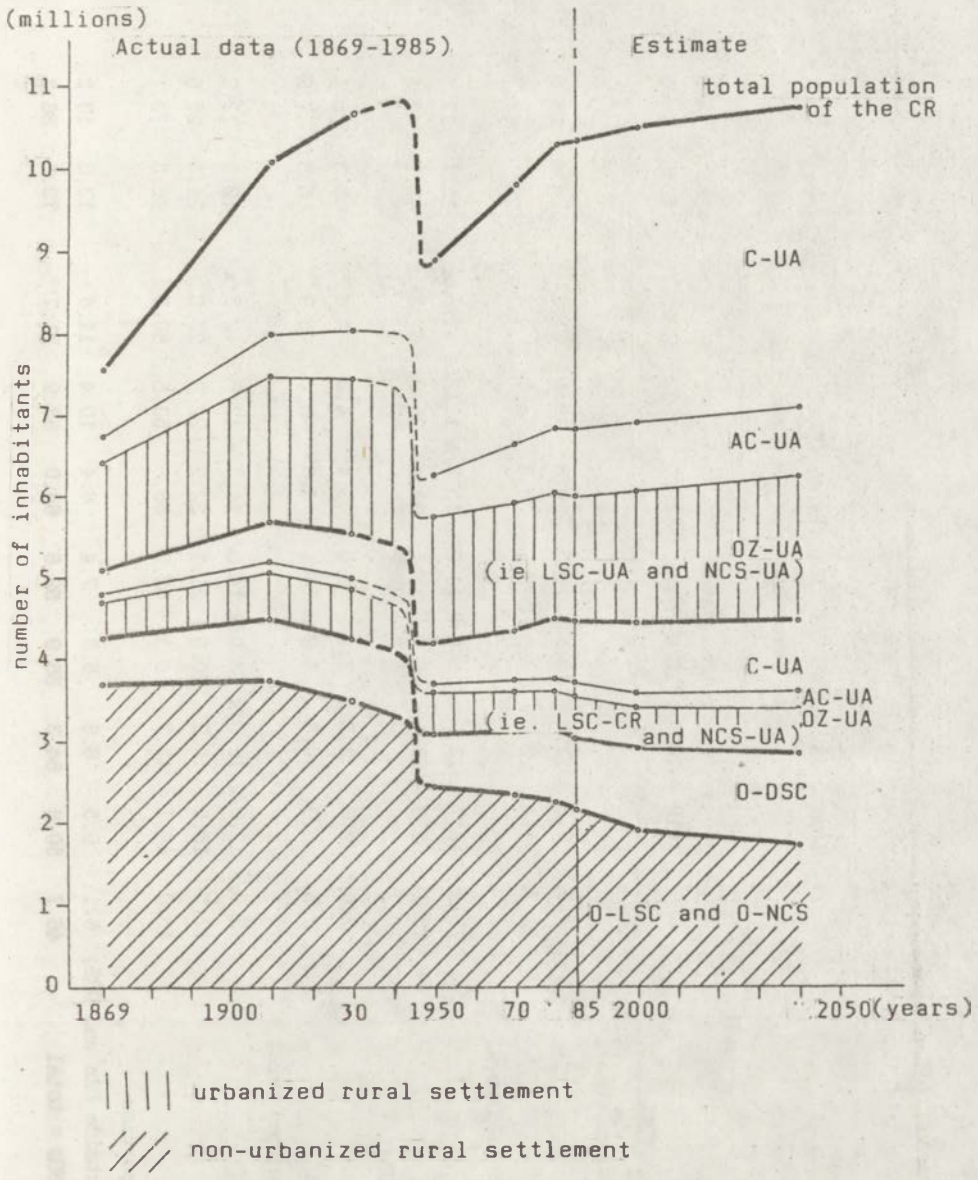

Fig.2. Population development of the settlement categories in the Czech Republic, 1869-2040

Table 3. Development of the settlement structure in SR, 1869-2040

Settlement structure	Population living in Uas, URs, other DSCs and other settlements, as percentages of CR population									
	Actual data								Estimated data	
	1869	1910	1930	1950	1961	1970	1980	1985	2000	2040
Urban agglomerations (UAs):										
Cores	7.0	9.5	12.3	13.5	14.5	16.8	19.7	21.1	24.4	28.6
Adjacent centres	2.3	2.4	2.6	3.0	3.1	3.4	4.0	4.4	5.1	6.4
Outer zone (urbanized rural settlement)	13.8/x	13.7/x	13.6/x	13.6/x	13.5/a	13.2/a	12.2/a	11.8/x	12.7	12.5
Subtotal	23.1	25.6	28.5	30.1	31.1	33.4	35.9	37.3	42.2	47.5
Urban regions (URs):										
Cores	2.0	2.6	3.2	3.1	3.0	3.4	4.4	4.8	5.3	6.1
Adjacent centres	3.5	3.9	4.0	3.9	4.1	4.6	5.4	5.9	6.5	7.2
Outer zone (urbanized rural settlement)	12.0/x	12.0/x	12.0/x	13.0/x	14.0/a	14.2/a	12.8/a	12.3/x	12.5	12.3
Subtotal	17.5	18.5	19.2	20.0	21.1	22.2	22.6	23.0	24.3	25.6
UAs+URs = total	40.6	44.1	47.7	50.1	52.2	55.6	58.5	60.3	66.5	73.1
Other district service-centres (DSCs outside UAs and URS)	6.1	6.5	6.6	6.8	7.4	8.4	10.4	11.4	13.0	13.2
UAs+URs+other DSCs = total	46.7	50.6	54.3	56.9	59.6	64.0	68.9	71.7	79.5	86.3

Other settlements (i.e. local service-centres (LSCs) and rural settlements outside UAs and URs) - non-urbanized rural settlement	53.3	49.4	45.7	43.1	40.4	36.0	31.1	28.3	20.5	13.7
Total SR population	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total SR population in 000s (= 100%)	2,482	2,917	3,324	3,442	4,174	4,537	4,991	5,177	5,590/b	6,500/x

For note see Table 2.

Reprint from Rysavy, 1987a, p.21, data for 2040 corrected.

man population, so that in the period 1930-1950 the number of inhabitants in the non-urbanized rural settlements was reduced by 1.05 million inhabitants and the number of inhabitants in the urbanized rural settlements - by 0.46 million inhabitants.

In 1985 the territory of *urbanized* rural settlements was inhabited by about 27% inhabitants of the UAs and URs, i.e. by about 48% inhabitants of all the rural settlements in CR and 19% of the total population of CR.

Similarly as in the non-urbanized rural settlements even in the urbanized ones a fast decrease of agricultural population occurred; however, in the *urbanized* rural settlements the population *did mostly not move away but rather changed their employment into non-agricultural ones* and commute to the cores and other centres of the UAs and URs. Consequently, no large decrease of the overall number of inhabitants occurred.

The change of the social and professional structure of the *urbanized* rural settlements resulted in the *stabilization* of their population on a favourable level. Owing to this the considerably better living conditions are provided in these regions (level of civic amenities, etc.) than in the rather depopulated *non-urbanized* rural settlements.

3.2.2. Slovak Republic (SR or Slovakia, see Tables 3 and 5, Fig. 1 and 3)

The basic difference between the CR and the SR in the urbanization process and in the depopulation within the rural settlement system has been caused by the fact that the start of the urbanization process in Slovakia was delayed by some 100 years. The trends of the rural settlement development are connected with this, too.

The total *absolute* number of rural inhabitants in Slovakia had been growing since 1869 (2.0 million inhabitants) till 1970 when it reached its peak at the level of nearly 2.9 million. Afterwards, a relatively fast decrease began, reaching the level of some 2.7 million inhabitants (1985).

The *relative* proportion of rural inhabitants in the total Slovak population has, however, been diminishing regularly since as early as 1869: from 79% through 71% (1930) to 70% (1950). After 1950 the decrease accelerates considerably so that in 1985 this proportion was but 52% of the total population of SR.

Same as in CR, the development of the non-urbanized and urbanized parts of the rural settlement system in Slovakia is differentiated. The absolute number of inhabitants of the *non-urbanized* rural settlements grew slowly till 1970; in recent years it has dropped off considerably. The rela-

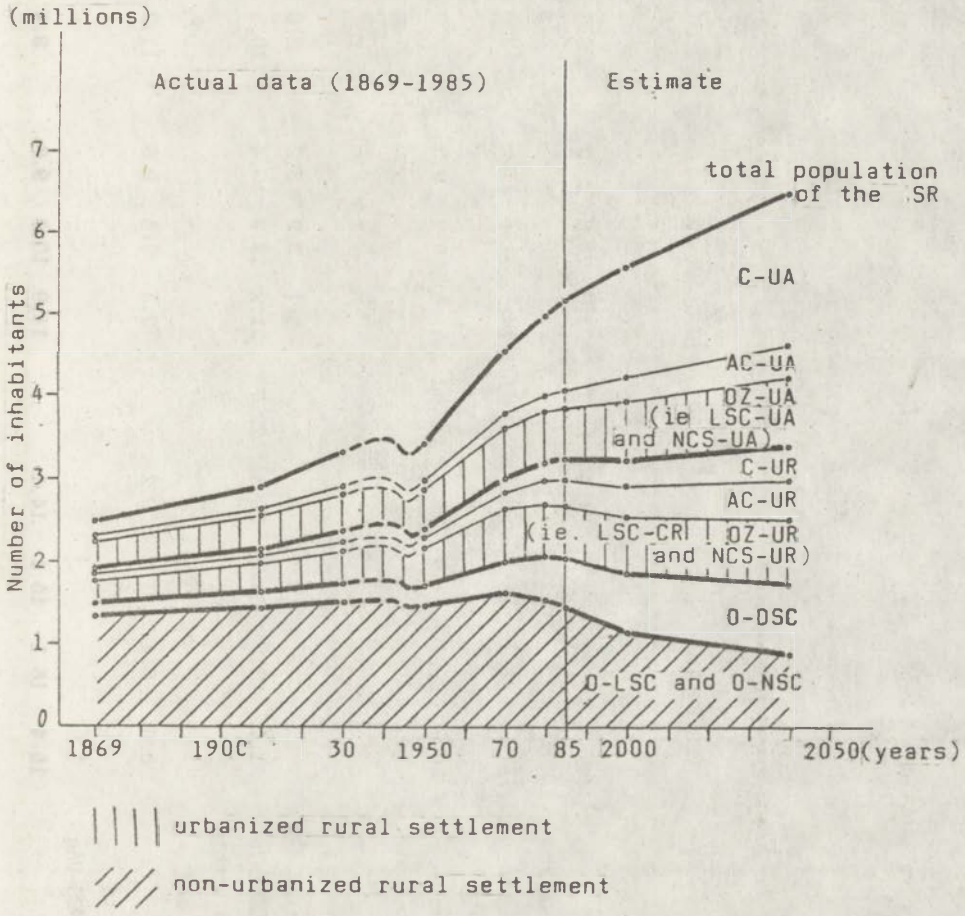

Fig.3. Population development of the settlement categories in the Slovak Republic, 1869-2040

Table 4. Development of rural settlement system in the CR, 1869-2040

Settlement structure	Population living in rural settlements as percentages of population of the CR									
	Actual data								Estimated data/x	
	1869	1910	1930	1950	1961	1970	1980	1985	2000	2040
A NON-URBANIZED RURAL SETTLEMENTS:	48.8	37.1	32.7	27.4	26.1	23.9	21.9	20.9	18.2	16.0
Aa Other local service-centres (O-LSCs)xx/	21.9	17.0	15.1	13.2	.	12.3	11.7	11.6	10.3	9.4
Ab Non-central settlements (O-NCSs)xx/:	26.9	20.1	17.6	14.2	.	11.6	10.2	9.3	7.9	6.6
O-NCSs with permanent importance (O-NCS-Ps)m/	.	.	.	.	.	6.5	6.3	6.1	5.3	4.6
O-NCSs without permanent importance (O-NCS-NPs)m/	.	.	.	.	.	5.1	3.9	3.2	2.6	2.0
B URBANIZED RURAL SETTLEMENTS:	23.4	23.5	23.7	23.3	22.7	21.2	19.9	19.4	20.3	21.5
Ba Local service-centres within UAs and URs (LSC-UAs and LSC-URs)xx/	8.0	8.4	8.6	9.2	.	9.3	9.4	9.6	11.2	12.5
Bb Non-central settlements within UAs and URs (NCS-UAs and NCS-URs)xx/	15.4	15.1	15.1	14.1	.	11.9	10.5	9.8	9.1	9.0

TOTAL POPULATION OF RURAL SETTLEMENTS (A+B)	in %	72.2	60.6	56.4	50.7	48.8	45.1	41.8	40.3	38.5	37.5
	in 000s	5,456	6,108	6,020	4,510	4,671	4,423	4,302	4,168	4,042	4,031
TOTAL POPULATION OF CR	in %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	in 000s	7,557	10,079	10,673	8,896	9,572	9,808	10,292	10,343	10,500b/	10,750x/

For note see Table 2.

x = own estimates, xx = own estimates based on the results gained by the analysis of the study area (of 7 districts), m = own estimates based on the results of Markova et al (1987), b = prognosis by Federal Bureau of Statistics (1987).

tive proportion of the non-urbanized rural settlement had been falling permanently since 1869, after 1950 this decrease accelerated dramatically (1869: 53% of population of SR, 1985: 28%). In contrast to this the absolute number of inhabitants of the *urbanized* rural settlements still continues to grow (after 1970 a deceleration of this growth took place and at present the growth has nearly ceased) and its relative proportion in the SR population is nearly stable (1869: 26%, 1985: 24%).

4. Main factors of depopulation

4.1. The consequences of depopulation

A relatively large portion of rural settlements, first of all the O-NCs-NPs, pass at present into a *critical state* (unintentionally prepared in the long run). Their social and economic vitality is broken (disappearance of basic civic amenities, reduction of public transport, poor diversity of job opportunities and, locally, lack of labour). Consequently, the inhabitants of this segment of the rural settlement system (about 10-20% of the rural population) are being considerably and permanently discriminated against in their access to the above mentioned civic amenities.

A more favourable situation is observed in the *LSCs*. Their population numbers are more or less stabilized owing to the promotion of the concept of central settlements (see Tables 2 and 4).

4.2. Main Factors

The Czech settlement system has already entered as a whole the stabilization phase in the transition process of the settlement network. However, this does not concren the O-NCSs (outside UAs and URs) where scarcely any symptoms of population stabilization are observed.

The population increase of large and medium-sized cities (i.e. UAc-UAs and UAc-URs and O-DSCs) is due first of all to inmigration of rural population because of the virtual *zero population growth* in the CR. Another demographic source of urbanization is the inmigration stream from Slovakia.

One of the sources of the critical state of small O-NCSs is also the pure mathematical fact that *small settlements are much more sensitive* to relatively small changes of demographic development.

We observe that most rural settlements in the CR whose size falls down under a certain limit (roughly under 400-500 inhabitants) thus enter the almost *self-destructive spiral trend of demographic regression* in which decade after decade the number of their inhabitants decreases faster and faster

(Muller, 1987). This concerns even originally rather large and self-sufficient settlements which entered this trend of spiralling population regression and at present we do not know when, at what level and whether at all stopping of this regression trend will be successful.

We suppose, too, that stabilization of rural population was negatively influenced by the spontaneous disappearing and official dissolving of many *local associations* during the last 50 years. This seems correlated with the fact that some villages with well established and functioning local interest groups have usually more stabilized population (nevertheless, it occurs mainly in large villages with at least 1000 inhabitants).

In the villages which serve *recreational purposes* the housing stock is better conserved than in other villages. Small villages (0-NCSs-NPs) in territories unsuitable for recreational use are therefore the most endangered by total decay.

4.3. Spatial Differentiation of the Rural Settlement

In the settlement structure of the CR a macro- and microregional differentiation (or polarization) took place giving rise to more or less developed zones.

On the *macroregional* level the so-called *"inner-peripheral zones"* had developed (Musil, 1988). They are extended mainly along the administrative boundaries of the regions (Fig. 4) and are located almost exclusively outside the UAs and URs.

In the inner peripheral zones of the CR (according to Musil, 1988) there lived 10.5% of the CR population in 1961. By 1980 this proportion fell down to 8.2% and this corresponds well to the proportion of rural population living outside the UAs and URs (22% of the CR population in 1980). Comparison of the two proportions shows that some 40% of the population of the non-urbanized rural settlements (located outside the UAs and URs) live in the peripheral zones of the CR.

These zones are socially less developed (fast population decrease, high percentage of old people, decrease of the economically active population, small extent of housing construction, high percentage of unoccupied dwellings, low percentage of people with higher education, high percentage of jobs in agriculture, and worse equipment of households). The settlements in these zones also exhibit a low level of civic amenities.

On the *microregional* level the influence of the geographical position manifests itself in the differentiation of more and less developing zones

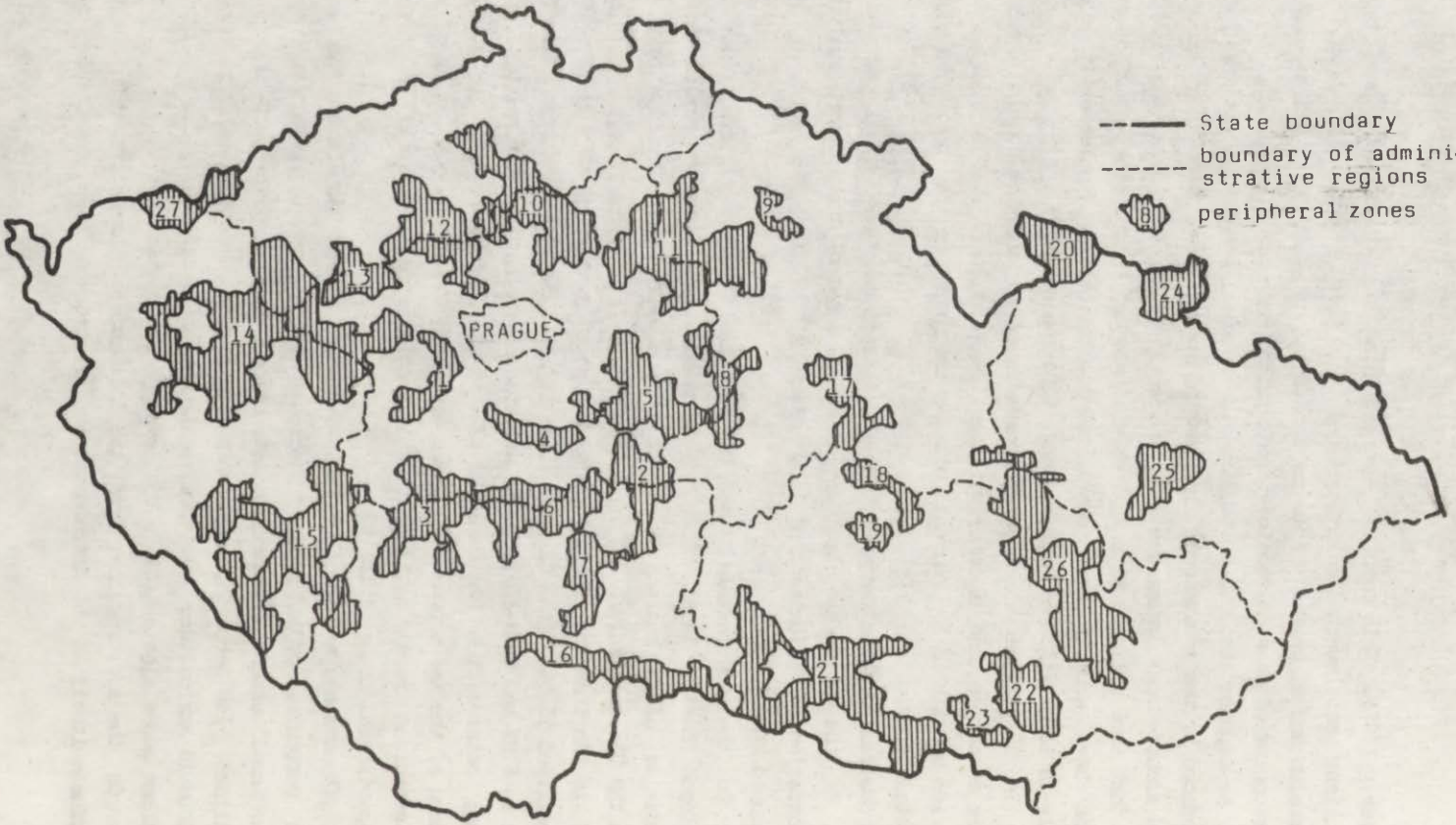

Fig.4. Peripheral zones of the CR

and sectors in the hinterland of many central settlements (i.e. roughly within the circle of the 5-15 km diameter around LSCs and of 15-40 km diameter around DSCs).

4.4. Conclusion

The main factors of the unfavourable development of rural settlements are their *size* (less than 500 and especially less than 200 inhabitants) and their *location*. The influence of location manifests itself both at the macroregional level (peripheral zones) and at the microregional one.

5. Alternative future developments

With regard to the critical and progressive depopulation involving approximately a half of NCSs (O-NCSs mainly) and a small part of LCSs, too, it is a high time to decide on the further development of rural settlement network. We consider the following main options:

a/ *Continuation of the Central Settlement Concept*

This would mean a concentration of rural population and their activities into LCSs and partly into NCS-Ps and liquidation of most depopulated NCS-NPs. The liquidation would progress step by step, with all social considerations, but in a consistent manner. Nevertheless, it would probably result in the irreversible disappearance of a part of the Czech settlement network and devastation of the rural landscape.

b/ *No Intervention*

No intervention of any sort will be made concerning the development of NCSs. They would be left to their destiny, waiting for more favourable times for them (e.g. possible more extensive return of workplaces to the countryside in connection with the expansion of computer techniques making it possible to work at home).

c/ *Compromise*

About 60% of all NCS-NPs can be used for recreational purposes. Out of the remaining 40% those exhibiting some developmental possibilities (with prosperous specialized workshops, natural or historical monuments, etc.) will be revitalized. This means that some NCS-NPs (some 10-15% of all NCS-NPs) will disappear with the course of time. In so doing, the inhabitants of these latter NCS-NPs should be treated with utmost consideration. Their right to end their lives in their villages must be respected. The demolition would, therefore, take place only after all inhabitants die out or outmigrate on their own will.

In no circumstances the decision on the future of rural settlements should be made on the basis of mere statistical data; deep knowledge of the *reality in situ* is essential here.

In all the other maintained rural settlements, i.e. about 85-90% of NCS-NPs and all NCS-Ps and LSCs, *revitalization programmes* should be implemented. They should aim both at decelerating the decrease or even stabilizing the population and, above all, at improving and enhancing their productive and service function. We consider both these functions in rural settlements to be the key factor which will probably be decisive for the results of revitalization programmes.

Utilization of the experience of successfully functioning highly modern and effective agricultural cooperatives and estates is much promising for these programmes. Here experience should also be used of already numerous prosperous amenities (e.g. restaurants, car repair services, special workshops, etc.) which begin to reappear in rural settlements.

At the same time, revitalization of the rural settlement system can be promoted by supporting the so-called "indirect urbanization of the country", a process which makes it possible for the rural population to share at least partially the advantages of the urban way of life.

Should the proposed revitalization programmes be successfully implemented, then, in our opinion, the proportions of population in the non-urbanized rural settlements (presented in Tables 2, 3, 4, 5) will be reached roughly in 2040; meaning some 15-17% of the CR population living in non-urbanized rural settlements, out of this number about 8-10% in O-LCSs, 4-5% in O-NCS-Ps and about 3-2% in O-NCS-NPs. If these programmes are not successfully implemented those proportions will be considerably lower, at roughly half of the numbers given.

However, those proportions (in Tables 2 and 3) are based on the stable, i.e. the present-day, total *area of urban and rural settlements*. It may be expected that still another part of rural settlement area will be urbanized as a result of the continuing urbanization process. This territorial change could reduce the population of non-urbanized rural settlements by about 15-25% .

We do *not* expect that by 2040 a massive *return of urban population from the urban to rural settlements* located *outside* UAs, URs and other DSCs would take place. The main source of the attractiveness of the countryside for permanent residence will, of course, be a *healthier environment* (in the

Table 5. Development of the rural settlement system in the SR, 1869-2040

Settlement atructure	Population living in rural settlements as percentages of population of the SR									
	Actual data								Estimated data/x	
	1869	1910	1930	1950	1961	1970	1980	1985	2000	2040
A NON URBANIZED RURAL SETTLEMENTS (0-LSCs and 0-NCSs)	53.3	49.4	45.7	43.1	40.4	36.0	31.1	28.3	20.5	13.7
B URBANIZED RURAL SETTLEMENTS (LSC-UAs, LSC-URs, NCS-UAs and NCS-URs)	25.8	25.7	25.6	26.6	27.5	27.4	25.0	24.1	25.2	24.8
TOTAL POPULATION OF RURAL SETTLEMENTS (A+B) in %	79.1	75.1	71.3	69.7	67.9	63.4	56.1	52.4	45.7	38.5
in 000s	1,963	2,191	2,370	2,399	2,834	2,877	2,800	2,713	2,555	2,502
TOTAL POPULATION OF SR in %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
in 000s	2,482	2,917	3,324	3,442	4,174	4,537	4,991	5,177	5,590/b	6,500/x

For note see Table 2.

b = Prognosis by Federal Bureau of Statistics (1987), x = own estimates.

recent period, however, seriously damaged even in the country, by local sources, i.e. by agricultural production), its *recreational quality* and *proximity to the city*. These factors exist together only in a very limited number of rural settlements located outside UAs, URs and other DSCs.

Another situation with this respect is encountered in rural settlements located within the UAs, URs and other DSCs/x/. We expect that continuous outmigration of urban population to the rural settlements will be *directed mostly to these regions.*

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x/. Due to the administrative "integration" of settlements the administrative area of one DCSs and/or LSCs encompasses frequently rather large number of NSCs (usually from 1 to 8, exceptionally up to 57 small villages).

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List of Abbreviations

AC-UAs	adjacent centres of urban agglomerations
AC-URs	adjacent centres of urban regions
UAs	urban agglomerations
C-UAs	cores of urban agglomerations
C-URs	cores of urban regions
URs	urban regions
DSCs	district service-centres
LSCs	local service-centres
LSC-UAs	local service-centres within urban agglomerations
LSC-URs	local service-centres within urban regions
NCSs	non-central settlements
NCS-UAs	non-central settlements within urban agglomerations
NCS-URs	non-central settlements within urban regions
NCS-NPs	non-central settlements without permanent (residential) importance
NCS-Ps	non-central settlements with permanent (residential) importance

O-DSCs/x/	other districts service-centres, i.e. DSCs located outside UAs and URs
O-LSCs	other local service-centres, i.e. LSCs located outside UAs and URs
O-NCSs	other non-central settlements, i.e. NCSs located outside UAs and URs
O-NCS-NPs	other non-central settlements without permanent importance, i.e. NCS-NPs located outside UAs and URs
O-NCS-Ps	other non-central settlements with permanent importance, i.e. NCS-Ps located outside UAs and URs
OZ-UAs	outer zone of urban agglomerations
OZ-URs	outer zone of urban regions
.....	
CR	Czech Republic (includes Bohemia, Moravia and Czech Silesia)
SR	Slovak Republic (i.e. Slovakia)

/x/. DSCs located *within* UAs and/or URs are called "adjacent centres" and "cores" (i.e. AC-UAs, AC-URs, C-UAs, C-URs).

DEPOPULATION OF RURAL AREAS IN THE CZECH REPUBLIC

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The paper will deal with the population of rural areas in one of two republics constituting Czechoslovak federation. The development of rural areas represents a long-term process connected with a historical course of industrialization and urbanization. Till the year 1918, the changes of rural areas in Slovakia had been based on different principles than those in Czech Lands (Bohemia, Moravia and a small part of Silesia, Fig. 1). However, a common development of all parts of Czechoslovakia necessitated identical or similar development of some phenomena influencing also the population development of rural areas. Up to the present, however, there have been greater differences between town and country milieus in the Slovak Republic than in the Czech Republic.

Recapitulating the population development we must mention the essential change taking place in the Czech borderland as a consequence of the Second World War, namely the transfer of German population and a successive re-settlement by the resident Czechs and Slovaks, and by the repatriates. The borderland was populated mostly with younger migrants, from both urban and rural areas. In the borderland, indeed, the migrants found towns to be more attractive. In the core of Czech Lands, the borderland re-settlement caused a weakening of population potential, especially in the districts neighbouring directly with the borderland. To a lesser extent the post-war changes affected East Moravia, which has long-term higher natural increase than other territories of Czech Lands.

A special attention will be paid to the period between the census of population in 1961 and that in 1980. The years 1961-1980 were not characterized by the thus essential changes in the population distribution as the

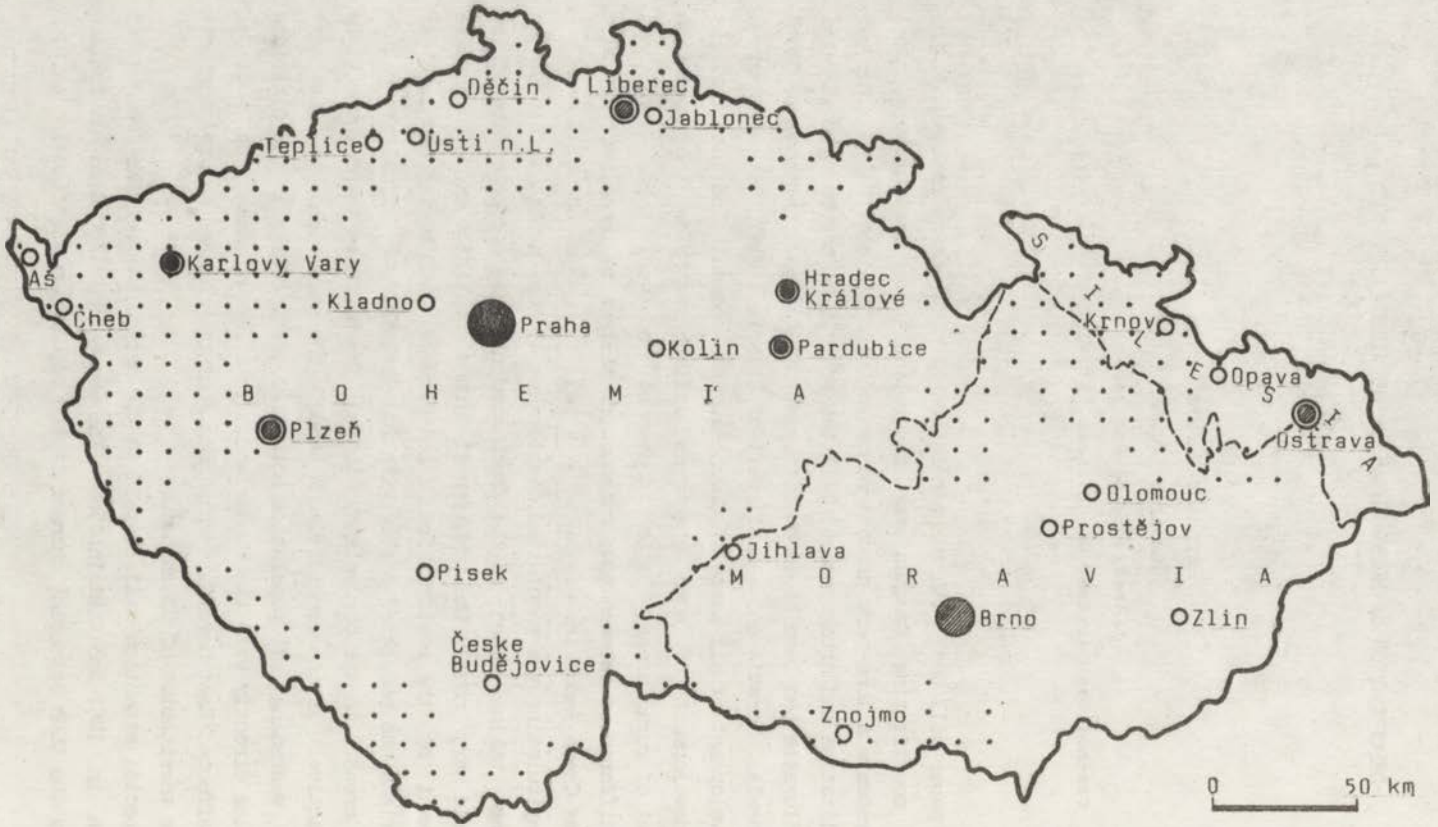

Fig. 1. Former Czech lands

Dots illustrate the distribution of German population until 1945

post-war period and the fifties. The period studied, however, consists of two rather different decades. In the sixties, the Czech Republic reached the lowest demographic reproduction level of the whole post-war period. The seventies, on the other hand, were characterized by a wave of population reproduction, caused by a generation shift of the post-war natality wave, and also by the pro-natalistic measures. The eighties in the Czech Republic represent, however, a comeback to the general stagnation of the number of population. It must be pointed out that already in the beginning of this century there was a transition to the stationary type of population dynamics in Czech Lands, and recently even to a regress, in which, given the intensity of mortality, the birthrates could not fully replenish population in reproduction age.

Up to 1980, of the total population of the Czech Republic 66.0% lived in urban (town) communities, 5.5% in the so-called agglomerated communities (i.e. communities closely neighbouring with some towns - the aim of this category is to eliminate partially, in statistic, the consequences of uneven integration of communities around towns) and 28.5% in country communities. At the same time, 4 cities with more than 100,000 inhabitants accounted for just 19.9% of the population of the Czech Republic (30.1% of the urban population of the Czech Republic).

It must be stated that the Czech Republic consists of 8 regions (one of them being Prague) with 75 districts. In fact besides Prague and 6 other regional centres, other 64 district towns exist. In the planning practice, the categories of centres of local importance (their total number in Czech Republic being 850) and those of district ones (178 in the Czech Republic, mostly district towns until 1960) started to be used, too. It is the very centres of local importance (a part of them having an urban character) that play an important role in the rural milieu.

Thanks to administrative changes, which were on a local scale intensive primarily during the 1970s, the number of communities in the Czech Republic decreased from 8726 to 4778 during the period of 1961-1980. The greatest decrease could be seen in the South-Bohemian region (down to less than one third of the state from 1961), the least integration took place in the South-Moravian and East-Bohemian regions. Since the integration of communities as administrative units in Czechoslovakia has been a long-term process, it is even difficult to make any reconstruction of delimiting rural areas for individual past censuses. No historical studies for the "urban-

rural" cross-section exist. And we must mention also different definitions of town (or urban community) for last censuses, complicating the study even more.

During the period of 1961-1980, the population number (if we take into account the inhabitants of the agglomerated communities and of the country ones) decreased by 11.2%, while that of 345 Czech towns increased by 20.6% during the same period with the total increase 7.5% in the Czech Republic in the mentioned years. The greatest decrease of rural population was observed in the North-Bohemian region (-16.1%). The decrease of rural population numbers lower than the nation-wide average could be seen only in the North-Moravian (-3.8%) and South-Moravian (-7.9%) regions. This results from a more favourable age structure of rural population of both regions. The greatest decrease of rural population was recorded in the districts of Chomutov (by 38.2%) and Teplice (by 27.8%), the increases characterized just rural communities of the districts of Opava (3.9%), Český Krumlov, Ústi and Labem and Brno-country.

A considerable decrease was characteristic of the size group of communities with less than 1 thousand inhabitants. However, the communities with population of 1-2 thousand were stagnating in Moravia, those in Bohemia had greater decrease than the national average. In almost all the regions there was a stagnation in the population numbers also in rural communities of more than 2 thousands inhabitants. A group of centres of local importance had a very low growth (3.3%), but the centres were, at the same time, considerably differentiated: in the centres being towns there was a slight increase (+15.4%), while in the other centres (i.e. local centres - country communities) a decrease (-4.4%) (Table 1).

A greater attention was paid to the communities having lost 30% and more of their residents during the years 1961-1980. These communities could be found in all the regions of Czechoslovakia (Fig. 2). Their number totalled 542 and was greatest in the East-Bohemian and South-Moravian regions (118 and 116), characterized by a lower level of community integration. These communities included also 14 centres of local importance, a half of them situated, however, in the Mid-Bohemian region. In the South-Moravian and North-Moravian regions, no centre of local importance of the mentioned kind could be found. Altogether 180 of these communities had less than 200 inhabitants, but simultaneously, 109 of them had 50 at least inhabitants.

Neither districts with more important depopulation of rural areas, nor

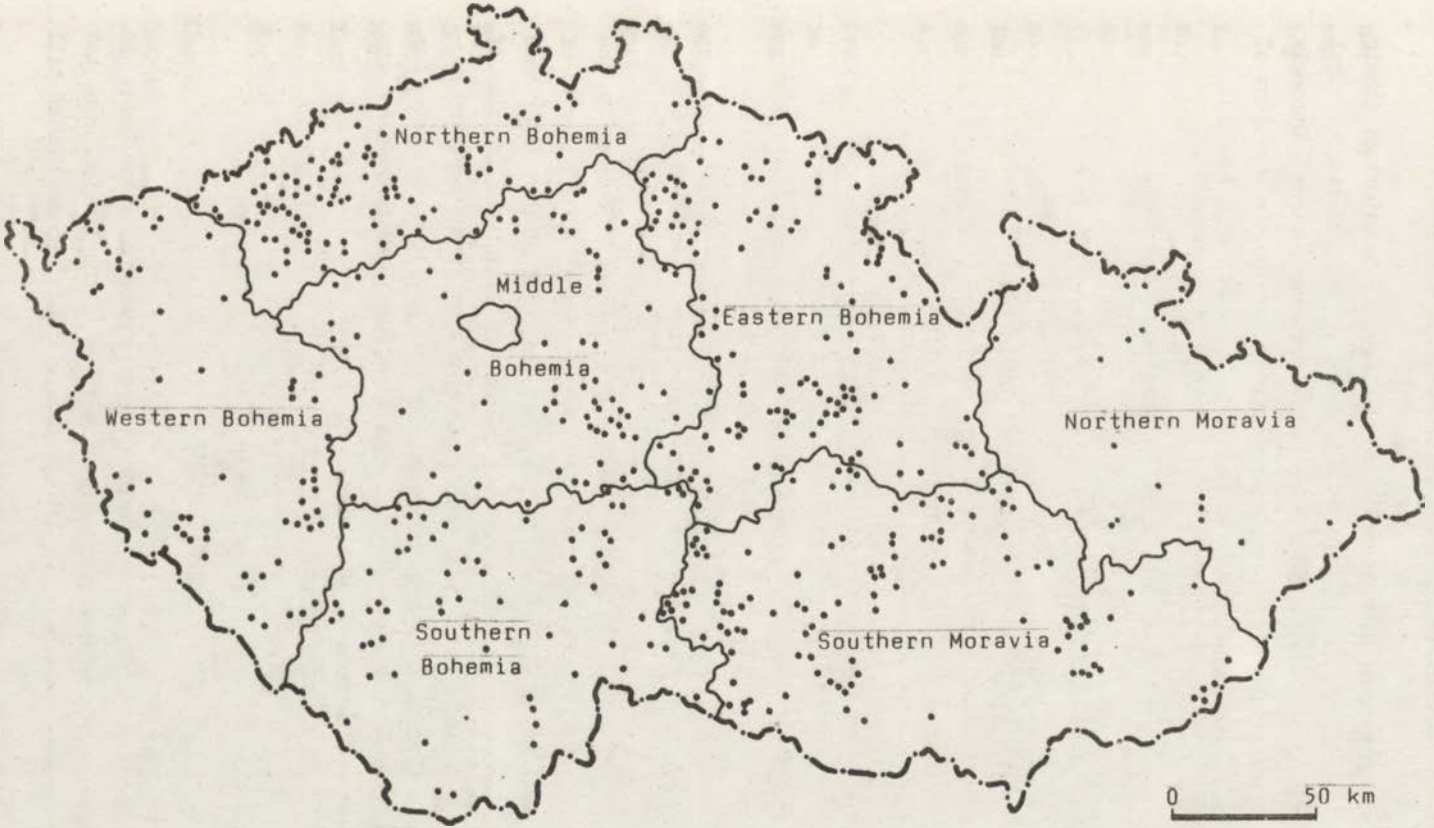

Fig. 2. Communities with considerable depopulation, 1961-1980

individual communities of this character form coherent territories, their location is mosaic. It can be seen that in Bohemia, depopulation of rural areas makes itself felt more clearly than in the Moravian regions. Strongly depopulating communities are, as a rule, located outside the territory of the main Czech agglomerations (with the exception of North-West Bohemia).

Table 1. Decrease/increase of population in nonurban communities, 1961-1980 in %

Size groups	Czech Republic	Former Bohemia	Former Moravia
<199	-28.2	-31.6	-23.0
200-499	-20.2	-21.7	-17.2
500-999	-15.8	-17.9	-11.2
1000-1999	-10.5	-13.5	- 5.2
2000-4999	- 0.1	- 1.6	+ 1.3
5000-9999	+ 8.9	+33.3 /x/	+ 4.2

/x/ This category is represented only by 3 communities of Northern Bohemia

In Czechoslovakia, the shares of particular sectors of economy in the employment structure has been changing in a way typical for a majority of industrially developed countries. The long-term decrease of the importance of primary sector was at first counter-balanced by an intense dynamism of industrial and building activities, and later by a boom of the tertiary sector, though in this regard the standard of some most developed countries has not yet been reached in Czechoslovakia. The above-mentioned tendencies can be proved by the data from three censuses:

	1961	1970	1980
primary	22.6%	16.3%	13.1%
secondary	49.9%	48.1%	48.8%
tertiary	27.5%	35.6%	38.1%

The transition to large-scale agricultural production, which began, in Czechoslovakia, with founding of co-operative farms in the fifties, resulted in a fast decrease of agricultural labour numbers. This process lasted till

the half of the seventies. At present the yearly decrease of population employed in agriculture is 2 thousand perons, this trend roughly corresponding to the average increase of productivity in this time.

In 1980, country communities of Czech Republic (with the exception of towns and the so-called agglomerated communities) were settled by 404.8 thousand agricultural workers, but at the same time, by 660.8 thousand employees in industry and construction. On the other hand, only 68.8% of agricultural workers lived in country communities, almost one third of them lived in towns and agglomerated communities. This phenomenon is above all connected with a rather broad administrative delimitation of some towns in the Czech Republic, it also signals, however, growing job commuting to agriculture (in 1980, the workers in agriculture and forestry represented already 11.4% of all the commuters).

The fall in the number of agricultural workers resulted in the prevalence of people employed in industry and building over those employed in agriculture and forestry among the country inhabitants according to regions with the exception of the South-Bohemian region.

Interesting discoveries are given by the conversions of workers in agriculture per 100 hectares of so-called reduced agricultural land (meadows and pastures are calculated there with just a half surface considering less work devoted to them).

Regions	Numbers of workers per 100 hectares of the reduced agricultural land (as of 1 February 1980)
Mid-Bohemian and Prague	13.57
South-Bohemian	12.50
West-Bohemian	11.73
North-Bohemian	12.95
East-Bohemian	14.74
South-Moravian	16.20
North-Moravian	15.15
Czech Republic	14.11
Slovak Republic	(16.56)
Czechoslovakia	(14.95)

It is obvious that the lowest number of workers has been recorded in

the West-Bohemian region and the characteristics of Moravian regions are with that respect similar to those of Slovakia.

The state farms in North-West Bohemia are short of manpower due to the attractiveness of industrial plants and lignite mines with high average wages. One of the results is a lower agricultural production in these territories, not corresponding to the natural conditions.

On a nation-wide scale, however, agriculture does not rank among the branches with lower workers' incomes. According to statistical data monthly incomes, ecpecially of co-operative farmers reach on the average a quite high level. Thus, for example in the Czech Republic, until 1980 the average monthly wage totalled 2650 CS crowns in the socialized sector, excluding the Standard Farming Cooperatives (SFC), and simultaneously that of the SFC workers, 2728 CS crowns. In 1985, an average monthly wage in the socialized sector without the SFC was 2901 CS crowns, and simultaneously that of the SFC was 3147 CS crowns.

The age structure of agricultural workers has been more favourable in the eighties than it was until quite recently. The post-productive age category decreased but still a lack of the youngest age group, which could guarantee the simple reproduction of labour in agriculture, has been significant. In the central part this situation is worse than in the borderland.

It can be said about the rural areas of Czech Lands that they have already got rid of their former agricultural character, among others also thanks to the fact that already in the past (and that makes a great difference compared with Slovakia) many industrial plants were located also in smaller towns and some of country communities.

Czechoslovakia includes more than 4.8 thousand communities with industrial plants, but just 3066 of them had more than 50 workers. These data referred to 1980 when Czechoslovakia included 7504 communities.

Considerable dispersion among a large number of small industrial centres is therefore typical of the Czechoslovak industry. Until the year 1982 only 82% of all industrial workers worked in towns. Even some non-urban communities (29 in Czechoslovakia, but for the greatest part in the very Czech Republic) are larger industrial centres with 2 or more thousand industrial workers (calculated according to the workplace). As a rule, however, these centres are agglomerated communities located in the proximity of larger towns.

The transfer of labour from agriculture to industry has not always been connected with migrations. A number of workers in industry continue living in the country and commute to work. This phenomenon occurred due to sufficiently dense network of centres providing non-agricultural employment opportunities and to subsidized commuting by buses and trains. The existence of rural areas with prevailing non-agricultural population retains, in comparison with a high concentration of population in towns, some ecological and social advantages (living in family houses, partial food self-sufficiency, living out of the reach of the polluted industrial zones, avoidance of risks resulting from the anonymous social milieu of towns, etc.).

In this connection it can be pointed out that there exist no marked differences in car numbers per capita between the towns and the neighbouring country communities in the Czech Republic. These differences are of rather regional character.

Table 2. Structure of professionally active population according to branches of economy (Czech Republic, 1980 in %)

Occupation categories	Country communities	Agglomerated communities	Towns
Farmers - members of SFC	19.1	5.3	1.8
Private farmers	0.1	0.0	0.0
Other farmers	8.3	3.6	2.6
Forestry	2.2	1.0	0.6
Industry	37.6	51.0	41.6
Construction	7.3	8.2	9.1
Transport and communication	5.3	6.2	6.8
Business, commerce	7.3	8.6	10.7
Education, culture, health care	6.3	7.5	12.2
Other activities	6.4	8.6	14.6
Totals	99.9	100.0	100.0

The situation of country communities in the Czech Republic does not facilitate the determination of the main factor responsible for their depopulation. Thus, it is not directly to changes in agricultural production that depopulation should be attributed, but rather to deterioration of the age structure of rural population, compounded by previous and continuing outmigration, which contributes to the widening gap between mortality and natality, in conditions of persisting migrational attractiveness of towns. The age structure, however, does not constitute an indisputable factor neither, because the borderland communities subject to depopulation usually have relatively young residents.

Probably, it would be necessary to verify the hypothesis that worse traffic accessibility makes a community less attractive and forces its population to leave for other places. However, with a considerable dense network of centres in the Czech Republic just a small number of communities are too remote and with bad or even missing traffic connections with a town. It must be admitted, however, that the depopulating communities are very often those with insufficient traffic connection with town. But in a contrasted location, in the immediate contact with a town, in addition to some individual dynamic agglomerated communities those of all other types, according to population development trend, including the highly depopulated ones, could be found. The proximity of town and possibility of contacting it have therefore quite a contradictory effect on the neighbouring communities. Here an important role may be played by the existence or non-existence, in a community, of employment opportunities dependent on the very proximity of town.

However, it is not only in rural areas that the population numbers decrease. For the period of 1961-1980 the analysis of 40 agglomerations in the Czech Republic was done (with the inner composition of these agglomerations being respected according to the statistical delimitation of elementary settlements). Its aim consisted in tracking of the tendency of development of population numbers in the very core (the core settlement unit or units in agglomeration), and in comparison with this, that of population numbers in the other settlements of the agglomeration. In doing that it was possible to separate also individual parts of each town. In this connection only the proper coherent built-up central part of a town was considered the core. The results for 40 largest agglomerations of the Czech Republic are

presented in Fig. 3. The axis x represents the population trend of a core part of the agglomeration, the axis y, the trends of the other settlements for each agglomeration. A part of Czech agglomerations grows in the situation in which the immediate surroundings of the agglomeration cores lose their population, in a part of them, the growth of the agglomeration core is connected with that in other agglomeration parts. This dichotomy, however, is not related to the size of agglomeration. The agglomeration core usually develops much quicker than the neighbouring settlements. Larger agglomerations (the serial numbers of agglomerations in the graph note their size ranks: the Prague agglomeration has number 1) have, of course, not , in their wholes, a high relative dynamism of population development. For the period of 1961-1980, the only exception among big cities is that of Ostrava in which (and also in its immediate surroundings) as late as in the sixties the features of the previous stage of the post-war industrial development could be seen. From the viewpoint mentioned, a great number of agglomerations show specific features (especially down to the 20th place and then from the 34th place on according to the given sequence).

In spite of the mentioned reservations about the concept of an explicit dependence of the depopulation of rural areas in the Czech Republic on their agricultural orientation, this rule can apparently be applied roughly also more generally to the Czech Republic. Although a profound quantitative analysis has not been done until the present, it is clear in advance that depopulation of a community is closely connected with the following features:

- high proportion of flats in family houses,
- high proportion of population in post-productive age,
- high proportion of population with primary education,
- small number of households with telephones,
- high proportion of economically active persons working in agriculture (or in agriculture and forestry),
- high average age,
- low proportion of economically active persons working in industry and construction.

The other features to be mentioned are:

- low proportion of population in productive age,
- low proportion of population in pre-productive age,
- low number of households with colour TV sets,

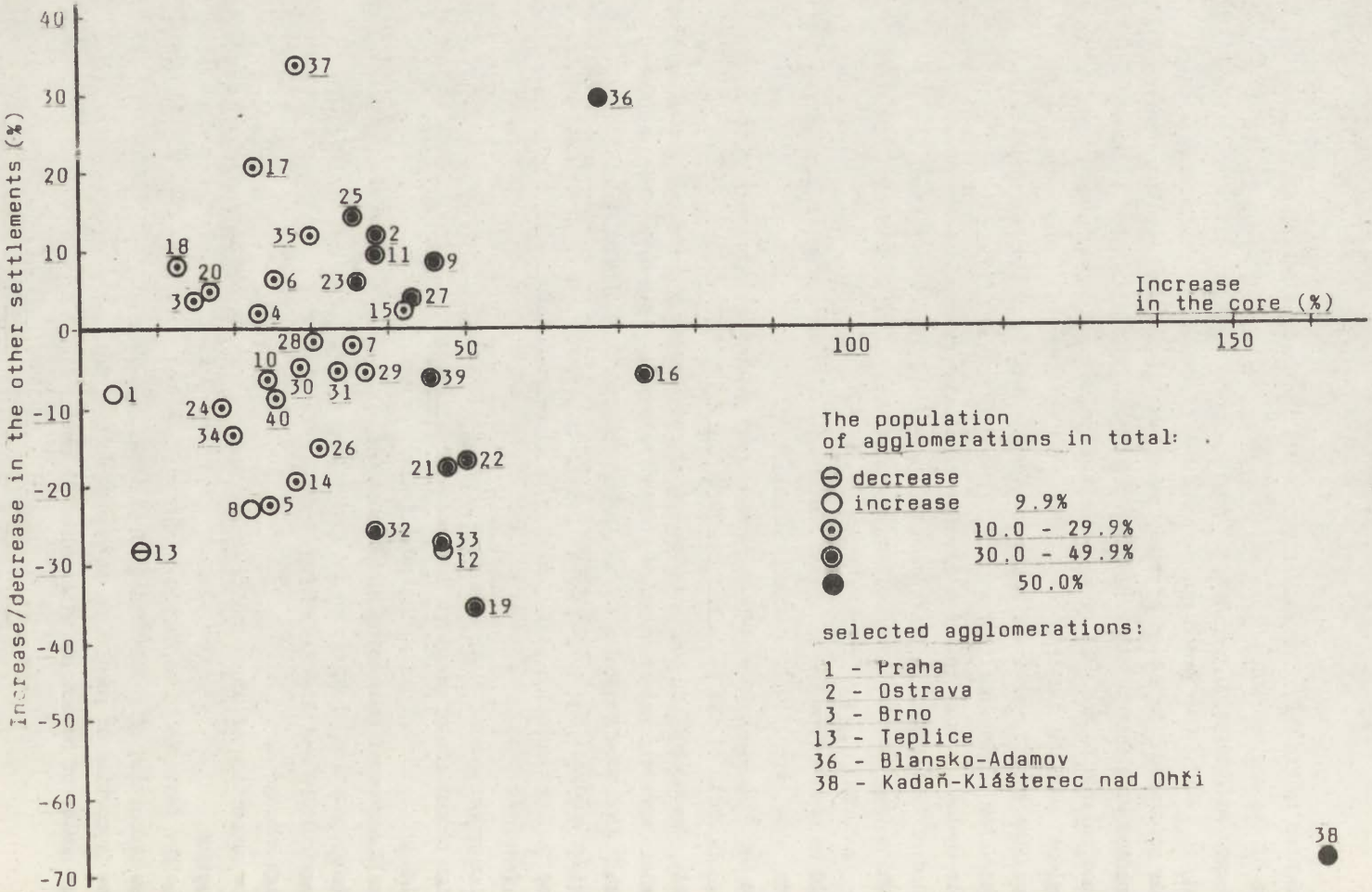

Fig.3. 40 Czech agglomerations (1961-1980)

- low number of households with automatic washing machines.

The majority of these features represent, of course, rather the effects of the depopulation process than its causes, which makes the interpretation of the present state and the prognosis more difficult. It is possible that important factors are hidden behind (e.g.: peripheral location and worse traffic connections, the quality of working and housing environments). For purposes of verification, not only motivations of migrants, but also other factors should be taken into account.

During the post-war decades the intensity of migrations decreased most markedly, both between the two republics and among the regions within the republics. But migration record, has been influenced, as well, by a continued integration of elementary administrative units - communities, because the change of residence within a community has not been recorded statistically.

An increasing part of the total volume of migration takes place on a smaller spatial scale, with prevailing orientation of migration streams along the line: the hinterland (rural areas) - the centre (town). Naturally, also the volume of migrations among centres has been growing. There are 345 towns in the Czech Republic (according to the definition of statistical offices valid until 1980), but on the other hand, a great number of potential migration aims does not allow the migration growth of towns to be important for all of them. There are also smaller towns with stagnating or decreasing population.

The differentiation of the migration mobility is interesting in the territorial aspect. The most intensive gross migration can be seen in the districts of the West-Bohemian region, while in the direction of the inland and eastward the intensity of the gross migration decreases. The majority of the Czech Republic districts is passive from the viewpoint of net migration.

At the level of different community categories, the migration factor has been primarily a mechanism of concentration and thus also of "passing" of the demographic potential from the countryside into towns, from little communities into bigger ones. Even if the mechanical concentration of population ends in a relatively short time and then a minimum migration between the communities of various size categories takes place, due to age structure features further differentiation and growth selection in the settlement system would occur, even in the future. Dependence of the average age on the size of community has already been quite paradoxical, too. Until

1980, the highest age average was typical of both the smallest communities with not more than 200 inhabitants (38.6 years of age) and the capital of Prague (38.6 years of age, too). On the other hand, the lowest age average characterized the towns with 10-20 thousand inhabitants (33.2 years of age) and those with 20-50 thousand inhabitants (33.4 years of age).

The great changes in the age structure will take place immediately after the turn of the millennium: high numbers of persons born after the Second World War will reach the post-productive age and this generation will be replaced by a much less numerous one, born in the eighties.

With regard to conditions of continued depopulation of rural areas in Czech Lands two essential facts must be stressed:

1) Rural areas as a whole have lost their original agricultural character. Thus, changes in the industry and in the tertiary sector will increasingly affect also the numbers of population in rural areas and the way of living there.

2) The settlement system is characterized by a great density of centres being really active at several levels and in a mutual cooperation. This system represents a buffer factor against the radical impacts concerning the territorial distribution of population, it can, however, be sensitive to some changes in industrial production on a local scale.

Even under these conditions, however, the differentiation of rural and urban milieus will be developing in favour of towns. A new factor (for the moment existing just in the surroundings of Prague, Brno and Ceske Budejovice) will appear - a new development of agglomerated communities absorbing a part of the population of large cities. Serious negative changes in the age structure of rural population will be apparently most markedly felt in Middle Bohemia (excepting the zone immediately surrounding Prague). Depopulation of rural areas in Eastern Moravia will be a bit delayed compared with the rest of the Czech Republic.

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DEPOPULATION OF RURAL AREAS IN HUNGARY

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1. Introduction

Besides its other characteristic features the process of urbanization implies territorial concentration of population. This means that population becomes more flexible, residence-location-wise, than earlier, it moves to the central areas of urbanization and, as the process goes on, those rural areas which are not or are less affected by urbanization become gradually depopulated. This is a general phenomenon everywhere but at the same time it has structural, temporal and regional characteristics as well.

This short summary gives an insight into the depopulation and its features in the rural areas of Hungary, with emphasis on the period after the Second World War. Naturally, depopulation of rural areas started already in the second half of the past century, much before the Second World War. The establishment of Austro-Hungarian Monarchy (1867), industrialization, the acceleration in structural development caused great socio-structural changes and increased the mobility of population as well. In the period until the First World War, in this complex process, taking place on the territory of ancient Hungary, migrations were characterized on the one hand by out-migration to foreign countries, mainly to America, and at the same time by inmigration to Budapest, forming a large metropolis. Although these two major tendencies of migration were unfavourable, mainly for rural areas, high rates of natural reproduction largely compensated for the losses caused by out-migration, so in this way we cannot speak of this process as a process of general depopulation. (Although in some smaller areas the true process of depopulation had already started).

After the end of the First World War Hungary (reduced to one third of its former territory and fighting with a great number of socio-economic problems) was also the scene of a special urbanization process. Apart from a rapid development of some industrial centres due to mining in the period be-

tween the First and Second World Wars, Budapest was the only destination of migrations, and there was only a slight growth in the population of rural towns, their size relative to Budapest being unimportant. The stagnant economy, the slow development of industry and urbanization process caused depopulation only in some areas, in spite of the fact that there was a long crisis in agriculture. The level of natural reproduction of population considerably decreased. The increase in the population of rural areas also stopped in general. The general net appearance covered unfavourable structural changes (e.g. ageing).

The Second World War caused great losses and destructions (victims of battles, concentration camps, and victims in civil population) in Hungary as well. There were a lot of refugees in Hungary and the composition of population was greatly affected by forced diplacements. All these factors resulted in so strange situations that the census data taken right before and right after the Second World War indicate an increase of rural population in the proportion of rural/urban population. In fact, in these years the rates of rural and urban population were practically the same.

The changes after the Second World War are very significant in all respects. Let us first note the main consequences:

- mobility is much higher than before,
- besides Budapest, a lot of rural towns became main destinations of migration,
- depopulation of rural areas has accelerated,
- depopulated territories joined to form greater continuous areas.

These main tendencies of the period after Second World War are indicated in Table 1.

In the following analysis we are going to sum up the characteristics of separate chronological stages, structural features and regional differences.

2. The chronological stages of depopulation

These stages are separated by their socio-economic peculiarities and processes. This way they differ from each other by the types of migrations as well.

a/ The extensive period

This period covers twenty years from the second half of the 1940s till the end of the 1960s. Its most determinant ideology is the priority of the

Table 1. Population numbers in towns and villages /x/

Year	Budapest	The rest of towns	Villages	Total	Budapest	The rest of towns	Villages
	1000 inhabitants				per cent		
1920	1232.0	2225.7	4529.1	7986.9	15.4	27.9	56.7
1930	1142.9	2398.8	4843.5	8685.1	16.6	27.6	55.8
1941	1712.8	2597.3	5005.9	9316.1	18.4	27.9	53.7
1949	1590.3	2507.3	5107.2	9204.8	17.3	27.2	55.5
1960	1783.2	2948.5	5229.3	9961.0	17.9	29.6	52.5
1970	2001.1	3429.1	4892.0	10322.1	19.4	33.2	47.4
1980	2059.4	3984.9	4665.2	10709.5	19.2	37.2	43.6
1985	2071.5	4121.5	4464.4	10657.4	19.4	38.7	41.9
1986	2076.0	4142.8	4421.2	10640.0	19.5	38.9	41.6
1987	2093.5	4160.9	4366.7	10621.1	19.7	39.2	41.1
1988	2104.7	4173.5	4326.2	10604.4	19.8	39.4	40.8

/x/. According to the administrative division as of January 1st 1988

Table 2. The number of towns and villages according to population-size groups, January 1st, 1987

Population-size group	Towns		Villages		Towns and villages	
	Number	Population in per cent	Number	Population in per cent	Number	Population in per cent
≤ 499	-	-	942	6.2	942	2.5
500- 999	-	-	715	12.0	715	4.9
1000- 1999	-	-	639	20.9	639	8.6
2000- 4999	-	-	492	33.4	492	13.8
5000- 9999	14	1.7	113	17.5	127	8.2
10000- 19999	46	10.7	31	9.5	77	10.2
20000- 49999	44	21.1	1	0.5	45	12.6
50000- 79999	10	10.3	-	-	10	6.1
80000-119999	5	8.0	-	-	5	4.7
120000-219999	5	14.7	-	-	5	8.7
Budapest	1	33.5	-	-	1	19.7
Total:	125	100.0	2933	100.0	3058	100.0

working class, the superiority of towns to villages, the absolute priority of industrialization.

The key concepts of the economic policy were: the necessary reconstruction, the extensive industrialization (based on the exploitation of natural resources for heavy industry), the "economies" as to the development of infrastructure, using up of all reserves, building up of only these kinds of infrastructure which are in close relation with the development of heavy industry, the permanent handicapping of agriculture and its reorganization into-large scale farming with such methods where the use of force was not excluded. All these factors demanded and resulted in the centralization and sectoral territorial investment of national income into certain fields. In a short time this caused very important differences between the living standards and prospects of population, living in expanded rural areas, and people living in relatively smaller urban areas, being in close connection with Budapest and with the urbanization axis, which was becoming more and more dominant at that time. This caused a large-scale out-migration from previous areas. The interregional mass migration was expanded on the whole territory of rural areas and at the same time the destination concentrated on a very small area (Fig. 1).

b/ The transition period

This period, starting at the end of the 1960s and terminating at the beginning of the 1980s can get this name only for the lack of a better one, since this period was full of contradictions. Its important elements are the insistence on certain ideological "taboos", justified by the reasons of home and foreign policy and on the other hand, this period is marked with the realization of the need to turn to the intensive development of economy. The "new economic model", introduced in 1968, was favourable to decentralization but the return to the old system in the beginning of the 1970s made its results doubtful. Our false adaptation to the new tendencies of world economy in the middle of the 1970s mixed up all the processes which were taking shape at that time.

Comparing with the earlier period, infrastructural developments became more decentralized as a whole. Our agriculture attracted worldwide attention, and improved the living conditions of rural population with its rapid development. The National Plan of Settlement Development approved in 1971, having an essential influence on the territorial and settlement development process of Hungary until the early 1980s, has regulated the trend of inter-

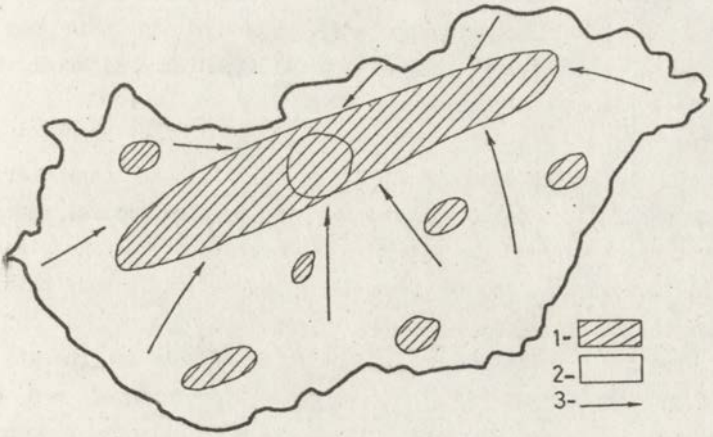

Fig.1. The migrational model of the 1950s and 1960s

1 - destinations of migration, 2 - areas of out-migration, 3 - directions of migration

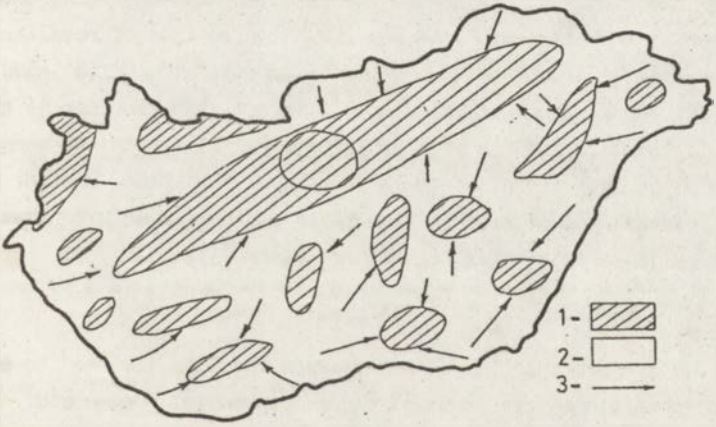

Fig.2. The migrational model of the 1970s

1 - destinations of migration, 2 - areas of out-migration, 3 - direction of migration

nal migration according to the hierarchy of settlements and resulted in the intraregional migration type. The centralized redistributive model caused great differences among settlement system and types and in this way it strenghtened and preserved the process of depopulation in rural areas which in some places took place on a large scale (Fig. 2).

c/ The recent period

This period, beginning with the middle of the 1980s is characterized by breaking down of ideological obstacles and by more radical reforms. However, these changes towards the process of democratization take place in very unfavourable conditions, and the process of innovation is very painful. Breaking down of the centralized model, redistribution of incomes on the place of their creation, reinstatement of the forms of self-government, the property-reform and the ceasing of the system of preferences and dis-preferences altogether give an opportunity for a more balanced process of territorial development.

All these changes give some help in the demographic situation of rural areas in spite of the fact that in some areas the process of depopulation - because of the advanced demographic erosion - seems to be irreversible. The way of recovery lies in the consolidation of inhabitants of microregions and settlement units, into the agglomeration consisting of some villages or towns. Growing importance of horizontal intersettlement connections brings some hope for that. In this period the demographic situation of rural areas and their demographical prospects become more differentiated which leads to coexistence of smaller distinct units. Another important difference is that depopulation of rural areas is taking place parallelly with the general process of population decrease since the beginning of the 1980s. Another new element is the beginning of erosion in some parts of the former urbanization axis, transforming it in this way into backward areas (Fig. 3).

3. Structural features

The long-lasting depopulation of rural areas resulted in, and to some extent was also conditioned by, special changes in social, economic, infrastructural and environmental sphere.

a/ The characteristics of the social sphere

The changes in rural areas were similar to national trends but specific processes have also developed at the same time. Among the previous factors we have to mention the increase in the numbers of professionally ac-

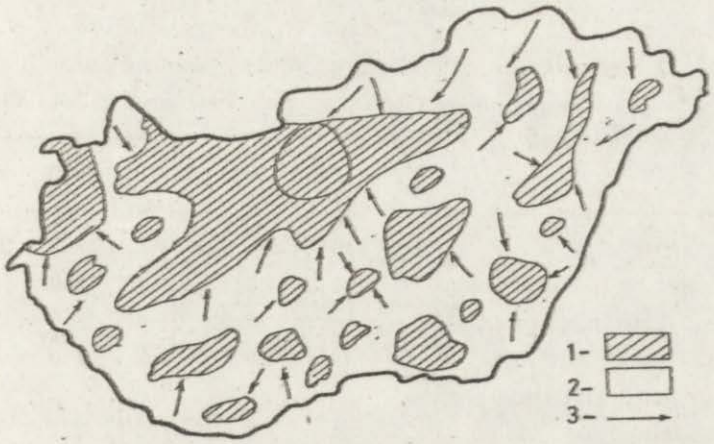

Fig.3. The migrational model of the 1980s
1 - destinations of migration, 2 - areas of out-migration, 3 - direction of migration

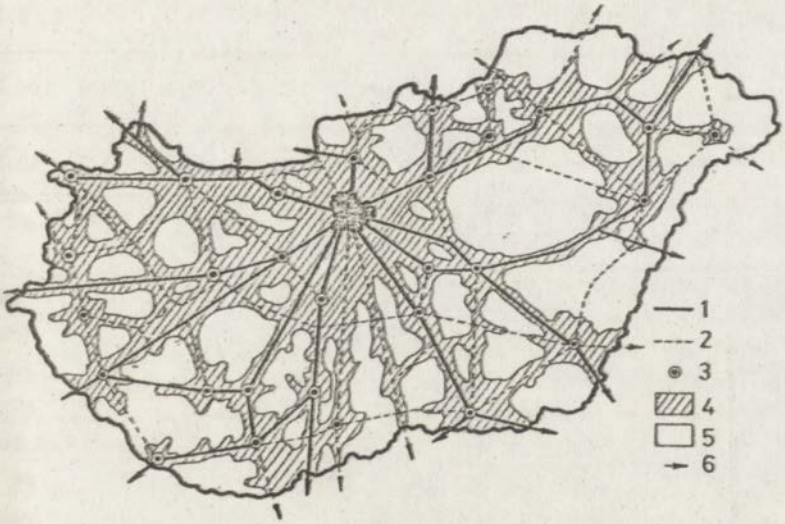

Fig.4. The spatial structure of Hungary
1 - national line of spatial organization, 2 - regional line of spatial organization, 3 - centre of spatial organization, 4 - densely populated urban areas, 5 - sparsely populated rural areas, 6 - direction of main international connections

Table 3. The division of numbers of active wage-earners by the branches of national economy (January 1st) (%)

	1949	1960	1970	1980	1988
Industry	19.4	27.9	36.3	33.9	30.9
Construction	2.2	6.1	7.4	8.2	7.1
Agriculture and forestry	53.8	38.5	24.4	19.0	18.8
Water management	0.1	0.2	1.2	1.5	1.6
Transport, mail and telecommunication	4.4	6.5	7.3	8.1	8.3
Commerce	5.3	6.3	7.9	9.8	10.7
Other material activities	..	..	..	0.9	1.0
Personal and economic services	3.5	2.5	2.8	3.1	3.9
Health, social and cultural services	3.8	5.6	7.7	10.4	12.6
Communal, administrative and other services	7.5	6.4	5.0	5.1	5.1
Total	100.0	100.0	100.0	100.0	100.0
The overall proportion of women	29.2	35.5	41.2	43.4	45.8

tive population, the great number of women who joined the socially organized division of labour, the increase in the proportion of skilled wage-earners etc. With the esablishment of the possibility for retiring to the elderly members of agricultural cooperatives the number and proportion of inactive population in rural areas have greatly increased.

The changes in the division of active wage-earners by the sector of national economy were similar in rural areas to national trends, there was only a proportional difference between them.

While the national share of active wage-earners in agricultural sector has declined since the end of the 1940s from 50% to less than 20% the parallel figures for rural areas have declined from 75% to more than 30% (Table 3). Since the middle of the 1960s the industrial sector has developed significantly and the importance of tertiary sector has also increased in rural areas. Although the rate of restructurization in rural communities was below the national average, the rural communities are much more flexible and much more enterprising now than earlier. The age structure of rural population is less favourable than the average, and this is true for the indices of educational level and skill too. Recently figures of natural reproduction generally indicate a negative trend, and even if they show a positive trend in some places, it is still smaller in rural than in urban areas. In some rural areas the population numbers indicate an increasing trend and among them there is a growing proportion of inactive persons.

b/ The characteristics of the economic sphere

The economic basis of rural settlements is generally very colourless, of only agricultural type. In this way development (improvement) closely depends on policies and investments carried out in the agricultural sector. However, the rate of investments is falling behind the desirable and reasonable level. The differences are compensated from own and local sources by rural population. Within the scope of total agricultural production the role of household farming has greatly increased (Table 4).

As a special contradiction to the previous facts the state farms have increased the rate of their industrial, commercial and other non-agricultural production from a few per cent to one third during the past twenty-five years.

Speaking generally of the economy of rural settlements we can observe that even a single project may have an extremely great importance on the given area. We also have to stress that the rate of commuters in these areas

is high and the population living in better-situated areas can have a double (industrial and agricultural) income and in this way their living standards may turn out to be better.

Table 4. Gross product of agriculture by property forms (current prices, %)

Sector		1960	1970	1980	1987
Socialist		76.6	98.4	99.3	99.4
from this:	state	13.9	17.2	20.1	20.7
	cooperative	53.6	72.8	69.6	68.8
	subsidiary farms	9.1	8.4	9.6	9.9
Private		23.4	1.6	0.7	0.6
	Total:	100.0	100.0	100.0	100.0

c/ The characteristic of infrastructural sphere

Speaking generally of infrastructure (both its productive and communal sectors) one should admit that it is more underdeveloped than on the average. This results partly from the national investment policy and partly from the lack of autonomy for local investments and infrastructural developments. Transport has a particularly great importance in these areas, because they consist of weakly populated small settlements where rentability can be determined not just by transport companies, but only on a social level. Similarly, the picture of telephone network shows great underdevelopment. There are some contradictions in the situation of "inner" infrastructure, too. The figures on communal services indicate underdevelopment, but at the same time the figures indicating the surfaces of flats show a far better situation.

d/ The state of environment in rural areas

The smaller density of population and the one-sided economic activity meant for a long time smaller harms to environment. Although this situation has slightly changed with the side-effects of modern agriculture by now (mineral fertilizers, use of chemicals in plant protection) rural areas are still less polluted. The value of these quiet, peaceful, clear, sometimes attractive areas is going for urban population up and these areas get new

stimuli for development by means of village tourism.

4. Regional differences

Up till now very important regional differences have been formed between urban and rural areas. It is a general phenomenon that rural areas have been shaped out of incoherent territories lying in the periphery of main transportation routes, they have very weak connections with cities and urban areas and as time goes on, they get renounced and split. Although migrations to urban areas bring about losses in rural population, their rate is becoming smaller (Table 5). Changes in the population of regions (Fig. 4) with the division into towns and villages show significant differences (Table 6). We can summarize the main regional characteristics of rural areas in particular regions as follows:

a/ The Central Region

This region, ascribed to Budapest and to its greater agglomeration is one of the most developed areas in Hungary. Rural areas hardly occur here. These scattered, small-size rural areas "enclosed" between urban systems have got a well-developed infrastructure and they have close connections with urban areas. The recreational function predominates in them. The rural areas of the Central Region represent the future of rural areas, lying in the other parts of Hungary.

b/ Western Hungary

This one is the most changeable region considering its rural areas as well. They are surrounded with extended industrial regions. These rural areas have well developed agriculture. Families having double income are common here. Small villages are quite common in the Western and South-Western areas and they have important functions in tourism. The area of Mezőföld is coming out with its larger settlements and Baranya with its complex and colourful features. The greatest problem of the whole region concerning rural areas, is the question of depopulating villages.

c/ Northern Hungary

Based on the survey on the central areas and the spatial axis of Northern Hungary, we can determine it as a strongly, but unilaterally, industrialized region, with expanded rural areas, joining the urban areas. Some parts of them are small settlement units with unfavourable conditions of transport and some of them are frontier regions. The majority of them is bound to urban areas by commuters, and in this way the structural crisis of

Table 5. Changes in permanent residence, 1960-1987

Year	Number of migrants	Budapest			Other towns			Villages		
		inmigrants	outmigrants	population number change	inmigrants	outmigrants	population number change	inmigrants	outmigrants	population number change
1960	338206	47723	22049	+25674	84189	57578	+26611	206294	258579	-52285
1970	270998	25293	16688	+ 8605	80572	54956	+25616	165133	199354	-34221
1980	211611	21566	14006	+ 7560	84878	54669	+30209	105167	142936	-37769
1985	220370	25212	14746	+10466	82215	71219	+10996	112943	134405	-21462
1986	221107	26235	15651	+10584	86563	76333	+10230	108309	129123	-20814
1987	232636	27720	19015	+ 8705	89368	83309	+ 6059	115548	130312	-14764

Table 6. Population numbers according to macro-regions, 1949-1980

Region	Population numbers				Changes in population numbers, %			
	1949	1960	1970	1980	1949- -1960	1960- -1970	1970- -1980	1949- -1980
	in thousands							
Central	2277.2	2589.0	2879.7	3033.7	+13.7	+11.2	+ 5.3	+33.2
villages	583.1	664.0	688.0	744.9	+13.9	+ 3.6	+ 8.3	+27.7
towns	1694.1	1925.0	2191.7	2288.8	+13.6	+13.9	+ 4.4	+35.1
Western Hungary	2769.3	3000.1	3089.1	3221.2	+ 8.3	+ 3.0	+ 4.3	+16.3
villages	2007.9	2009.6	1874.2	1750.5	+ 0.1	- 6.7	- 6.6	-12.8
towns	761.4	990.5	1214.9	1470.6	+30.1	+22.7	+21.0	+93.1
Northern Hungary	1161.6	1312.0	1354.5	1399.7	+12.9	+ 3.2	+ 3.3	+20.5
villages	853.1	924.2	879.4	844.4	+ 8.3	- 4.8	- 4.0	- 1.0
towns	308.5	387.8	475.1	555.3	+25.7	+22.5	+16.9	+80.0
Great Hungarian Plain	2996.7	3059.9	2998.7	3054.9	+ 2.1	- 2.0	+ 1.6	+ 1.9
villages	1989.4	1962.6	1770.0	1669.2	- 1.3	- 9.8	- 5.7	-16.1
towns	1007.3	1097.3	1228.7	1385.7	+ 8.9	+12.0	+12.8	+37.6
Total	9204.8	9961.0	10322.0	10709.5	+ 8.2	+ 3.6	+ 3.8	+16.3
villages	5433.5	5560.4	5211.6	5009.1	+ 2.3	- 6.3	- 3.9	- 7.8
towns	3771.3	4400.6	5110.4	5700.4	+16.7	+16.1	+11.5	+51.2

the recent years (mining, metallurgy) brings these rural areas into a backward situation as well.

d/ The Great Hungarian Plain (Alföld)

This is a region with a special system of settlements. The spotted or axis shaped urban areas are surrounded with extensive rural areas. Settlements having large population are surrounded with small farms ("tanya") lying on a large territory. Out of the transformation processes in the rural areas of Alföld it is most interesting to see how the "tanya" system which was sentenced to death so many times, is reviving again and again, giving evidence of its great adaptability. It happened sometimes that in spite of the general depopulation of rural areas, new farm settlements and settlement groups were formed on some well-situated areas. Three factors determine the differences among the areas of the Great Hungarian Plain: the difference among the predominant economic systems having developed on sandy soil and loess, the situation of the backward frontier regions having restricted opportunities for setting up connections with other settlements, and the difference among rural areas joining urban areas and the axes of spatial structure.

5. Some questions on the future of rural areas

The national trends and the results of self-development are equal factors in the future of rural areas. The following general, regional and microregional features may determine the future and the migrations in/out of rural areas:

- increasing importance of local communities;
- the system of self-government and self-sponsoring;
- public administration and territorial structure reforms;
- the changes in the structure of production in the economic field of both spatial structures;
- acceleration in the development of infrastructure;
- assignment of higher value to healthy human environment;
- diffusion of telephony and its integration into the everyday life of rural areas.

It is our well-founded opinion that the future projects for territorial and settlement development must not push the problem of rural areas into the background. If we ensure equal possibilities to some rural areas which have deformed structures by means of material support from central

funds, they can regain their energy for their development, and this can be a determining factor in formation of a well-balanced spatial structure.

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DEPOPULATION OF RURAL AREAS IN BULGARIA

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Under the present conditions of this country, the term "depopulation" cannot be defined just as a certain regime of population reproduction, resulting in population decrease. It is thoroughly described in the Russian demographic encyclopedia (1985) where the major criterion specifying this process is the net reproduction coefficient whose value should be lower than 1. Again in the aforesaid encyclopedic dictionary we can read another definition, even more acceptable from the socio-economic point of view, according to which depopulation is treated as one of the forms of demographic crisis.

Proceeding from our own investigations and from the classification of municipalities both on the basis of their demographic situation and socio-economic development, we have concluded that depopulation is a combination of a number of aggravated demographic indicators (Geshev and Mladenov, 1989). It is a continuous process unfavourably influencing the socio-economic progress of the respective territorial unit and the national economy as a whole.

Taking into consideration the specific conditions of the country, we have summed up the following main features of depopulation: 1). a constant population decline; 2). a considerably lower population density than in the other territories with almost the same relief and climatic and soil conditions; 3). a very low relative share of the employed manpower per unit of farming land; 4). population dispersion towards small villages and hamlets; 5). a complete depopulation of most of these hamlets; 6). deteriorated age structure with domination of the old age population; 7). steady negative rates in natural increase; 8). diminishing population size and ageing of labour force; 9). low level of education and qualification attained by the economically active population; 10). functional isolation or

poor functional links between the settlements; 11). low social and political status of the population.

As a result of the administrative and territorial reform, which took place in 1987, 9 administrative regions and 273 municipalities were established. There are 24 municipalities incorporated in the territory of the capital city but they are analysed in their integrity under the name of the Sofia-city administrative region. Generally speaking, out of 250 municipalities 4 are urban, i.e. they consist of 1 town, and 45 of them - of villages.

The investigation covers rural localities with their adjacent area accounting for 246 of the municipalities. Not always the information available is accurate but it serves the needs of the present analysis and assessment. The existing settlement system was approved with a decree of December 4, 1985, when the last census was carried out. Later on some very small villages dropped off the list of the settlements while the number of towns remained the same.

The demographic changes in this paper are traced for the years 1934-1985, i.e. for the 51-year period, in the rural settlements, given such a statute by the Decree of December 4, 1985. We have chosen such a long period of investigation because depopulation is a gradual and slow process and because quite often within a shorter space of, for example, 10 years there would be no clear-cut tendency since the population dynamics considerably varies. As there was no census just prior to the World War II, we deal in this work with information referring to 1934 and compare it with that for 1946. During the 12-year period the demographic development did not undergo any significant changes because the villages retained their agrarian functions. It can be seen from census data that the first substantial demographic transformations and the first symptoms of depopulation became discernible in certain rural regions not earlier than in 1956.

The distribution of rural population is strongly dependent on natural conditions and especially on relief. Many studies give evidence in favour of this relationship (Geshev 1973; Geshev and Mladenov 1989). It is maintained that the size of villages is a function of the quantity and quality of land resources. Even nowadays this correlation is apparent although industrialization, intensive commuting and diversified employment structure have loosened it. Therefore a differentiated approach has been applied to the evaluation of the rural districts from the viewpoint of their depopula-

tion, closely connected with the nature of the physical geographical subregions. The best correlation between land and size of villages has been revealed for 1934.

Against the background of landscape diversity the subregions turned to be natural systems of optimal size where the specific features of rural population redistribution are best expressed.

Having in mind that the movements of rural population are influenced by the respective natural conditions, we have made a retrospective analysis of the most important demographic indicators by administrative units on the one hand, and by physiographic regions and subregions on the other. The last two proved to be reliable for the purposes of a comparative territorial analysis of depopulation. We have to emphasize that many ethnic features are also related to natural environment. At the same time natural systems can be indirectly affected by various unfavourable processes and phenomena.

Due to political reasons the country inherited sparsely populated marginal territories like those of Sakar, Strandja, Dobrudja, the western mountainous periphery, including the so-called Kraishte and the Western Stara Planina. The inconsistent policy with the neighbouring countries (except for Rumania) continued to have an adverse impact on their demographc characteristics even after the Second World War. They are marginal closed territories without any links developed between themselves or between them and the surrounding regions. So, in the past they were looked upon chiefly as a source of manpower needed by the centres along the linear urban axes of population redistribution. That is why these poorly inhabited regions suffered from heavy out-migration which later affected the other rural areas as well.

The collectivisation of farming, undertaken simultaneously everywhere in the country at the turn of the 1950s, was perhaps the main factor, which has led to a heavy depopulation in most of the rural territories, particularly in those where land was of low productivity. When analysing the demographic processes within the administrative regions, we are faced with a striking disproportion in population distribution over the two parts of Bulgaria, naturally divided by the Stara Planina, known as Northern and Southern Bulgaria. Now they are characterised by an opposite regime of population reproduction. Sofia is excluded from our further analyses since it has not contributed to disproportions in the demographic potential.

In Northern Bulgaria the demographic growth began to slow down in the

early 1930s. In 1934 the population there constituted 51.0% of the national population, but in 1985 this share decreased to 46.2% . During 1975-1985 for the first time population decreased by 31,000 while in Southern Bulgaria (Sofia excluded) it increased by 127,000. After 1985 this trend went on steadily and only within a 2-year period (to the end of 1987) the population declined by 18,000 in Northern Bulgaria and grew by 35,000 in Southern Bulgaria.

Alongside with the traditionally low birthrates in the North-Western and North-Central regions, the aggravated demographic situation throughout Northern Bulgaria was caused also by economic factors. The latter resulted in a rapid growth of urban population and in the formation of new towns. Hence, a distinct polarization in population distribution was brought forth in the areas under almost similar soil and climatic conditions. Since the union of Eastern Rumelia with the Bulgarian Principality in 1885 the fundamental principle in the policy pursuing a balanced distribution of the productive forces between North and South Bulgaria has always been the maintenance of equal number of administrative-territorial units. Before the stage of industrialization this equality was manifested by proportionate distribution of state bodies' functions and subsequently by that of the production capacities.

In our opinion this approach in combination with the centralized sectoral planning reduced the effect of the territorial factors and conditions on inter- and intra-regional population migration and contributed to demographic disproportions between the two large parts of the country. These two super-regions have so far been used just as geographical notions. What we have tried to do here is to make our analyses and generalizations within their framework, or otherwise said to switch over to a territorial synthesis on the basis of the nine administrative regions. Northern and Southern Bulgaria should not be treated as simple sum totals of administrative regions. They should be accepted as spatial models with economic systems of their own, with corresponding functions and self-regulating abilities. In fact the population redistribution is the antropogenic subsystem, integrating all other functional subsystems. In Northern and Southern Bulgaria the patterns of population movements are similar, i.e. there are clearly shaped urban axes and the number and location of the big and medium-sized towns are alike. The component administrative regions have to be subject to such an integration that will guarantee steady rates of economic growth and will

create possibilities of equalization of their potentials, particularly the demographic one.

Table 1. Rural population by administrative regions in Bulgaria, 1934-1985

Administrative regions	Population (thousand) 1934	1985	Rural area (km2)	Rural popul. density per1km2 1934	1985	Average popul. per one village 1985	Villages per 100 km2	Mean annual rate of population dynamics 1934/1985
I.Northern Bulgaria	2238.4	1422.8	41498	56.0	34.1	640	5.3	-0.95
1. Varna	441.7	312.3	10518	40.0	30.0	635	5.4	-0.70
2. Lovech	740.4	414.7	12607	58.7	32.0	459	7.0	-0.90
3. Mikhailovgrad	534.4	311.8	8993.7	59.4	34.7	850	4.0	-1.10
4. Razgrad	521.8	384.2	9377.8	55.6	41.0	817	5.0	-0.60
II. Southern Bulgaria	2111.9	1714.9	52571.9	40.2	32.6	609	5.3	-0.40
5. Burgas	417.6	308.4	12802.1	32.7	24.1	670	3.6	-0.60
6. Plovdiv	472.2	452.5	10176.6	46.4	44.5	854	5.2	-0.10
7. Sofia	646.2	430.3	16624.9	38.9	25.9	482	5.3	-0.80
8. Haskovo	556.6	468.6	12119.4	45.9	38.7	512	7.6	-0.35
3. Sofia-city	17.3	55.1	848.9	20.3	64.9	1616	4.0	+2.30
Total	4350.3	3171.8	94069.9	47.2	33.3	623	5.3	-0.65

In order to illustrate the degree of depopulation throughout the country we have compiled Table 1 comparing the administrative regions in Northern and Southern Bulgaria, where some opposite trends can be distinguished. It is quite obvious that all rural areas of Northern Bulgaria suffer from depopulation which is most widely spread in the Mikhailovgrad and Lovech administrative regions. Over the period under investigation the annual decrease of rural population in the Northern regions occurred at a rate 2.5 times higher than in the South.

The Plovdiv administrative region is the only one which, according to our criteria, can be described as stable from the viewpoint of its demographic development. Very few villages in it give outward migrants. Table 1, 2 and 3 illustrate well-expressed correlations between the indicators involved. For instance in the regions showing a certain stability with respect to rural population dynamics, the average size of one village is larger and the density of villages per 100 km is lower. Where the number of rural population drops at accelerated rates, the size of the villages is smaller and it corresponds to a higher density of rural settlements over a given territory because of the dispersed settlement pattern. This relationship is not common for the Rhodopes and some parts of north-eastern Bulgaria where the villages are traditionally smaller, as they were in the past, and where the natural increase is considerable.

It has already been pointed out that the characteristics of rural population redistribution are best discernible within the integrated physical geographical subregions of intermediate rank (Table 2). We must stress, however, that they do not fully cover the regions of most intensive in- and out-migration, for it is not seldom that in order to preserve the unity of municipal territory one municipality can include in its boundaries parts of two different physiographic subregions. Thus it is difficult to determine where the municipalities along the Struma river valley should belong, the valley being the tectonic borderline between Rila and Pirin on the one hand, and the Osogovo and Belasitsa mountain chain on the other. They are equally distributed in the two subregions which have a similar type of population redistribution and therefore we have grouped them into one subregion. Again on the basis of their similarities and disparities some subregions of the transitional mountain-basin area are divided into parts or are attached to other subregional parts. We deem this reasonable because the population distribution is associated with the dissection of relief and with the altitude.

To a certain extent, going from North to South the physical geographical regions and subregions can be looked upon as regions and subregions of active rural redistribution.

In the Danube Plain three subregions of outward and inward movement of the rural population are outlined: the first embraces the Western and central parts of the plain and the other two are respectively the Eastern Danubean subregion and that of Dobrudja. Most of the municipalities from the Western and Central Danube Plain are remarkable for their negative mean an-

Table 2. Rural Population Distribution by Physiographic Regions and Subregions in Bulgaria, 1934-1985

Region Subregion	Population (thousand) 1934	1985	Rural area (km2)	Rural popul. density pers/km2 1934	1985	Average population per one village 1985	Villages per 100 km2	Mean annual rate of popul. dynamics 1934/85
I.The Danube Plain	1782.6	1201.8	31813.5	56.0	37.8	888	4.3	-0.8
1.Western	378.0	234.6	5616.7	67.3	41.8	1076	3.9	-0.9
2.Central	509.3	308.6	7921.0	64.3	39.0	1151	3.4	-1.0
3.Eastern	662.7	464.4	11479.0	57.7	40.4	840	4.8	-0.7
4.Southern Dobrudja	232.6	194.2	6796.8	34.2	24.2	616	4.6	-0.4
II.Stara Planina system	600	323.8	13685.7	43.8	23.7	310	7.6	-1.2
III.Transitional mountain-basin	1402.1	1017.2	31754.2	44.1	32.0	711	4.5	-0.5
1.Western	303.3	198.2	6309.2	48.0	31.4	461	6.8	-1.0
2.Sr.Gora & Sub-Balkan	257.0	205.3	6708.6	38.3	30.6	838	3.7	-0.45
3.Plovdiv and Pazardjik lowland	257.8	248.2	3882.8	66.4	64.0	1418	4.5	-0.10
4.Eastern Upper Tracia and Sredna Tundja	390.1	241.3	7901.1	49.4	30.5	663	4.6	-1.0
5.Sakar and Strandja	136.2	62.9	5004.1	27.2	12.6	422	3.0	-1.5
6.Burgas Lowland	57.7	61.3	1948.6	29.6	31.5	901	3.5	+0.10

IV.Rila-Rhodopean	514.7	594.8	16962.9	30.3	35.1	491	7.1	+0.30
1.Rila, Pirin, Osogovo, Belasitsa	230.4	176.0	7303.1	31.5	24.0	558	4.6	-0.45
2.Western Rhodopes	166.5	189.8	5758.7	28.9	33.0	565	5.8	+0.40
3.Eastern Rhodopes	117.8	229.0	3901.1	45.6	58.7	408	14.3	+0.50

nual rates of population increase. In several municipalities the situation is worse and together with the neighbouring Stara Planina mountainous area they form the largest depopulated region in the country (Table 3, Fig. 1). The process of depopulation advances from the West to the East and from the South to the North.

In the Eastern Danube Plain depopulation is of lesser intensity. Out of all the 37 municipalities, a marked population decline is registered in 9, while in the western and central parts from the total of 44, the population decreases in 26. These few municipalities form a compact zone situated between the Varna-Devnya agglomeration to the east, the town of Shumen to the west and the town of Tolbukhin to the south.

At the first sight Southern Dobrudja seems to have the most favourable mean indices as compared to all Northern Bulgaria (Table 2). But these indices average opposite tendencies represented by two groups of municipalities. The first incorporates demographically stable municipalities (e.i. Balchik, Tervel, Glavinitsa, Dulovo, Silistra) while the second one includes those with strongly regressing indices (Alfatar, Kainardja, Krushari, etc.). Almost the whole territory from the Yugoslav frontier to the Black Sea coast in the zone of the Trans-Balkan and the Stara Planina is in its essence a rural area, having experienced the earliest depopulation. Of all 36 municipalities, 31 are geographically bound to Northern Bulgaria.

The next two physiographic regions are entirely located in Southern Bulgaria. Highly diversified is the pattern of rural population redistribution in the transitional mountain-basin subregions (Table 2). Here is the most heavily depopulated region of Sakar and Strandja whose development is stimulated by the national complex regional programme enforced in 1982. The same rates of depopulation are to be observed in the western mountain-basin subregion. The Sakar and Strandja subregion is notable for its better indices because it reflects the accelerated population growth in the villages belonging to the administrative region of Sofia (Table 1). The so-called Kraishte district joins this subregion to form the most depopulated territory in the country.

In spite of the flat relief, common for the Upper Thracian Lowland and the Central Tundja Plain, the western and eastern parts of the subregion are subject to opposite trends. This made it necessary to study them separately. The western part is a centre of active in-migration since most of the large villages in Bulgaria are located there. They are situated in the zone in-

Fig.1. Depopulation regions in Bulgaria

fluenced by Plovdiv and Pazardjik and some of them are involved in the agrarian belt around the Plovdiv agglomeration.

In the western part of the subregion (covering the Stara Zagora area, the Haskovo and Sredna Tundja hilly plains) the population is declining like in the Western and Central Danube Plain. The municipalities, surrounding Sakar and Strandja, intensify the process of depopulation.

The Sredna Gora and the Sub-Balkan form a linear structure, oriented from west to east, where only isolated spots are depopulated.

Most of the Burgas Lowland coincides with the agglomeration under the same name which is being formed at present. The demographic stability of the villages is a result both of the direct impact of the big town at the Black Seaside and of their own summer resort functions.

Only in the Rila-Rhodopean region rural population has increased (Table 2) which is due to high birthrates. The Rhodopean mountain system is inhabited in all altitudinal zones. Its western - moderately high - and top parts have the density of rural population that is equal to the national average. To the east the density is twice as high. The Eastern Rhodopes, populated mostly by Muslims, may occasionally give outmigrants and thus may partially be affected by depopulation but the well-balanced age structure which results from the high natural increase is a good prerequisite for keeping its demographic potential unchanged.

The Rila-Rhodopean subregion together with the mountain chain of Osogovo and Belasitsa show a great variety in rural population distribution. The municipalities in advanced stage of depopulation are concentrated in the northern part and hence they merge with the previously mentioned largest depopulated region.

Proceeding from the comprehensive analysis and assessment of the demographic situation in the villages and taking into consideration the classification of municipalities, based on their demographic characteristics, two rural regions of intense depopulation have been delineated. They are of different sizes but have similar demographic features and are known respectively as the Western Margin-Stara Planina and Sakar-Strandja (Table 3). These two regions cover 30% of the rural area, divided almost proportionately between Northern and Southern Bulgaria. With regard to population, though, this proportion is 2 times larger in the North as compared to the South. Outside the aforesaid two regions very few villages in Southern Bulgaria experience depopulation. Throughout Northern Bulgaria another 30% of

the municipalities approximate the indices of the first region.

Table 3. Depopulation Regions in Bulgaria

Regions	Population 1934	Population 1985	Rural area (km2)	Rural popul. density 1934	Rural popul. density 1985	Average population per one village 1985	Villages per 100 km2	Mean annual rate of popul. dynamics 1934/85
	(thousand)							
I.St.Planina	946.7	421.9	18731	50.5	22.5	303	7.4	-1.7
II.Sakar Strandja	264.9	125.7	8777	29.8	14.3	393	3.6	-1.5

The regional policy which has been consistently carried out in order to restrict depopulation, has some weak points. Achievements have been made primarily in the municipal centres where the existing infrastructural facilities are the leading factor. The experience gained in the sphere of social management proves that priority is to be given to the development of social infrastructure that will improve the living and working conditions and will facilitate the provision of more consumer goods.

To a certain extent it can be expected that holding back of the rural population in the regions under depopulation can be facilitated by the establishment of firms, and especially of small ones, collectively or individually operated, as well as of affiliated state companies whose production is profitable.

In deep restructuration of our economy many inefficient and labour-intensive branches will be closed down. To overcome the labour deficit advanced technologies are to be introduced in the remaining economic sectors.

The two regions discussed are very attractive because nature has been bountiful here and because many historical and architectural monuments of great interest are still available. The regional authorities and firms should understand that if infrastructure is rapidly constructed on a large scale, tourist industry will make progress, too. Later on, when Bulgaria enters the stage of desurbanization, some of the villages will assume again

their former functions of residential zones.

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DEPOPULATION OF RURAL AREAS IN SR SERBIA

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1. Introduction

Serbia, with 9.3 million inhabitants in 1981 and 41.5% of Yugoslavia's population, is characterized, in Yugoslav and European proportions, by a very specific demographic development manifested through two fundamental models. The first is the model of highly developed countries, featuring a slow growth of population, insufficient reproduction and very progressed ageing of the total population and of individual age groups of manpower, which is characteristic of Vojvodina and of Serbia proper (i.e. without its autonomous provinces). The second is the model of insufficiently developed countries with the marked growth of population based on the expanded reproduction and diminished death rate, with the domination of young and supported population, agrarian overpopulation and pressures towards urban centres. This model is characteristic of the autonomous province of Kosovo. Therefore, the phenomenon of depopulation in Serbia proper and in Vojvodina, and the expansion of population in Kosovo, are the most important characteristics and problems of the contemporary population development in SR Serbia, which have important consequences for the whole of economic, social, cultural, ethnic and political development of Serbia and Yugoslavia.

2. Volume and geographical distribution of depopulation in SR Serbia

The population of SR Serbia is characterized, in the course of the last six decades, by the growth from 4.8 million in 1921 to 6.5 million in 1948 and 9.3 million in 1981. The average annual growth rate amounted between 1921 and 1948 to 11.2 and between 1948 and 1981 to 10.7 per 1000 inhabitants which corresponds to the average growth of Yugoslav population. Individual parts of SR Serbia, however, show considerable deviations from

the above mentioned population dynamics. Thus the population of Vojvodina shows a considerably slower growth and the lowest population dynamics in Yugoslavia. Vojvodina had in 1921 1.5 million, in 1948 1.6 million and in 1981 2.0 million inhabitants, altogether an increase of 1.3 times only with the average annual rate of 2.4 until the Second World War and 6.5 per 1000 after the war. A quicker growth of population was recorded in Serbia proper with average annual rates in the above mentioned periods of, respectively, 13.9 and 9.5 per 1000. In 1921, 2.8 million, in 1948 - 4.2 million and in 1981 5.7 million inhabitants lived in this area. The quickest population growth is noticed in the Autonomous Province of Kosovo, where there lived in 1921 some 439 thousand of inhabitants, in 1948 about 733 thousand and in 1981 1.6 million (an increase by about 3.6 times). The average annual rate of population growth was 18.6 up to the Second World War and in the post-war period 20.9 per 1000, i.e. three times those of Vojvodina. Population of Kosovo doubled in modern times in about 30 years, that of proper Serbia in about 60 years and of Vojvodina in about 100 years (Braznik 1975, 1976; Simeunović 1964; Stanovništvi... 1984). Thus the share of the population of Kosovo in population of SR Serbia increased (1948-1981) from 11.2% to 17.0% and reduced the share of the population of Vojvodina from 25.1 to 21.8% and the population of Serbia proper from 63.7% to 61.2% (Table 1).

Regional differences of population dynamics in SR Serbia are even more marked when observed on the level of lower territorial units (communes and settlements), through which the whole complexity of the depopulation process, on the one hand, and of population expansion, on the other, is manifested.

Differentiation of regions and localities in SR Serbia into those which show an increase in and concentration of population and the other in which population decreases take on the character of depopulation occurred as early as in the 1960s. Thus, in 1948-1981 the quickest population growth with average annual rates over 20 per 1000, took place in the communes of Belgrade, of provincial and regional centres and in these which are more industrialized and urbanized. Migrations exerted a decisive influence on the population dynamics. High population dynamics characterized also the communes of Kosovo, but their growth is the result of a high natural increase in the Albanian population. Already in this period decreases in the number of inhabitants occurred in a series of regions in Eastern and South-Eastern Serbia, which are known for their traditions in birth control and one-child

Table 1. Population number and dynamics in SR Serbia, 1921-1981

	Population numbers					
	1921	1948	1953	1961	1971	1981
SR Serbia	4819439	6527966	6979154	7642227	8446591	9313676
Serbia proper	2843426	4154174	4458394	4823274	5250365	5695564
Vojvodina	1536994	1640757	1712619	1854965	1952533	2034772
Kosovo	439010	733034	808141	963988	1243693	1584440
	%					
SR Serbia	100.0	100.0	100.0	100.0	100.0	100.0
Serbia proper	59.0	63.7	63.0	63.1	62.2	61.2
Vojvodina	31.9	25.1	24.5	24.3	23.1	21.8
Kosovo	9.1	11.2	11.6	12.6	14.7	17.0
	Average annual rates of increase per 1000					
	1921/48	1948/53	1953/61	1961/71	1971/81	1921/81
SR Serbia	11.2	13.5	11.4	10.1	9.8	12.7
Serbia proper	13.9	14.2	9.9	8.5	8.2	13.4
Vojvodina	2.4	8.6	10.0	5.1	4.1	6.8
Kosovo	18.6	19.7	22.3	25.8	24.5	22.6

Source: D.Braznik (1975, 1976) and Stanovnistivi i domaćinstva (1984).

Table 2. Depopulating settlements in SR Serbia, 1948-1981

Region	Number of settlements	Number of settlements		% of depopulating settlements in their total number	% of inhabitants in depopulating localities in total popul.
	1953/48	1948	1953	1953	1953
SR Serbia	1539	1445457	1383751	24.9	19.6
Serbia proper	1213	923836	887172	28.5	19.9
Vojvodina	171	467915	447466	36.5	26.1
Kosovo	155	53706	49113	10.7	6.0
	1981/53	1953	1981	1981	1981
SR Serbia	3081	2716492	2532532	49.6	33.1
Serbia proper	2641	2137099	1981224	62.1	41.1
Vojvodina	204	501707	479606	43.5	25.7
Kosovo	216	77686	71702	14.9	7.4

Region	1971/61	1961	1971	1971	1971
SR Serbia	4040	3934427	3492226	65.5	41.3
Serbia proper	3411	2928870	2576639	80.2	49.1
Vojvodina	336	907631	828817	71.7	42.2
Kosovo	293	97918	86770	20.2	7.0
	1981/71	1971	1981	1981	1981
SR Serbia	4052	3534618	3085116	65.7	33.1
Serbia proper	3303	2527860	2187864	77.6	38.4
Vojvodina	335	845269	765402	71.5	37.6
Kosovo	414	161489	131850	28.6	8.3
	1981/48	1948	1981	1981	1981
SR Serbia	3720	3341580	2531567	60.3	27.2
Serbia proper	3160	2478288	1837375	74.3	32.3
Vojvodina	304	787829	639714	64.9	31.4
Kosovo	256	75463	54478	17.7	3.4

system. From 1961 to 1981 the number of communes in which population numbers show a decline increased in SR Serbia and the depopulation regions extended, in addition to Eastern and South-Eastern Serbia, also over the northern and eastern parts of Vojvodina, the Morava river basin, as well as over mountainous regions of Western Serbia. Kosovo remains the area with the high rates of population growth (over 21 per 1000). Generally, in 1948-1981 a population growth was recorded in Serbia proper in 56.6% of communes, in Vojvodina - in 63.6% of communes and in all communes of Kosovo (Stanovništvi... 1984; Fig. 1).

The volume of depopulation in SR Serbia is more evident in population dynamics of the smallest territorial units - localities. Already in 1948-1953, 24.9% of settlements accounting for 19.8% of population of Serbia noted a decrease. For Serbia proper this relation was 28.5% and 19.9%, for Vojvodina - 36.5% and 26.1%, for Kosovo - 10.7% and 6.0% . In the following decades population decrease spread over the greatest part of Serbia, except Kosovo. In the last inter-census period 1971-1981 decrease was recorded in 65.7% of localities in SR Serbia, accounting for 33.1% of population. At the same time, in Serbia proper depopulation spread over 77.6% of settlements and 38.4% of population, in Vojvodina 71.5% of settlements and 37.6% of population and in Kosovo 28.6% of settlements and 8.3% of population. Generally, in the 1948-1981 period population decrease was recorded in 60.3% of settlements in SR Serbia, 74.3% in Serbia proper, 64.9% in Vojvodina and 17.7% in Kosovo. Thus, about one third of Serbia's population (Serbia proper) and of Vojvodina are characterized by the trend of population reduction, whereas in Kosovo this trend has been recorded by some 3% of population only (Table 2, Fig. 2).

The regions where depopulation is most expressed are located in Eastern and South-Eastern Serbia, mountainous regions of Western Serbia and Eastern and Northern Vojvodina. Regarding the types of settlements, depopulation struck for the most part rural settlements and typical rural areas which have poorly developed secondary and tertiary sectors of the economy. Their population is continuously diminishing on account of outmigration towards urban settlements and non-agricultural activities, as well as on account of their own demographic transition and controlled reproduction. Rural settlements with the population increase are at present in SR Serbia (without Kosovo) only individual villages located in the vicinity of towns (Belgrade, Novi Sad, Kragujevac, Kraljevo, Leskovac, Svetozarevo and

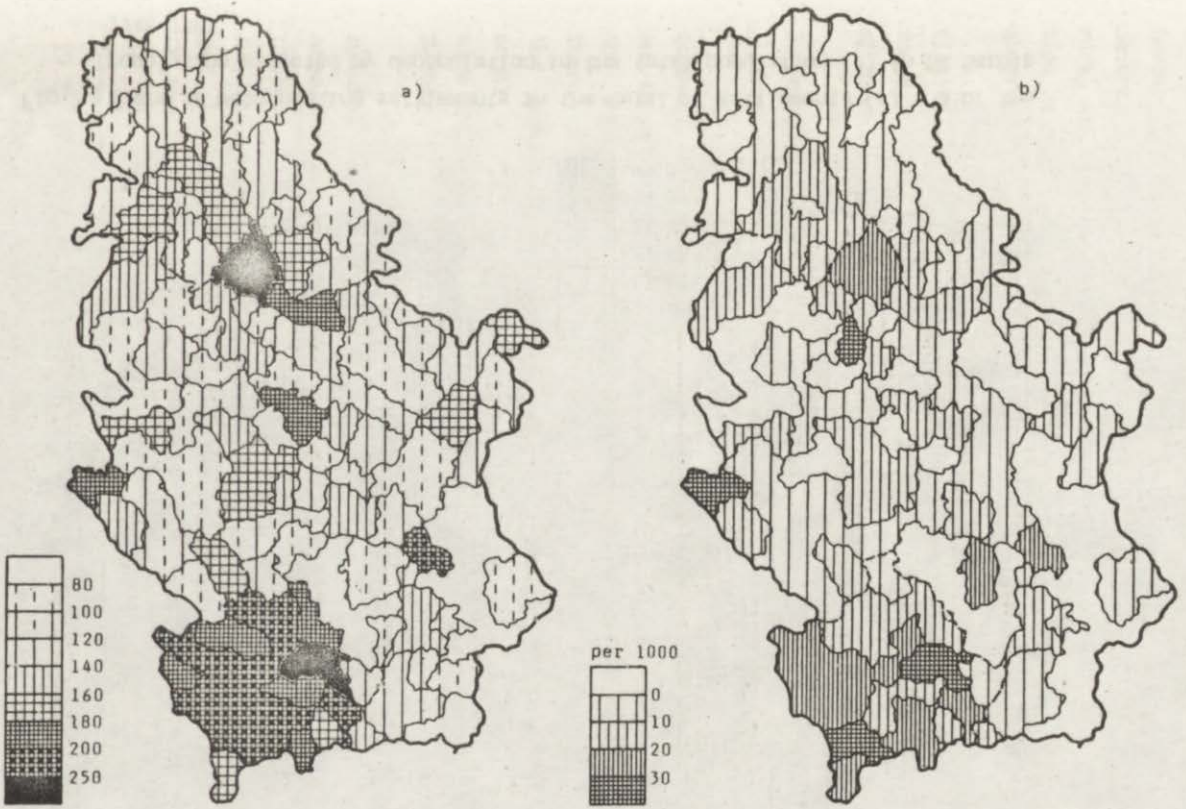

Fig.1. Index of growth (a) and average annual rate of growth (b) of population of SR Serbia, 1948-1981

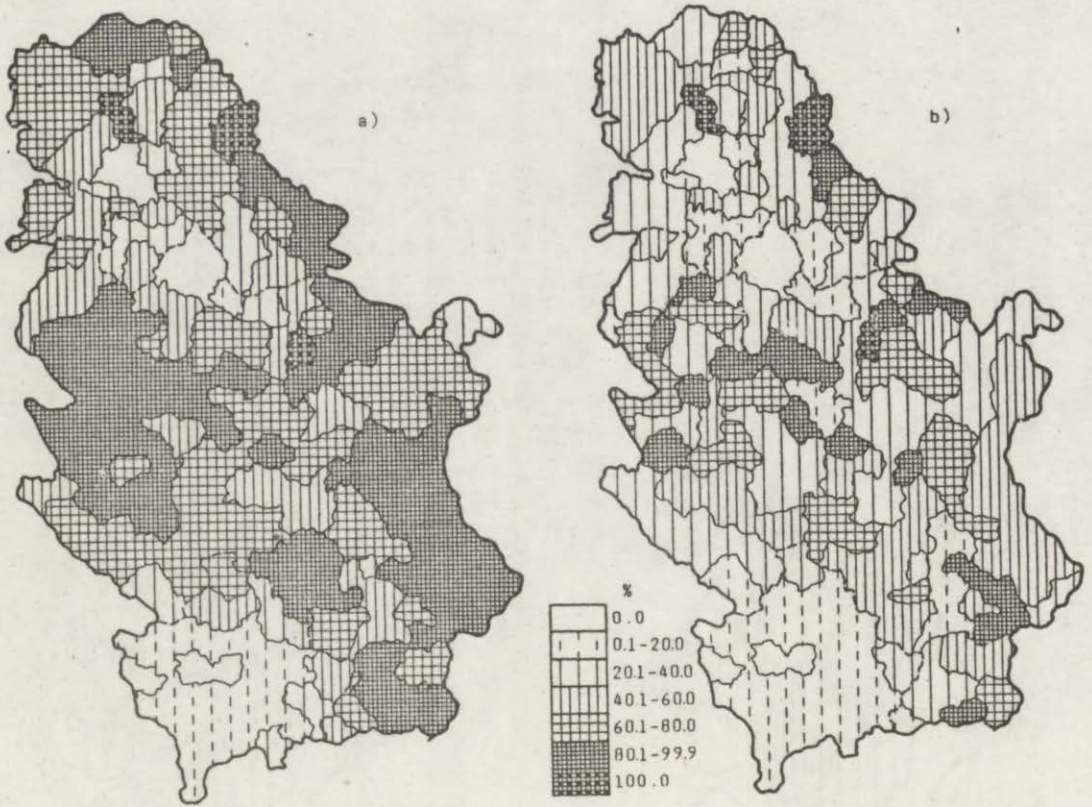

Fig.2. Share of depopulating settlements in the total of settlements (a) and of the population affected by depopulation in the total population (b) in SR Serbia, 1948-1981

others). The growth of population also occurs in particular villages with a favourable geographical and transport situation, because they perform some central functions and attract population. And while about two thirds of rural settlements in Serbia proper and in Vojvodina are losing their population by out-migration and by the decrease in natural growth, urban centres absorb the inmigrants.

The causes and consequences of the above mentioned spatial differentiation of SR Serbia regarding growth and decrease in poopulation are to be found both in demographic and in economic, social and ethnic-cultural spheres and they are at present an object of discussions.

3. Depopulation conditioned by demographic factors and its consequences for further population development

Depopulation in SR Serbia is conditioned, first, by changes in natural components of the population development: birthrate, fertility, deathrate and natural increase, and it is on the basis of those characteristics that the most important demographic differentiation of SR Serbia took place. There are, nowadays, two distinct models of natural population development: the low-natality model in Vojvodina and in Serbia proper and high-natality model in Kosovo. The spread of these types of population reproduction determine decisively the volume and geographic distribution of depopulation in SR Serbia.

Due to all the social changes and the demographic transition, the natural increase in SR Serbia after the Second World War decreases both in absolute and in relative numbers. The average annual rate of natural increase was (1948-1953) about 14.5 per 1000, accounting for 38% of the natural increase in Yugoslavia. In 1971-1981 this rate was reduced to 8.9 per 1000, and its share in the increase in Yugoslavia has grown to 40.0% . On the contrary, Kosovo records the absolute growth in natural increase and in its average annual rate from 24.4 to 27.6 per 1000. Natural increase in Kosovo contributed to (in 1948-1953) 7.3% of the increase in Yugoslavia and 19.3% of SR Serbia.

The above course of natural increase is a result of changes in birth and deathrates of population which had different courses in individual areas of SR Serbia. The natality of the population of proper Serbia was reduced from 24.5 in 1951 to 13.2 per 1000 in 1981, of Vojvodina from 22.8 to 13.7, and of Kosovo from 37.5 to 30.2 per 1000. Population of Kosovo is

characterized, in spite of a certain decreasing trend, by a very high birthrate which, in addition to reduced mortality, causes the rapid demographic expansion. On the other hand, natality in Serbia proper and in Vojvodina has not been securing for almost three decades the level of simple reproduction, leading to biological depopulation. Thus, while in 1950 in SR Serbia there were on the average 3.0 (Serbia proper 2.8, Vojvodina 2.6, Kosovo 5.8) children born alive per one woman, these numbers decreased to 1.7 in Vojvodina and in Serbia proper and in Kosovo to 3.8. Gross and net reproduction rates were, as early as in the 1960s in Serbia proper and in Vojvodina, about 1.0 and almost for three decades are below the level indicating the insufficient natural population development and, therefore, depopulation appears as the fundamental demographic and social problem of Serbia, excluding Kosovo (Jasić and Gaćeša, 1983).

In Figure 3 the changes in natural increase are shown by communes. The birthrate lower than 16.0 per 1000 was characteristic in the 1960s of the communes in Eastern, South-Eastern and Central Serbia. This natality level is characteristic of all the communes of Vojvodina, as well as of Serbia proper, except for the parts of South-Western and Southern Serbia, inhabited by Muslim and Albanian populations. Most communes in Kosovo had (1986) a natality level above 28 per 1000, which is a consequence of high fertility among the Albanians in spite of socio-economic changes which took place in the meantime.

As regards the deathrate, considerable changes occurred in SR Serbia. They manifest themselves in the decrease of general mortality in Kosovo by reduction of death rates and the growth of the share of young people in total population. On the other hand, in the low-natality areas (Eastern and South-Eastern Serbia, Eastern and Northern Vojvodina) the general deathrate increases on account of the intensive ageing of the population. The above quoted changes in both natality and mortality importantly contributed to differentiation of the communes of SR Serbia as regards the natural increase in population in 1961-1986. A considerable number of communes of Serbia proper and Vojvodina had in 1986 a negative or lower than 6 per 1000 natural increase, which clearly indicates the volume of depopulation in this part of Yugoslavia. Contrary to these, most communes in Kosovo had in the same year natural increase above 20 per 1000, i.e. represented an essentially different model of the natural population development (Fig. 3).

Insufficient births and depopulation endanger today especially rural

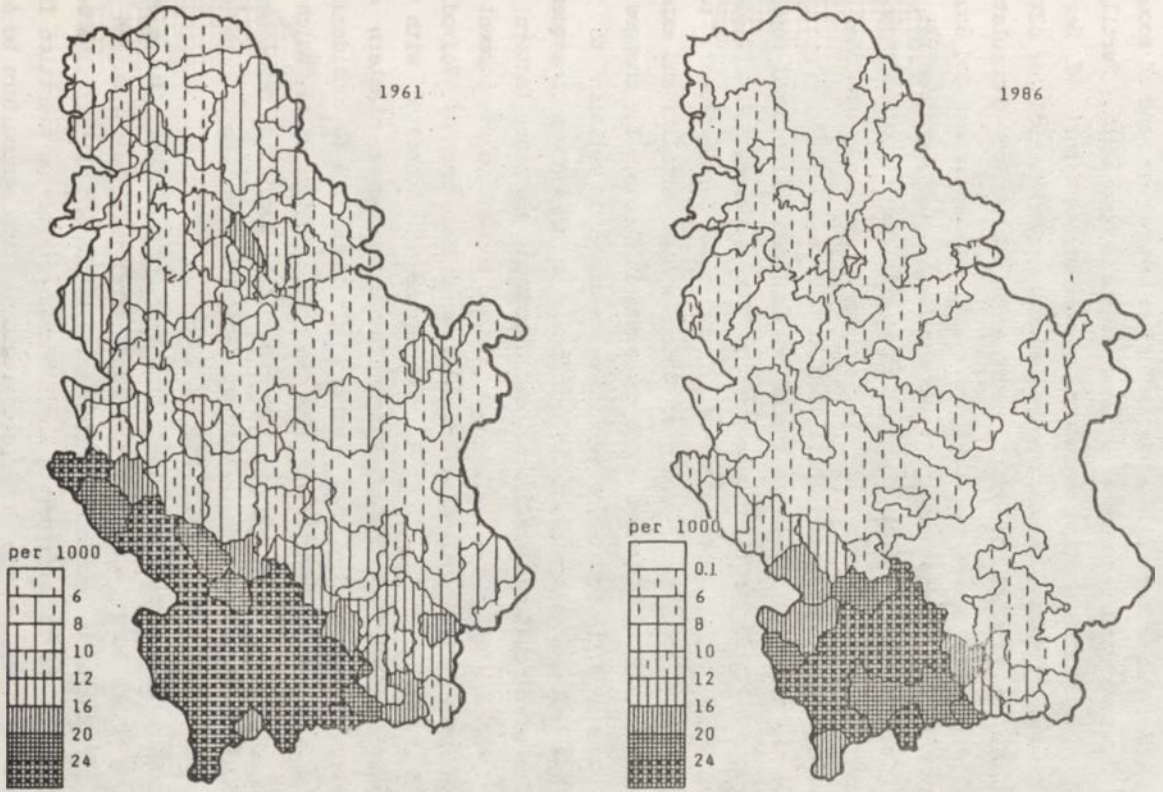

Fig. 3. Natural growth rates of population in SR Serbia

areas of Serbia proper and Vojvodina, which are characterized by the lowest fertility. Birthrate of rural population has already been lower for a whole decade than is the natality of urban population in the area of SR Serbia without Kosovo. This is a consequence of out-migration from countryside of younger people, in economically active and reproductive age, and of acceptance of birth control measures also among the rural population. Fertility level below simple reproduction characterized the greater part of Serbia proper and the negative natural increase was recorded in 1981 for 52% of rural population in 54% of rural settlements. Zones of depopulation stretched themselves over the rural areas also outside Eastern and South-Eastern Serbia, i.e. regions known by the earlier adopted birth control and one-child system. A positive natural increase in rural population can be found only in the areas situated near large towns or in those inhabited by Muslim and Albanian population (Rančić 1986).

From the above considerations it can be concluded that natural population development in SR Serbia is determined by two problems: insufficient reproduction on the greater part of Vojvodina and Serbia proper, particularly of rural population, and simultaneously high fertility and expansion of Albanians both in rural and urban areas in Kosovo. The changes in the reproduction of the population of Kosovo are slower in relation to the economic and social development of the province, and they are a consequence of specific ethnic-cultural, religious, socio-economic and other factors. On the other hand, insufficient births and narrowed population development in the greater part of the rural areas of Serbia proper and of Vojvodina originated even before the socio-economic changes, connected with the development of industry and the urban growth, and lasted in Eastern and South-Eastern Serbia for more than a century. It gives rise to considerable demographic disturbances, particularly in the population structure, which in individual rural areas already endangers the global population development and particularly of manpower in agriculture (Macura 1986, Macura et al. 1984, Problem obnavljanje... 1982, Rašević 1988).

Migration of the population in SR Serbia is one of causes, but also a consequence of the above quoted volume and territorial distribution of depopulation. Intensive processes of industrialization and urbanization were put in motion in the post-war period in SR Serbia, involving migration from insufficiently developed to developed regions, from agriculture to non-agricultural activities and from the countryside to the towns. The rural to

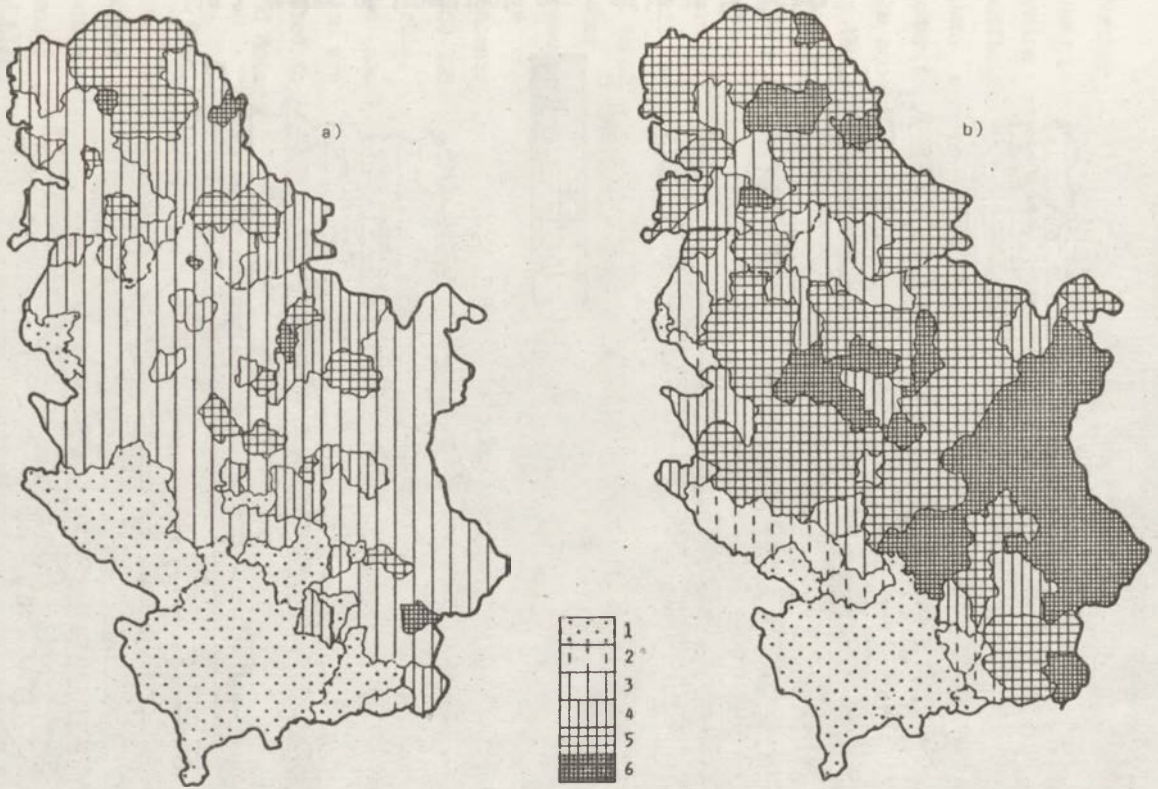

Fig.4. Structure of population by age in towns and centres of communes (a) and in the rest of localities (b) in SR Serbia in 1981.

1 - markedly young, 2 - young, 3 - ripe, 4 - initial ageing, 5 - advanced ageing, 6 - markedly advanced ageing

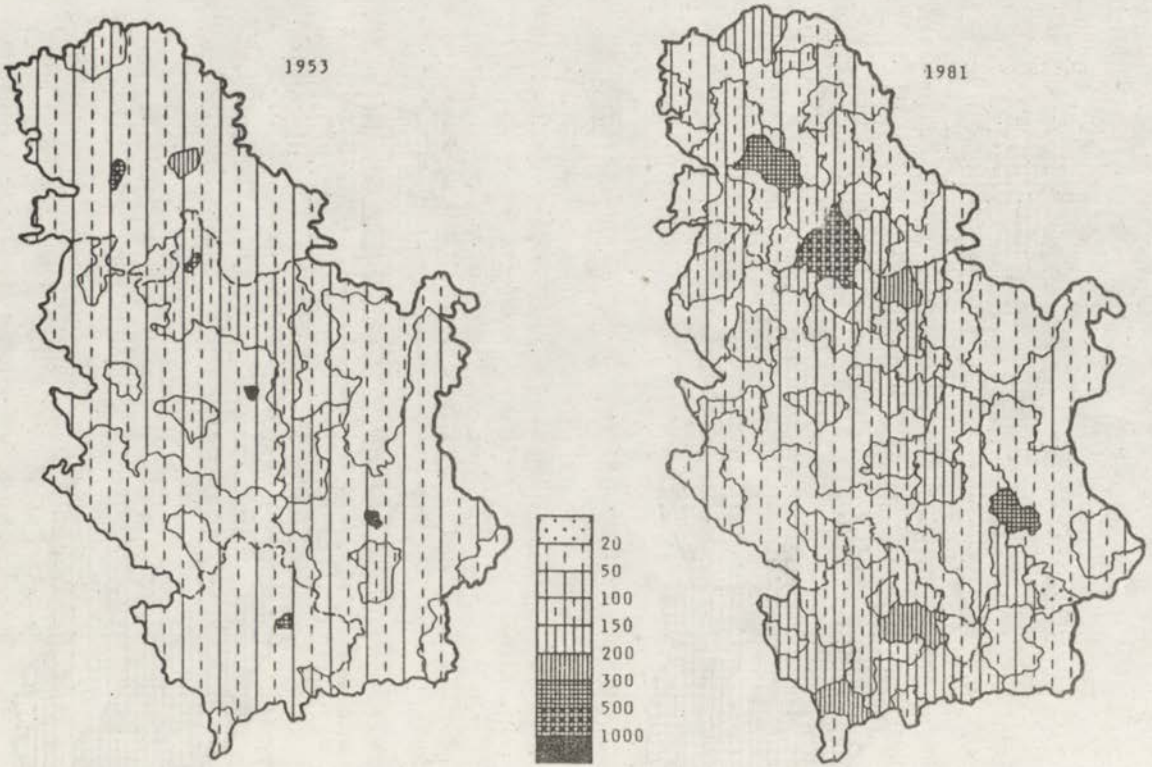

Fig.5. Number of inhabitants per 1 sq km in SR Serbia

urban migration and acceptance of birth control also among the rural population strengthened the depopulation trend in Serbia proper and in Vojvodina.

The consequences which the depopulation in SR Serbia caused for its further demographic, economic, social, ethnic and spatial development are numerous. In the demographic sphere they are first manifested in rapid ageing of rural population, diminishing of agrarian population and its insufficient natural renewal, changes in distribution and density of population, etc. The post-war age structure of population in SR Serbia ranges today from markedly young structure in Kosovo to very progressed ageing in the zones of depopulation, particularly in agricultural areas. Differences in the attained degree of ageing among the urban and rural populations are presented in Fig. 4. Almost the entire rural space of Serbia proper and Vojvodina is characterized by a progressed or a markedly progressed process of ageing of population, while rural population in South-Western Serbia, and particularly in Kosovo is characterized by a markedly young age structure. This indicates essentially different demographic potentials for the renewal of manpower and of the total population in the rural areas of Kosovo and in other parts of SR Serbia. The changes in the population density are presented in Fig. 5. The depopulation areas of Serbia proper and Vojvodina are characterized by the decrease in population density and a markedly low concentration of population in Yugoslav scale. Such zones were extended in 1953-1981 parallel to the population expansion in Eastern and South-Eastern Serbia, mountainous regions of Western Serbia and in Eastern Vojvodina. In the same time the zones of high and markedly high concentration of population are succeeding one another and their geographical distribution is related to important urban localities, the valleys of the rivers Sava, Danube and Morava as well as the province of Kosovo.

4. Conclusions

The depopulation of rural areas in Vojvodina and Serbia proper and the expansion of population in Kosovo are the chief problems of contemporary and future demographic development of SR Serbia and Yugoslavia as a whole. Hence, a considerable attention of scholars is concentrated on these problems, their causes and consequences meant in determining and carrying out the population policies to stimulate the population increase in SR Serbia, SR Croatia and SR Slovenia.

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RURAL POPULATION DISTRIBUTION AND MIGRATION IN ENGLAND AND WALES: THE END OF DEPOPULATION?

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This paper is essentially a review of some recent work and ideas on post-war changes in the rural population and its distribution in England and Wales. The focus of the paper is on England and Wales rather than Great Britain or the United Kingdom because much of the British literature on population distribution and migration concentrates on England and Wales rather than on the larger units. However, certain other more broadly based papers are included.

Problems of definition

Until 1974 the term "rural" was applied to a large number of administrative districts, and although one could complain of many anomalies in its use, nevertheless most of the districts concerned exhibited at least some of the characteristics associated with rurality, including relatively low population densities, the existence of farming as a major occupation or other primary production activity such as forestry or mining (although some observers prefer to exclude mining), low levels of manufacturing activity, but relatively high levels of occupation in services. Subject to boundary changes, the rural administrative districts provided a data base which to a certain extent could be manipulated to correct the more glaring anomalies, but in 1974 the problem of identifying the rural areas for data collection purposes was made more difficult by the abolition of the rural district councils. In a sense the problem of rural depopulation in Britain had been eliminated by removing the "rural" data base. What also must be appreciated here is the growing dissatisfaction in British social science with the idea of rurality, except in terms of relatively low geographical densities, i.e. rurality was to be understood as a spatial feature rather than as a socio-economic process. Hoggart's (1988) view that in an explanatory context the

concept "rural" is more hindrance than help is pertinent here. Increasingly there has developed an awareness of the urbanization of the countryside, i.e. the decline or disappearance of distinctively rural activities and the invasion of the countryside by a population of largely urban origins, urban occupations and social connections, and urban incomes. The importance of farming as an employer of labour has declined so much (Table 1) that in most rural districts it is no longer the chief source of employment. Moreover, even in the old rural district council areas a large part of the population was living in small towns which may have had only low levels of employment in manufacture, but which offered occupations in service industries and a concentration of population which suggested an urban rather than a rural character.

Table 1. Totals and percentages of the British working population engaged in agriculture

	a Workers in agriculture (millions)	b Total working population (millions)	a as % of b
1851	1.8	7.6	23
1861	1.8	8.3	22
1871	1.6	9.4	17
1901	1.3	13.8	9
1931	1.3	16.3	8
1951	1.1	17.9	6
1961	0.9	23.7	4
1971	0.7	24.0	3
1981	0.6	26.7	2.4
1985	0.6	27.6	2.2

From: A.Burrell, B.Hill and J.Medland, 1988, Statistical Handbook of UK Agriculture, 43, Department of Agricultural Economics, Wye College, University of London

There is clearly a definition problem in deciding where rurality begins as one moves down the settlement hierarchy. Most geographers concerned with studies in areas they regard as rural are concerned that there is still a set of distinctive features and socio-economic problems in areas with relatively low densities of population even if the distinctions are of degree rather than of kind. Several of them in consequence have tried to provide a definition of rural districts to replace the definition lost in 1974. The most notable of these attempts are Cloke's "Index of Rurality" (Cloke 1977, Cloke and Edwards 1986), which uses Principal Components Analysis to classify a wide range of relevant variables, and the "Functional Regions Framework" of the Centre for Urban and Regional Development Studies (CURDS) at Newcastle-upon-Tyne (Coombes et al. 1982, Champion 1989) which adopts a regional rather than settlement hierarchical framework and includes rural areas in its "Local Labour Market Areas". Simpler definitions are also being tried, such as that of Fothergill et al. (1985), which defines rural areas as those local authority districts which in 1971 (for comparison with 1981) had fewer than 35,000 people and were neither coalfield districts nor suburbs.

Rural population trends

The rural population of England and Wales as defined by the administrative rural districts steadily declined from 1861, when it was just under half the total population, to 1947 when it was just over 17 per cent. This decline was especially marked in the 19th century when the great volume of migration from the countryside to the town led to the formulation of some of the earliest theories of migration, including the notion of return flow or countermigration (Ravenstein 1885). From 1921 to 1947 there were heavy losses from the more remote rural districts in the West and North, but already population increase in areas classified as rural could be observed in the South-east, the Midlands and even in the South-west and North (Willatts and Newson 1953). Inner London was observed to be affected by population decrease from 1931 to 1951 while other metropolitan districts had increases. The biggest increases and the highest rates of inmigration, however, were shown by Willatts and Newson to be in the South-east in an arc round London. Vince (1952) had already tried to distinguish a "primary" rural population (dependent on primary occupations except mining) from a "secondary" or service industries based population and from an "adventitious" population,

either retired or dependent on other forms of employment. He mapped areas of "rural dilution", i.e. areas where the primary population was declining and being replaced largely by the adventitious population. It was already clear that the rate of rural population decrease was slowing down and a pattern of areas of rural gain which were not merely suburban, was emerging alongside the areas of continuing rural loss. Bracey noted in a study of Somerset (1958) that even at the county scale, it was the more remote and less well serviced parishes that suffered the most persistent depopulation.

There had been some increase in the birth-rate of England and Wales in the 1950s accompanied by the beginnings of a major influx of population from overseas. By the 1970s, however, net population growth was down to 0.5 per cent so that most local increase of population was due to migration. The influx from overseas went mostly into the inner cities, compensating to some extent for the out-migratory movement of part of the host population. Rural depopulation was still evident in the 1960s and 1970s and regarded as a matter of considerable concern despite the general recognition of the movement of population of urban origin into the countryside (e.g. Pahl 1965, 1966). Depopulation was thought to be especially characteristic of the remoter rural areas, although Grafton (1982) showed for 1966-1971 that people left the remoter rural areas in broadly the same proportions as from any other part of the country and that such areas were then characterized less by consistent and considerable outmigration than by consistently low inmigration. The introduction by the planning authorities of "key settlement policy" in the 1950s, i.e. the selection of rural settlements for the concentration of statutory facilities, population growth and development investment, was seen initially mainly as a means of reducing rural depopulation, but also rapidly became a device for controlling growth in areas of marked population gain (Cloke 1979, 19-36; 1983, 90-97; Hoggart and Buller 1987, 212-14).

Counterurbanization

The evidence for depopulation mainly came from research at the very small administrative unit level, i.e. parishes and wards. At the larger unit level in the 1970s most rural districts appeared to have net gains of population, although often accompanied by age group and social class restructuring. The population of England and Wales was becoming a little more evenly distributed as the larger urban regions lost population and the more rural districts gained. Table 2 shows the percentage changes of popula-

Table 2. Population changes in South-east England, 1961-1985

	Population in thousands		Population change 1961-1985	Percentage change
	1961	1985	in thousands	1961-1985
Inner London	3481	2512	-968	-27.8
Outer London	4496	4256	-240	- 5.3
Outer Metropolitan Area	4384	5506	1122	25.6
Outer South-east	3710	4918	1208	32.6
Peripheral SE England *	2822	3679	857	30.4
South-east Region	16071	17192	1121	7.0
England and Wales	46194	49922	3728	8.1

* Counties of Cambridgeshire, Dorset, Suffolk, Norfolk, Northamptonshire and Wiltshire.

Derived from Table 1, p. 25 in Cross (1987).

tion in the South-east between 1961 and 1985, illustrating the considerable loss of population in Inner London in contrast with the more rural if somewhat urbanized regions of Outer and Peripheral South-east. Table 3 uses the regions classified by Cloke's Rurality Index to show the percentage rates of population change in England and Wales in the first two decades and the last quinquennium from 1961 to 1985 (Cloke and Edwards 1986, Cross 1987, 34). The two "Non-Rural" regions in the strict sense are not urban, but regions having both rural and urban characteristics and a largery "in-between" location. In part at least they correspond to what has been termed the "Pressured Rural Areas" (Cloke 1978), i.e. areas affected by the spread of urban influences into the countryside. The contrast between the high rural values and the low urban values is clear and there is a considerable gap between the Rural and "Non-Rural" regions on the one hand and the Urban Districts on the other. In the first two decades the two "Non-Rural" regions have the greatest percentage gains and the highest absolute gains, reflecting the considerable movement of population from the metropolitan districts into rural and urbanized rural areas with good accessibility to the major cities (In 1986 the Metropolitan County Councils were abolished, but the terms "metropolitan" and "metropolitan districts" for very large urban areas

continue to be useful). However, between the two decades the rates of change fell in all regions excepting the Extreme Rural region where there was a slight increase. In the half decade 1981-1985 the Extreme Rural region showed the largest gain, but even here the rate for the half decade was lower proportionately than the rates for the previous two decades. In effect the Extreme Rural region simply showed less of a decline in the rate of gain than the other regions. At the same time the rate of loss in the Urban Districts was reduced. These changes will be examined again towards the end of this paper. However, one final point with regard to the table is that, important as the evidence for counterurbanization appears to be in that the 1970s seem to have brought an end to a century of almost uninterrupted urban growth, nevertheless the Urban Districts still contain over 60 per cent of the population of England and Wales.

Table 3. Population change by rurality index classification 1961-1985

Regions	Population 1961 ('000)	Population change in thousands 1961-71	1971-81	1981-85	Population 1985 ('000)
Extreme Rural	2945	210	240	99	3494
Intermediate Rural	4055	496	351	115	5017
Intermed. Non-Rural	4188	707	454	134	5483
Extreme Non-Rural	3843	899	456	88	5286
Urban Districts	31233	643	-1018	-148	30710

	Percentage population change				Percentage of national popn.	
	1961-71	1971-81	1981-85	1961-85	1961	1985
Extreme Rural	7.1	7.6	2.9	18.6	6.4	7.0
Intermediate Rural	12.2	7.7	2.3	23.7	8.8	10.0
Intermed. Non-Rural	16.9	9.3	2.5	31.4	8.9	10.9
Extreme Non-Rural	23.4	9.6	1.7	37.6	8.3	10.6
Urban Districts	2.1	-3.2	-0.5	-1.7	67.6	61.5

Derived from Table 3, p.34 in Cross (1987).

Using the Local Authorities as the statistical basis, Fig. 1, the map of percentage population changes in England and Wales 1971-81, gives some indication of the counterurbanization changes (Robert and Randolph 1983 and also shown in Cross 1987). Gains appear in a great arc around London with its heavy losses in the inner city and considerable losses even in the peripheral areas. There is gain throughout East Anglia, the rural Midlands and the South-west with losses again in the larger urban areas. There is some depopulation in northern uplands but there are also marked gains in remote Pembrokeshire and Anglesey and especially in Mid-Wales. There is a clear picture of widespread rural gains and urban losses with population increase spreading outwards even to the remoter rural regions.

Robert and Randolph (1983, 90) claimed that "the last vestiges of rural depopulation seem now to be rapidly disappearing" and Weekley (1988) thought that "rural depopulation no longer seems to exist". Certainly in England and Wales one can accept Weekley's observation that the characteristic landscape of depopulation - derelict cottages and decrepit thatch and housefronts, together with low property prices - is now seldom found. In many rural districts throughout England and Wales affluence has appeared as urbanite immigrants have bought and improved existing properties or built new, larger houses. The changes in population distribution were seen by many as very different from the distribution of the past and involving a marked turn-around in the patterns of migration. Recognition of the distinctive character of the new situation led to the use of the term "counterurbanization", already in use in North America where similar trends had been recognised much earlier (Dean et al. 1984).

Counterurbanization was recognised in England and Wales as not simply a spreading outwards of the urban population by suburbs into areas still classified as rural, but as a reduction of the core area population of the larger cities accompanied by increases in the population of distinct villages and small towns. The existence around a number of metropolitan districts, and particularly round London, of Green Belts or statutory areas, where planning controls limited industrial and housing development, effectively prevented the suburbanization of the peri-urban countryside and helped to promote the appearance of a distinctively rural spread of population. However, apart from the question of the planning controls, the population movement involved not only decentralization or movement outwards from the central city but deconcentration or movement apparently down the urban

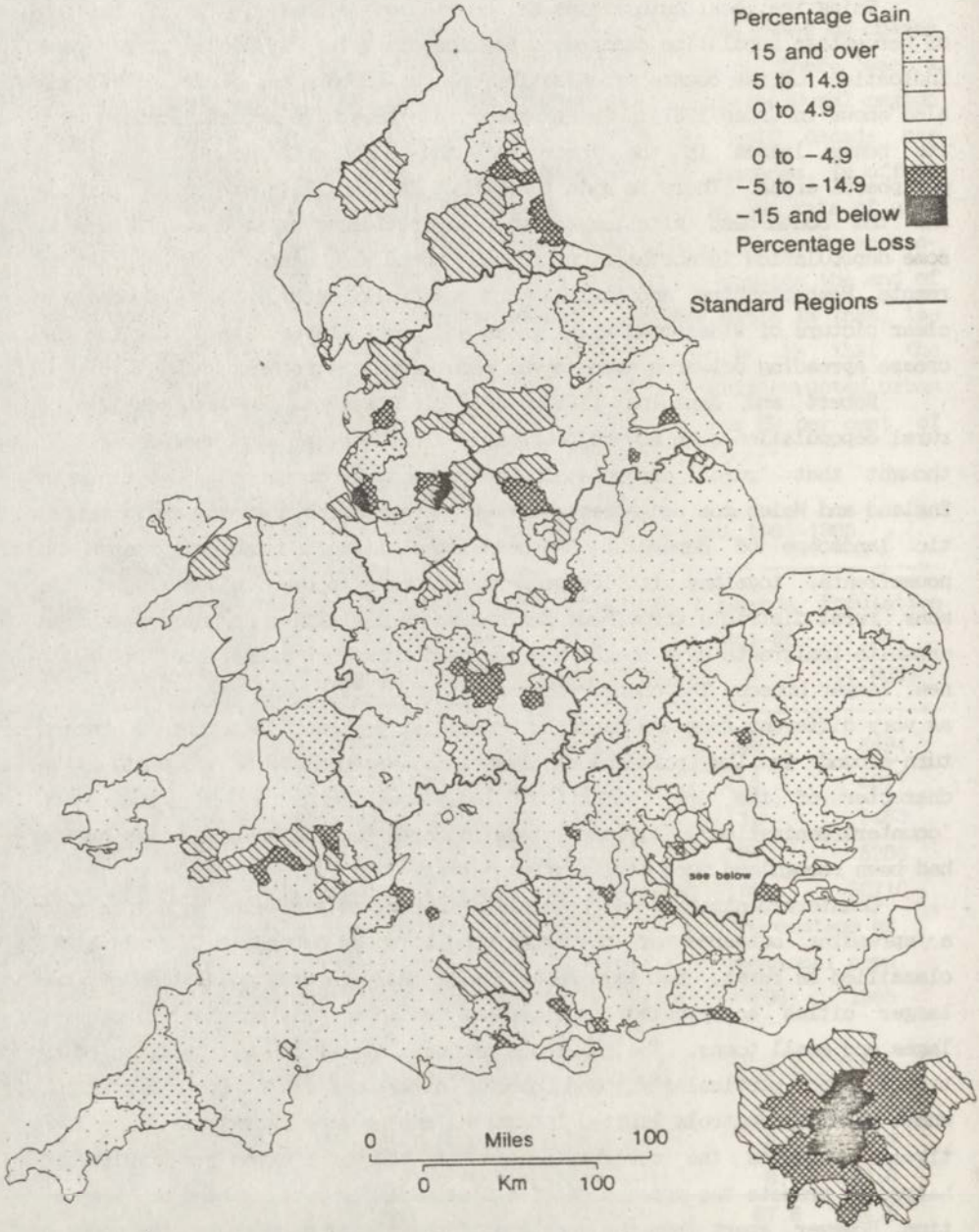

Fig.1. Percentage population changes, 1971-1981, for local authorities in England and Wales

Source: Robert and Randolph, 1983

hierarchy, between city regions and into rural areas (Robert and Randolph 1983, 78). Connell (1974) argued that population growth by the settlement of urbanites in villages, the so-called "metropolitan villages", was essentially the product of stringent planning regulations, although he admitted that similar developments had occurred elsewhere in developed countries where the planning regulations were less stringent. Counterurbanization has also been described as the logical opposite of urbanization, a process in which migration is inversely related to settlement size, i.e. assigning negative values to out-migration from the cities (Fielding 1982). Analysis using the CURDS framework of Functional Regions (Champion 1989) showed a consistent trend towards deconcentration over the last 15 years for all three regional levels in the framework hierarchy.

Major factors in counterurbanization

The movement of population from the larger British cities into the countryside has a number of components. Firstly one may consider the movement of those who continue to work in the city, but want homes in more spacious surroundings away from urban congestion and a supposed higher incidence of violence and crime. Improved services in many rural areas or adequate access by car to a small town node have made it possible to continue an urban life style in the country. Improved transport has made possible rapid commuter transit paid for by increased middle class affluence. The prewar commuter railway system encouraged the spread of low density suburbs, especially around London, and the earliest "new towns" such as Welwyn Garden City, but the greatest spread of commuter homes came with general car ownership and the building of motorways and an improved dual carriageway network. Table 4 shows the number of cars per thousand population in 1987 and the average number per household, which in the peak county of Hertfordshire reached nearly 1.2 compared with an English average of 0.85. In Great Britain over 60 per cent of households have the regular use of a car and about 18 per cent have the use of two or more (more than 70 per cent and 26 per cent respectively in South-east England outside Greater London) (Central Statistical Office 1989). An important early factor was cheaper land and lower house prices, a factor which has largely disappeared in the more accessible and more desirable rural areas.

A second factor, especially characteristic of the 1970s, has been the growth of manufacturing industry and of office developments in rural loca-

tions. Table 5 shows the changes in the number of manufacturing jobs in Great Britain by urban and rural locations between 1960 and 1981. Despite the existence of some planning controls affecting industrial location, the growth of manufacturing in rural areas has been largely unplanned. There is a considerable contrast between a 24 per cent increase in the rural areas by 1981 and a 43 per cent decline in the conurbations, including a 51 per cent decline in London. However, the percentages conceal the modesty of the rural

Table 4. Cars in relation to population in England and Wales in 1987

	Cars per thousand population	Cars per household
United Kingdom	320	0.82
England	331	0.85
Wales	308	0.82
South-east England	363	0.93
Hertfordshire (maximum)	447	1.19
Tyne-and-Wear	219	0.56

Total cars in England and Wales: 16.6 millions
Average size of household: 2.6
Derived from tables in Central Statistical Office 1989

Table 5.The urban-rural contrast in manufacturing employment change, 1960-81

	Change in number of manufacturing jobs	As % 1960
Rural Areas	128,000	24.2
Small Towns	-22,000	-1.4
Large Towns	-165,000	-17.9
Free Standing Cities	-381,000	-28.6
Conurbations	-987,000	-43.2
London	-688,000	-51.4
Great Britain	-2,115,000	-26.3

Taken from S.Forhergill, G.Gudgin, M.Kitson and S.Monk, 1985, table 8.3, 149
Source: Department of Employment

growth in absolute numbers. Most of the fall in the number of manufacturing jobs in London was only partly due to industries moving out. There was a great deal of industrial decline and failure. As Fothergill et al. (1985) pointed out, the jobs disappearing from the cities were mostly not the same as those appearing in the rural areas. Some of the firms which physically relocated built new more capital intensive plants employing less labour. The basis for this new growth was not particularly strong - about the only consistent advantages of the more rural locations are cheaper, good quality, serviced industrial land and residentially attractive evironments, although it has been argued that where firms want to maintain employment levels whilst increasing capital intensity, the existence of land for expansion in rural areas is an advantage (Fothergill et al. 1985). Another factor, argued by Massey (1984), has been the increased importance of the hierarchical and functional spatial division of labour, which means in both factories and offices that locations can be differentiated by the different roles their constituent business may play in the productive process rather than by their character in relation to major industrial sectors as before. In many industrial activities there is no longer any need to have all of a given business activity or productive process on one site - there may even be positive disadvantages in doing so. Thus the "front" office may need to stay in a high cost core area site while the "back" office may be removed to a lower cost or otherwise more attractive location. Gillspie and Green (1987) suggest that costs in rates, rent and salaries in backoffices tend to level out at 80 miles from London while communications costs rise with distance, producing a limited dispersal centred on London. In manufacture many of the industries locating in the more rural areas are "hi-tech" firms in electronics and computing or are in the expanding food processing sector. High technology industrial growth has appeared in small towns near the M1 and M4 motorways around London and in university "science parks" outside the metropolitan areas as at Cambridge. Nevertheless, as Keeble (1989) notes, although high technology industry in recent years (1981-84) has only been expanding in the Rural and Less-Urbanized counties, the great preponderance of high technology employment is still in the More-Urbanized counties and the Conurbations. Planning has been an important if limited factor in industrial and office dispersal, especially from London, and in attempts to promote rural industrial activity through the Council for Small Industries in Rural Areas (COSIRA), the English Industrial Estate Corporation (EIEC)

and the Development Board for Rural Wales. In many rural areas service industries employ the highest proportion of labour. Some of these, such as research and development firms, have a national character, but others are of localized importance. The invasion of an urbanite population and the increased capital investment in agriculture have created a considerable demand for services. In the more attractive locations at seaside resorts, especially in the South-west and West and in the uplands, tourism has grown markedly as leisure time and real incomes have increased, and it tends to be labour intensive. In the remoter locations it has certainly been more effective in the creation of jobs than manufacturing. Dower (1980) found in Cornwall and Pembrokeshire that in direct and indirect employment tourism supported 11 per cent and 10 per cent respectively of the civilian workforces.

A third factor in counterurbanization is the migration of the elderly. Higher retirement incomes, increased early retirement and a preference for a more rural environment, often based on holiday experience or on the use of a second home, have combined to encourage older people to migrate, even to the more remote locations. Law and Warnes (1976), using 1966 data, showed that the main source of elderly migrants was London and the main destinations were the South-west, East Anglia, Wales and the outer South-east. The combination of this movement with the continued out-migration of young adults from the remoter regions has produced a markedly peripheral orientation of older people with especially high concentrations in the southern coastal counties, including over 10 per cent of population aged 75+ in East Sussex, Dorset and the Isle of Wight.

Rural depopulation since 1961

Despite the evident counterurbanization trend, rural depopulation was still being observed and measured, but at localized scales. Thus Jackson (1968) found depopulation in the hill areas of Gloucestershire next to population growth in lowlands accessible to the West Midlands conurbation. Drudy (1978) found population loss due to changes in the agriculture of North Norfolk. Between 1971 and 1981 28.4 per cent of the Suffolk parishes with less than a thousand people each in 1981 had either lost population or stagnated, whilst Powys in mid-Wales recorded depopulation in a third of its smaller communities (Weekley 1988). Weekley also noted that in the 5 counties of the East Midlands 46 per cent of the parishes with less than a

thousand people each by 1981 had all been affected by depopulation. In East Sussex, a county with considerable population increase, Rowsell (1989) found depopulation in parishes which were not remote and which could not be explained by planning controls. He suggested that it was due to the preference on the part of certain estate owners to keep villages as traditional communities, i.e. to avoid investment in development.

However, in some counties planning controls appear to have been effective in limiting the number of houses built in rural areas and in directing development to selected "key" locations whilst trying to prevent it in others. This policy of deliberately uneven spatial development inevitably promoted growth in some rural locations whilst resulting in depopulation in other neighbouring locations. It all depends on the stringency with which planning policy is applied. If concentration of the landward oriented rural population is seen as essential for the provision of basic services, and a concentration policy is applied, then population shifts must occur. At the same time the rural population map is affected by the extent to which industrial development is permitted and the development of new urbanite and retirement communities is allowed or encouraged. Meanwhile agriculture continues to shed labour, more especially in the grain growing regions of eastern England, although at a lower rate than in the past. Young adults continue to find the need to migrate in search of work, because of limited rural job opportunities, whilst in some rural districts women tend to have fewer job opportunities than men and to be more migratory.

Other migration trends

Movements from rural to urban locations or from urban to rural are not the only migratory movements to have affected the population distribution of England and Wales. Moreover, many of the movements described as between urban and rural locations may not have had the objectives of seeking either urban or rural locations as such, as locations classified as urban or rural may also be classified in other ways, such as Northern or South-eastern, coastal or inland, and economically depressed or affluent.

Currently several British geographers are concerned with the validity of a division between North and South. A recent paper (Green 1988) claims that the concept of a "North-South" divide or "Two Nations" is valid despite spatial variations in the criteria used to determine the divide. The lack of uniformity is much less than the marked regional contrasts. The "North",

which was at the forefront of Britain's economic expansion in the third quarter of the 19th century, now shows relative economic decline with much lower economic prosperity and power, higher levels of current and long term unemployment, poorer employment opportunities in both number and quality, over-representation of manufacturing and under-representation of services, lower house prices and a poorer health record. Martin (1982) showed how in the 1979-81 industrial slump the distribution of job losses dramatically reinforced the contrasts between "North" and "South" and later (1988) illustrated the North-South contrasts in some detail. The higher costs of housing in the "South" make migration from the "North" difficult. Nevertheless migration southwards is taking place. In 1987, for 252,000 out-migrants from the Standard Regions of North, North-west and Yorkshire and Humberside, (used here as a combination in a major region representing the "North" of Green's argument, but omitting the Midlands which have some characteristics of both "North" and "South") 193,000 left this major region of the North, and 108,000 or nearly 56 per cent of the latter went to a "South" consisting of Greater London, the Rest of the South-east, East Anglia and the South-west (Central Statistical Office 1989, 62). There was a return flow from the South of 93,000, so that the new flow from the North to the South, as defined here, was only 15,000. The biggest migration contrast between the two major regions was in the volume of migration within them, i.e. between the "Standard Regions". In the North it was 59,000 or 23 per cent of all those migrating. In the South it was 439,000 or 64 per cent of all migrants. Whatever the origins and destinations of these movements in terms of an urban-rural classification, one can see them as evidence of a less desirable North and of a not insignificant North to South drift of population from relatively poor to relatively prosperous regions. Mason and Harrison (1989) noted that the government's Business Expansion Scheme to aid small businesses has been more effective in the South-east and has reinforced the economic advantages of the "South". Fielding (1989) noted the importance of the South-east in attracting highly qualified young adults, in converting some migrants from low level "white collar" workers into members of the professional, technical and managerial class and in exporting middle aged professionals and managers to other regions.

The decline of counterurbanization ?

There is evidence that since 1981 the movement out to the rural areas

has been slowing down and that growth is once more taking place in the metropolitan districts. Some of this evidence appears in Table 3 where the loss from the Urban Districts in 1981-85 has clearly been reduced compared with 1971-81, even allowing for the reduced length of the period. Champion (1987) examined post-1970 population shifts and indicated that there was a turn around in population movement after 1980 in which a relatively high growth rate had returned to the more urbanized South-east whilst peripheral and more rural Wales exhibited population decline. Growth had also returned to the Inner London boroughs, although not to other metropolitan districts such as Liverpool and Sheffield. Investment in urban renewal and in such major developments as that in London's Docklands may be seen to be having an effect. However, Champion (1987) warns that "population decentralization is by no means a spent force". The evidence for England and Wales is mixed, current investment policies may change and one 5 year period is not enough to make a judgment.

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DEPOPULATION IN THE RURAL AREAS OF FINLAND AND PROSPECTS FOR A SOLUTION

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During the last twenty years there has been a structural and regional centralization of population and functions in Finland. This has manifested itself in the strong growth of centres and built-up areas and in the reinforcement of their hierarchical structure, together with the retarded or even declining development of peripheral areas. The situation has led to a re-evaluation of the productiveness of the regional policy conducted by the central administration in individual communes. This is because traditional means have proved insufficient to guarantee balanced demographic and economic development, while the rise in unemployment in peripheral areas in particular has caused great concern. Admittedly the demand for skilled, highly educated labour has remained stable, but work is becoming concentrated in fewer and fewer growth areas. The peripheral communes, facing an insecure future and characterized by agriculture and a narrow economic structure, have been forced to search actively for new solutions to their problems and to try to find more efficient ways of utilizing their existing resources. One key area has been to stimulate small-scale businesses and increase their efficiency.

Main outlines of development in Finland

Socio-economic and regional changes typical of western societies were late in reaching Finland, but once they had begun they took place all the more rapidly (Naukkarinen 1987). The population living in the rural communes reached its post-war maximum in absolute terms in the mid-1950s, accounting for approximately two-thirds of the total population. In 1986 the corresponding proportion was 38.2% (STV 1988:38). These figures, based on the administrative division of the country into rural and urban communes, serve to provide a good general impression of what has happened to the basic

settlement pattern in Finland, but they do not provide an entirely adequate picture of the changes in the functional structure of settlement. The built-up areas, as defined with common criteria for all the Nordic countries, contained 56% of the population of Finland in 1960 and 76% in 1985, the figures being 92% for urban communes and 53% for rural communes (SVT VI C:106:XIII:23 and SVT VI C:107:V:67). According to predictions made by various authorities, this concentration of the population into built-up areas of different types and sizes will continue (see Ymparistoministerio ja Seutusuunnittelun keskusliitto 1986:11-12).

Again, these figures do dot yet indicate how this change has affected the various regions. Generally speaking (Fig. 1), there has been a continual concentration of population in the south and south-west of the country and to a lesser extent along the west coast, while at the same time the larger population centres in these regions have been subject to a certain amount of decentralization (see also Naukkarinen 1981a and 1981b and Alestalo 1983). Elsewhere in the country a movement towards the urban centre is a characteristic feature, and in the extreme north the great distances involved mean that any commune centre has the same power of attraction as the true urban centres have in other areas. On the other hand, many urban communes, especially in central and eastern parts of Finland, have been losing population during the 1980s.

Alongside these changes in urbanization and settlement structure, one may point to a continuous alteration in occupational structure. Where the primary production sector (agriculture, forestry and fishing) employed about a half of the economically active population in 1950, this proportion had decreased to one third by 1960, by which time the primary, manufacturing and service sectors employed roughly equal proportions. Since that time the change has been a very rapid one due partly to the problems of overproduction in agriculture. In 1985 about 10% of the economically active population gained a living from primary occupations (Table 1), while the corresponding figure for rural communes was about 18% (STV 1988: 47). At the same time the service sector has expanded markedly.

Pronounced migration, which has so far been directed towards the cities and developing centres of the rural communes, mainly in the form of commune-internal migration flows in the latter cases, has done much to alter the regional settlement and population structures. In terms of the rural-urban migration pattern, there are three major phases besed on dominant

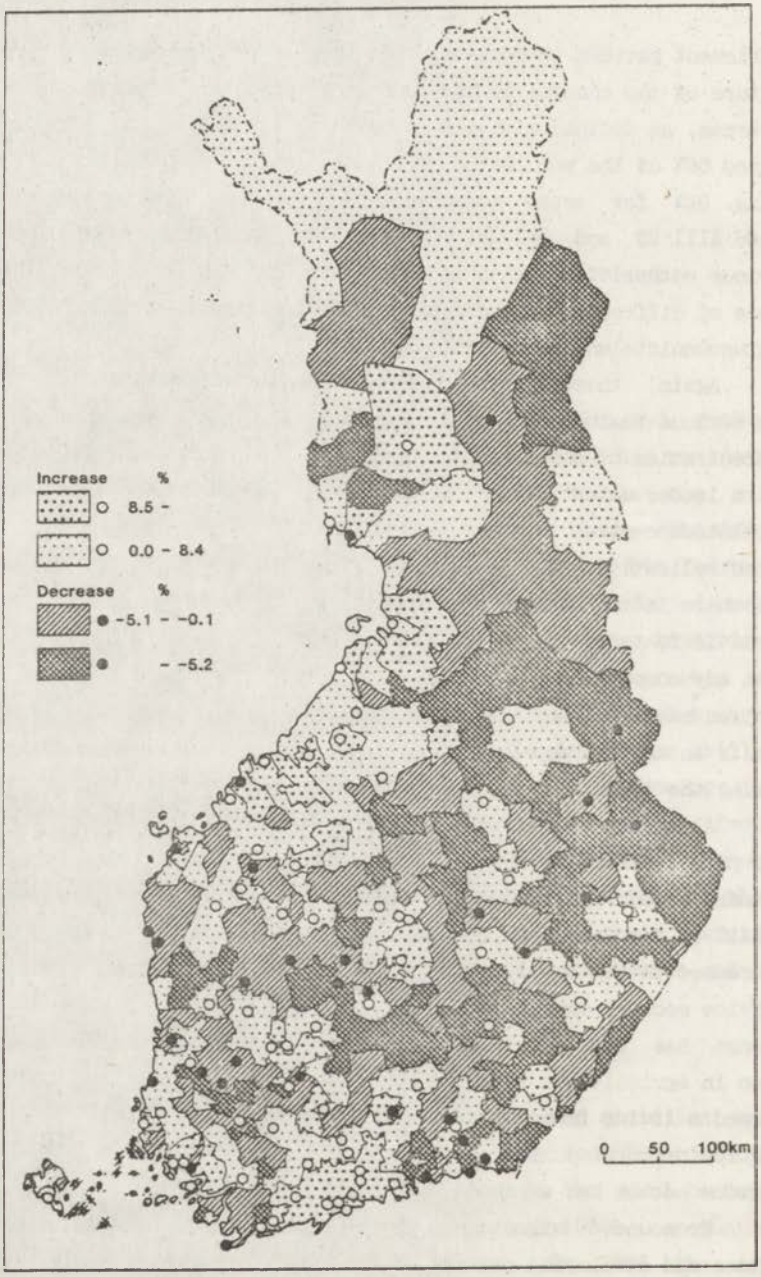

Fig.1. Population change by communes between 1980 and 1988. Urban communes are indicated by dots and circles (STV 1981 and SVT, väestö 1989:2).

Table 1. Economically active population by industry at the end of 1970, 1980 and 1985 (SVT VI C:107:V:41)

Sectors	1970	%	1980	%	1985	%
Primary:						
Agriculture, forestry and fishing	429010	20.3	279175	12.6	241831	10.6
Secondary:						
Manufacturing and construction	726292	34.2	741348	33.4	722596	31.7
Tertiary:						
Commerce, transport and services	933912	44.1	1151548	51.8	1304935	57.3
Unknown	29036	1.4	50068	2.2	7525	0.3
Total	2118257	100.0	2222139	100.0	2276887	100.0

migration flow to be seen since the early 1950s (Fig. 2). Migration between rural communes was the most important feature up to the first years of the 1960s, and this was followed by the "rural exodus" which came to an end at the beginning of the next decade. The third phase, which is dominated by migration between urban communes, is a fairly recent phenomenon in Finland. In the case of people of working age in areas of excessive migration, migration first emphasized the proportion of the young age-groups and only later that of the old age-groups. Measured in terms of the average age of the population, however, the differences between areas losing population and those gaining population have so far been relatively small. The "turnaround" phenomenon (migration from urban areas to rural areas) which attracted considerable attention in the industrialized countries in the 1970s can be seen in migration flows in Finland from the latter half of the 1970s onwards, although its influences have been restricted to very limited areas in the immediate vicinity of growth centres.

One phenomenon which has attracted increasing attention during the last few years in terms of the changing population structure and which seems

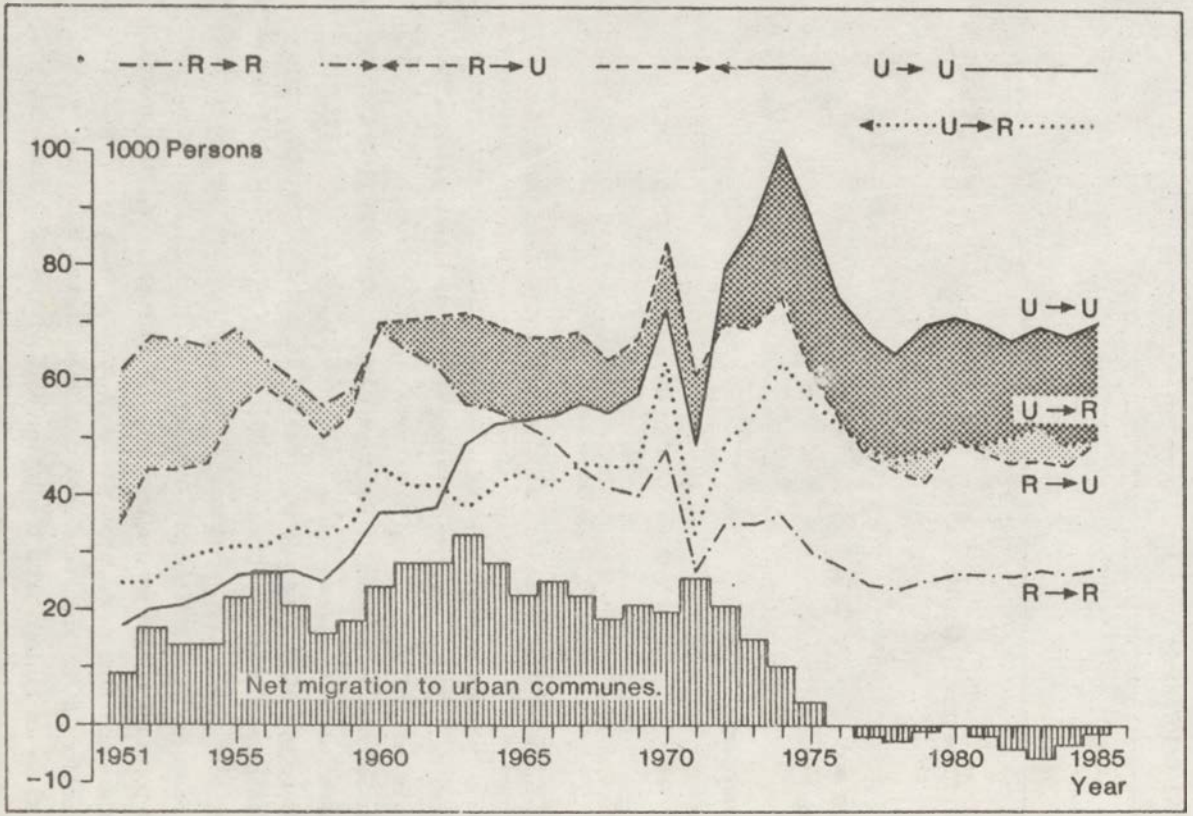

Fig.2. Trends in rural-urban migration flows and net migration to urban communes in Finland between 1951 and 1985 (Myrskylä 1978:100, STV 1980:77 and STV 1988:103).
R - rural commune, U - urban commune

to be developing into a rapidly growing problem in rural development, has to do with the ageing of the population. This is a fairly new feature in Finland and has not spread as forcefully as in some Central European countries, even though the basic trend is the same and its speed increasing. The most important demographic reasons lying behind it are the extended expectation of life and the declining birthrate.

Probably the simplest way of looking at the rise of regional features in the ageing of the population is through changes in the proportions of the oldest age-groups. While the proportion of people of age 65 or more was 9.3% in 1970, the corresponding figure in 1985 was 12.6% . For rural communes it was 13.5% in the same year (SVT VI C:107:V:41). The constant out-migration of young people of working and childbearing age, the smaller size of the families and especially the considerable growth in the proportion of unmarried farmers have resulted in a pattern in which the proportion of elderly inhabitants is clearly highest in South-West Finland, especially in the island communes, from where the phenomenon has gradually spread to reach most of the rural communes of Southern and Central Finland.

In addition to this, detailed material compiled on a square kilometre grid system covering the whole country from the population census of 1985 reveals that the border areas of the individual communes are becoming more and more inhabited by old people, as is also true of the major city centres, where old people come to be near the services that they need. The populations of the cities themselves are nevertheless very much younger on average.

The ageing of the rural population is most in evidence in the absence of the young age-groups. The situation seems quite shocking when viewed on the basis of the grid material from 1985, as about 60% of the inhabited squares did not have any children under seven years of age, i.e. children under school age. Practically all such squares represented country districts.

Since the above trends have been reflected in a weakening of the economic base in rural areas and a deterioration in the employment situation, and since traditional regional policy measures have not sufficed to ensure balanced areal development, attention will be focused further on the opportunities open to local authorities to improve conditions in their own areas. The principal emphasis in the examination and evaluation will be on the provision of encouragement and support for small businesses, as it is on

these that most rural authorities have pinned their hopes in recent years.

Role of the local authorities in promoting areal development and entrepreneurship

The local authorities, whose basic role is to promote general welfare in their areas, can resort to various means to implement their economic and development policies (see e.g. Nupponen 1986). At the first stage they can try to create favourable conditions in their areas for firms to establish themselves and function properly. Traditional ways of doing this have been to promote the supply of building sites and business premises, infrastructure, services, apartments etc. Industrialization policies of this kind were especially common in industrialized communes after the Second World War, enabling them to develop their functional and production structure simply by promoting general industrial conditions up to the 1960s. In those days the provision of direct economic support was not considered to lie within the scope of the local authorities.

In the late 1960s the rural communes, which had suffered major migration losses and had not achieved the expected levels of industrialization, began to practice a more active development policy. As the number of jobs in agriculture and forestry had declined and population figures had dwindled, they had to diversify their economic structure. The aim was to create a local functional environment which would attract manufacturing industries from elsewhere and help to encourage local entrepreneurship. The first local authorities to take such measures could be expected to profit most from the general developmental trend. Such developmental activity also spread to the declining industrial areas in the 1970s.

The expansion of the public sector, and especially the service sector, since the 1960s has posed new challenges for the economic and development policies of the local authorities, and these have adopted various strategies for developing their services. Firstly, conditions for the private service sector have been improved and this sector has received direct support. Secondly, the local authorities themselves have started to provide new services which have traditionally belonged to the private sector. The third operational model has been the active expansion of traditional services, e.g. by obtaining the necessary government offices within the area of the commune. Special attention has been paid to functions which are important for encouraging entrepreneurship in the area.

All in all, the old passive attitude has in most cases given way to an active developmental policy, including more efficient use of local resources. Special local conditions determine the number of measures taken and emphasize areas to be transformed through social development, and especially through changes in small-scale businesses.

More recently the local authorities have turned away from the inducement of businesses and have started to pay attention to the problems of the firms already situated in their own area and how these firms could be further developed. It is understood that the creation of new jobs cannot be the only goal of economic policy nor the standard for judging how well it has worked. It is equally important to maintain existing jobs as well. The firms operating in the commune already have an idea or a product, the means of production, the premises, the staff, customers, contacts, markets and other organisational contacts which are necessary for successful businesses. Some of the above factors may not be properly established, of course, and they are reflected in problems of various kinds within the firm, but in most cases solutions can be achieved with smaller investments than would be necessary to support entirely new firms.

The local authorities are naturally also interested in new entrepreneurs, because they offer the easiest way of expanding the basis of the economic structure, but the exploitation of ideas which are based on highly innovative and large markets is risky and in the long run requires a large company. The starting point is much more favourable if the idea has originated as a result of a demand arising out of the local cultural heritage and special conditions. The centralization of production, the rationalization and standarization of products, and the decrease in the selection available offer great challenges and possibilities for businessmen with new ideas.

Prospects for general development and entrepreneurship in rural areas

It is possible to list some general and local factors which may influence the creation of entrepreneurship in rural areas and its future prospects.

1. Many rural communes are about to lose, or have already lost, their best asset, a supply of young, cheap labour. Modern industry has very exacting requirements in terms of labour. The rapidly developing electronics industry, for example, approves only young, highly educated people or people

whom it is capable of retraining. Applicants are accepted by firms only after tests. Also, there must be enough labour available in the place where the firm is or will be operating. Few rural communes can market themselves on this basis, as only the largest rural centres come into consideration.

2. Very few firms are interested in the middle-aged, not to mention elderly workers, whose retraining seems to be possible only in a firm which is already operative and is responsible for its own recruitment. The turnover in staff is greater in such cases.

3. The importance of educated people on the labour market is increasing, and project-type tasks of short duration but well paid, are becoming more and more common. This means that one can no longer plan one's future on the basis of the permanence of one's job but instead one has to be prepared for changes in employment and place of residence. Admittedly, this would favour living in a rural area if mobility in its different forms could be accepted as a basic element of one's way of life.

4. At the present moment it does not appear likely that fairly large, labour-intensive firms will move into sparsely populated areas, as low population density and peripheral location are problem factors for businesses. This is still the case despite the fact that the role of transport and communication costs as a production factor is constantly decreasing.

5. Differences in labour costs between locations for companies are of minor importance because basically the same wage must be paid for the same kind of work. The lack of labour in some areas will increase labour costs, of course, but hardly to such an extent that firms would avoid these areas. In any case, the branches with increasing labour costs tend to represent growing and rapidly developing firms whose financial returns are good.

6. New firms which have to do with the development of data processing and applications of high technology in some way or an other have a wide choice of location, as they do not cause any pollution. Primary factors concerning the environment and the quality of life, such as opportunities for pursuing leisure-time interests, can affect the result unless the owner or originator has specific ties with the place where the firm is located.

7. It is no use putting too much emphasis on the role of environmental factors in Finland, however, as there are no large-scale environmental problems and the physical conditions within the country do not differ to such an extent that people would choose their place of residence on these

grounds. The situation is different at the local level, however, but even then the criteria will mainly be based on changes in the hierarchy of personal needs and the phase in the individual's life-cycle. "Fashion factors" will grow more important, "it is great to live in a particular area", but the "depths to the countryside" would appear unlikely to attract many people even if it became fashionable to live in such places. The areas surrounding large population centres are quite a different matter.

8. Most Finns have strong feelings towards the countryside because many city residents have childhood links with the countryside or their roots are to be found there. Thus at least part of their leisure time is spent in rural surroundings. According to the latest statistics, one Finnish household in four owns a second home, perhaps the highest figure in the world. The urban culture does not yet have strong traditions in Finland, and it is justifiable to claim that Finnish culture relies strongly on the environment of the countryside.

9. A typically rural way of life is reflected in people's behaviour and values. An ideal place of residence is one which is as near to nature as possible and there must be a plenty of space. The changing seasons and the rhythm of functions connected with it still influences the behavioural patterns of first-generation urban dwellers.

10. The days of large nation-wide infrastructure programmes are practically over. At that time the local authorities were forced to carry out the decisions made by the government and received financial support to do so. Now they have to develop their areas on the basis of their own material and intellectual resources. The points of departure differ markedly from one commune to another. The differences in basic material resources are not as considerable today as in terms of intellectual resources or on the level of attitudes in particular. One could very well say that by comparison with the communes at the top of the development scale, many are still living according to the thinking and functional patterns of the 1950s.

11. The local authorities have reached a dead end in their developmental options. Results must be achieved, and the residents measure or evaluate this by comparing their own commune with the neighbouring ones. It follows that they are facing a new competitive situation, which also places a strain on cooperation between them. Earlier, local authorities used to agree on the regional location of public services and the covering of the joint costs, for example, but today each selfishly seeks only its own benefit and there

is a danger that earlier forms of cooperation such as district health services, vocational training or provincial planning associations may disappear. These are functions which have constantly entailed increasing, above-average costs for individual authorities, while the possibilities for controlling them in terms of the use of tax revenues have decreased.

12. Today every local authority has some kind of development project aimed at attaining certain general or restricted goals. The communes have in most cases found their own know-how resources inadequate and have started to seek help from the universities, which have been persuaded to act as leaders in this developmental work, i.e. there has been strong pressure for the universities to fulfil their provincial and local obligations and expectations in addition to their universal scientific function.

13. At the same time as the communes have been looking for new partners for cooperation in their own developmental programs, they have been stepping on the toes of organisations which have earlier been responsible for certain tasks (arranging training courses for farmers or hiring experts, marketing consultants, agricultural advisers, etc.) and this has occasionally hindered the development work in the rural areas, which desperately need all the help they can get.

14. Successful development work nowadays requires solid cooperation between numerous authorities, organizations and interest groups both inside and outside the commune, in which the growing number of experts play a prominent role. Accepting and learning new functional patterns takes time, however.

Developing rural areas

The structure of entrepreneurship is changing enormously, and a classification based on traditional functions, occupations and descriptions of professions is no longer adequate to deal with this change. The proportion and variety of combinations of professions is increasing continuously. One has to be able to combine vocational skills with entirely new functions. It has become more and more difficult to make a difference between primary production, processing and services, especially when functions which used to be considered to belong to the service sector are now associated more firmly with other main sectors.

Even though the traditional occupations will have a significant role in the functional development of the countryside in the near future, and al-

though regional development in general seems to favour centres of varying size, certain developmental lines and functions seem to offer possibilities for promoting entrepreneurship in the future. Some principles which should lie behind the encouragement and guidance of entrepreneurship in rural, and especially peripheral areas in Finland are noted in the following.

1. Development efforts should above all be directed towards firms that are already in operation, as these possess a business idea, means of production, staff, markets and (other necessary) connections, although problems may occur in all these areas. In addition, it can be assumed that these firms have a basic idea of what running a business is all about.

2. The point of departure in development should be to satisfy local demand, i.e. to support activities that serve the population of the area. New opportunities of this kind are constantly being created in the primary sector, processing and services as general development approaches even greater levels of centralization and standarization. This in turn means even fewer products and longer delivery distances.

3. The above means that one must be able to satisfy individual needs, which are becoming ever more versatile and demanding. This, of course, places considerable demands on an entrepreneur, who has to be a real expert in his field and has to be able to give individual service and, if necessary, to package services on the basis of expertise in different fields. He must thus be able to cooperate with other entrepreneurs and experts in his and other related fields. It is important to encourage and develop flexible, integrated manufacturing and service firms based on sufficiently high levels of skills.

4. Furthermore, priority should be given to those branches of entrepreneurship and expertise which have traditions and are connected with the local culture. Individuality and distinctiveness are features that will sell.

5. Special attention should be paid to firms which are attempting to improve their operating conditions and competitive ability by means of modern technology. It is especially important for firms in the peripheral areas to try to utilize the opportunities offered by technology, and this in practice means rationalization. Where small firms are concerned, however, any actual decrease in labour will be negligible. Usually the influence of new technology in the periphery, where people are more likely to use innovations rather than to develop them, can be seen in some reduction in the

demand for labour.

6. It should not be considered altogether impossible that an innovation relying on some local demand or other idea may see the light of day in a development or rural area, but it would be unlikely to remain in the area because of high product development costs and marketing investments. Firms have to be able to act quickly and simultaneously over a very large area, and this is possible only through a large organisation capable of taking risks.

7. Complete subcontractor arrangements are worth studying and supporting in rural areas, although firms with no know-how or material development inputs are unlikely to succeed in the long run. This is especially true where parent or cooperative companies at the level of national or international markets are concerned. The situation is different for a firm relying on local markets.

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PROBLEMS OF DEPOPULATION OF RURAL AREAS IN THE INTERNATIONAL PERSPECTIVE. A SUMMARY OF DISCUSSIONS

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Discussions, which took place during the Seminar, concentrated around the problems of depopulation of rural areas in various countries, and of migrational flows between rural and urban areas. Sometimes discussions were taking quite a spontaneous character, so that questions and answers mixed with more general statements. Some questions have been considered several times, in various contexts. In this situation it would be difficult to present chronologically, sequentially all the pronouncements. Thus, the present summary gives the comments as to the main questions considered in discussion and, wherever applicable, draws some general conclusions. Discussion itself, however, shall rather be presented in accordance with the sequence of the seminar sessions devoted to various subdomains.

During the opening session of the seminar, after the introductory words of the vice-director of the Institute of Geography and Spatial Organization of the Polish Academy of Sciences (IGiPZ PAN), Professor Marcin Rościszewski, a short speech of the representative of the Ministry of Agriculture, Forestry and Food Economy, and the basic introductory lecture of Professor Andrzej Stasiak, first more general problems were taken up in the discussion.

Over the last few years the problems of depopulation of rural areas have become the subject of interest in Poland from the point of view, on the one hand, of necessary practical actions, and on the other hand - of the scientific research conducted within various research programs. Thus, for instance, the Ministry of Agriculture, Forestry and Food Economy prepares a special document dealing with this question, having primarily for its purpose determination of directions for regional policies in the domain of rural and agricultural development. Simultaneously, in central scientific

institutions, such as the Institute of Geography and Spatial Organization, the Institute of Rural and Agricultural Development, the Institute of Philosophy and Sociology, the Institute of Agricultural Economics, the Main School of Planning and Statistics, as well as in a number of scientific institutions located in various regional centres, scientific studies have been conducted for several years already aiming at explanation of conditions in which the processes of population loss in rural areas take place, and at formulation of more general theoretical and practical conclusions related to these questions.

Professor Rościszewski did in his opening speech turn attention towards the great significance of the subject of migrations between rural and urban areas for the current stage of socio-economic development of the countries of Central and Eastern Europe. This subject, though, is also important for other, European and non-European countries, in which urbanization process is still going on. Speaking on behalf of the authorities of the Institute Professor Rościszewski declared the readiness of the Institute to take care of the international studies in this domain. This declaration was met with lively reaction of the participants of the Seminar. Decision was made during the Seminar of initiating the work aiming at the establishment of an international centre of studies on rural-urban migrations in countries of Central and Eastern Europe.

During a further discussion conducted within the framework of the first session a lot of attention was devoted, for instance, to terminological questions. Since English was the main language of the Seminar, but Russian was also spoken, the problem emerged of univocal understanding of the fundamental terms used, such as "depopulation"(in English), and "depopulatsiya" or "obezluzhdenie" (in Russian). Some disputants turned attention to the fact that the term "depopulation" (in English as well as in French languages) is often understood as if it meant just the negative net natural movement, migrations not accounted for. In this sense depopulation areas are, for instance, some large towns where there is no natural increase, although the absolute population numbers may grow due to migrations. This is the so-called strictly demographic understanding of the notion of "depopulation" (Professor Rakov, Byelorussian SSR). In geographical sense it is accepted that the decisive factor is the absolute decrease of population numbers, irrespective of the degrees to which it is due to negative natural increase and to net migration. It was accepted in the discussion that this

is how the term "depopulation" (in English) and "depopulatsiya" (in Russian) shall be understood.

The second session of the Seminar, held also on its first day, was devoted to Polish papers presenting the results of studies concerning depopulation of Polish rural areas, conducted in various scientific centers, within the framework of the research program RPBP 03.5 coordinated by IGiPZ.

With the first paper in the series, presented by Professor Adam Jelonek, Cracow, serving as the background, discussion concentrated mainly around the question of relations existing between the intensity of depopulation processes on the one hand and village magnitude, availability of social and technical infrastructure, as well as road and rail connections with towns on the other. The question of directions of outmigration from towns was also taken up, including: international migrations, population outflow to further located towns and to other provinces, and also to towns located closer, within the same province. A problem, which surfaced in this context, is constituted by investments made in rural areas, especially in the construction of houses, by people who, having worked abroad, are coming back to their native villages. In connection with this a question was raised as to why previous inhabitants of rural areas who return from abroad do relatively frequently settle in villages and do not undertake migration to towns (question asked by Professor Naukkarinen from Finland). Explanation of this phenomenon referred, for instance, to greater possibilities of investing in the thus sure fired domain as family housing construction in the villages, and to maintenance of certain links between the migrants and their local communities. Economically motivated stays abroad to not usually lead to gaining of skills sufficient for self-standing existence abroad, since jobs taken there are most often not requiring much skill. Likewise, it was indicated in the discussion that persons returning from abroad with their economized hard currency do enjoy in their villages quite high prestige and therefore do not have to adapt to a new environment, the task they would face in case of migration to towns.

In connection with Polish papers the question of the role played by professional training, as well as by university and high school education for outmigrants from rural areas was discussed. It is beyond doubt that people acquiring education higher than the primary one become more capable of increased spatial mobility. On the other hand, however, disputants emphasized that in modern societies the slowing down of depopulation of rural

areas cannot be realized with limited accessibility of education, but rather with an increase of mobility in both directions. Outmigration from villages should be compensated for by inflow from towns. Rural areas cannot remain less attractive than towns because of their civilizational backwardness. Modern countryside, connected with town, has several advantages as a residential environment, advantages being lost currently by towns. This problem concerns, to a large extent, primarily creation of conditions in which young people could find it relatively easy to settle in rural areas, but not necessarily while remaining in their native village.

The problem of industrialization of rural areas was also considered, together with its significance for stemming the outflow of youth, or even attracting young people (Professor Izasław Frenkel, Warsaw). On the basis of studies conducted in the Opole region (Dr Heffner) it was concluded that location of just any industry does not decide of attractiveness of a village. It is only when a number of small industrial plants and crafts workshops are concentrated in a rural area that a diversified, attractive job market is created, forming thereby conditions for stopping the outflow or even attracting young people.

The consecutive session was composed of papers from other East European countries, such as Byelorussia, Ukraine, Latvia, Czechoslovakia, Hungary and Bulgaria, and discussion during this session brought up certain common problems. Disputants indicated that in all these countries destabilization of rural population was to an important degree due to policies of central government with regard to rural areas. Thus, for instance, the concept of the so-called "central villages" (in Czechoslovakia, Latvia, and also in other countries), was connected with the policy of forcing farmers to leave their, often prospering and often quite large, farms. This concept, oriented in fact towards acceleration of collectivization of agriculture at any price, contributed importantly to the increase of population outflow from rural to urban areas and to lowering of the prestige of agricultural jobs. Such a phenomenon had occurred yet before in the USSR and irrespective of catastrophic consequences of such a policy it was being pushed through in other East European countries. Hence, in all these countries there was a too rapid outflow of young people from rural areas (not entirely compensated by modernization of agriculture), entailing deformations in demographic structure, and thereby a decrease in the level of natural increase and consequently depopulation in rural areas.

In connection with the paper by Zdenek Ryšavý, from Czechoslovakia, the role of urbanization in East European countries was discussed, considering not only outflow of rural population to towns, but also urbanization of rural areas, both in economic and in spatial planning terms. Urbanization, it was stated, plays a positive role only up to a certain level of saturation of the environment with elements of technology and infrastructure typical for urban areas. Above this definite threshold the negative effects related to urbanization start to dominate over the positive, attractive elements of urbanization, and a reverse process begins. Still, it is difficult to overcome depopulation of rural areas and degradation of the environment, both related to overly rapid, turbulent urbanization, when this urbanization has already taken place on a broad scale. Hence the conclusion of the necessity of saving rural areas as representing a value in themselves, together with the elements which cannot be altogether expressed merely in economic terms, constituting the opposite of the elements related to urbanization. This current of thought is also undergoing a strong revitalization in the Baltic republics, as reported by the representative of Latvia, Eva Markausa. The idea of central villages, resembling by their character rather small towns, has been recently given up in Latvia, and a recovery of the dispersed type of the settlement system, previously typical for the rural areas in Latvia, was started instead.

There was also a discussion concerning centralization of decisions and concentration of economic potential, this discussion being deployed against the background provided by the paper of Professor Joseph Tóth, who commented upon the situation in Hungary. It was stated that strengthening of local and regional levels is necessary for the interests of an area to be properly accounted for, and thereby for stemming of the tendency of overly concentration of population in urban-industrial centres. On the other hand the significance of transformations in central policy was indicated, since local and regional factors are too weak to counter the tendencies resulting from the policies of the central authorities on the national scale. Emphasis was also placed upon the importance of local initiatives for intensification of local development, together with the necessity of extending adequate care towards the areas with weak development dynamics (Professor Włodzimierz Kamiński, Poland).

Discussion did also touch the question of demographic forecasts and the necessity of planning the population redistribution (Professor Stasiak).

With that respect in all the Eastern European countries similar troubles appeared, resulting from central planning and "socialization" of the main production means. The model of top-down management has become here the main rule. This model did not take sufficiently into account the information and postulates originating from "below". Discussion did also refer to the model proposed by Professor Tóth, the model of analysis of 4 spheres of activity in regional policy (the four spheres are: social, economic, infrastructural and ecological). It was emphasized that all these spheres require a strengthening on the local and regional levels (Dr Ryšavý).

In the next session, after the papers presenting the experiences of capitalist countries, by Professor William B.Morgan (England) and Professor Arvo Naukkarinen (Finland), the question of counterurbanization surfaced. Counterurbanization is a tendency opposite to urbanization, resulting in the decrease of population in certain towns, observed in Western countries. Central and local authorities try to help the declining towns, for instance by conducting appropriate tax policies. Phenomena of depopulation of rural areas do appear in these countries as well, but to a very limited degree. Villages are usually strongly urbanized. A majority of population inhabiting the countryside live off non-agricultural jobs.

Finnish paper, presented by Professor Naukkarinen, stressed the role of local authorities in opposing the tendencies of rural depopulation in some regions of Finland. When answering the question asked by Professor Włodzimierz Mirowski, Professor Naukkarinen explained also the significance of external outmigration for the rural depopulation processes in Finland. Currently, these tendencies got much weaker than in older time and they do not have any essential significance for the phenomena of rural depopulation, appearing in some regions.

Discussions held during the seminar in Szymbark were not limited to formal sessions of the Seminar. A particular significance for starting and shaping of discussion, together with provision of concrete examples, thereafter widely commented, had field trips organized during the Seminar, connected with visits to particular villages, private farms of various agricultural production profiles, and towns of Nowy Sącz and Tarnów voivodships. These field excursions were perfectly run and prepared by the team from the Jagiellonian University in Cracow, working under the leadership of Professor Jelonek, whose members did also participate in the Seminar. Some informative papers were also presented during the excursions, in Polish, English and

Russian languages, written by Professor Czesław Guzik and other members of the team. Participants of the Seminar did also receive specially prepared materials dealing with the main objects visited and the route of the excursion. Especially fruitful as to the discussion material was the meeting with representatives of voivodship authorities, competent in questions of rural settlement system and in agricultural economy. Some meetings with farmers, connected with visits to their farms (a livestock rising farm, an orchard and a greenhouse farm were visited) were also very interesting. Participants of the Seminar acquired there a very valuable firsthand information and could also see the facts resulting from effective attempts at countering the tendencies of rural depopulation, as well as examples of prospering private farms in Polish villages of this region.

During the last session discussion focussed mainly around the final statement prepared by the participants of the seminar, concerning creation of the International Centre for Studies on Rural-Urban Migrations, affiliated at the IGiPZ. It was decided that the first common undertaking of the Centre shall be constituted by publication of the proceedings of the Seminar. Plans include also organization of similar seminars in various countries of Eastern and Central Europe. Further, the Coordinating Committee of the Centre was also formed, constituted of representatives of the countries taking part in the Seminar. Professor Andrzej Stasiak was chosen as the Chairman of this Committee. Besides that, a three-person secretariate of the Centre was nominated with Professors Piotr Eberhardt, Izasław Frenkel and Włodzimierz Mirowski as the members. Representatives of delegations from various countries, participating in the Seminar, signed the declaration prepared, binding them to support the idea of organization of the Centre and to participate in the work of the Centre.

It can be stated that the Seminar did not only contribute to a better knowledge of facts related to depopulation of rural areas in European countries and to explanation of their conditioning, but had also essential significance for bringing closer of the scientists dealing with these problems in various countries, for gaining deeper insight into theoretical problems concerning broader problems against the background of urbanization and counterurbanization, as well as for perfectioning of the methodologies of research in this domain. It is also a concrete achievement of the Seminar that the organizational work has started aiming at formation of the International Centre for Studies on Rural-Urban Migrations, and that a step was

made towards a closer cooperation among the Central and East European countries, and finally that West European countries start also to be involved in this cooperation.

RESOLUTION OF THE RURAL DEPOPULATION SEMINAR IN SZYMBARK

From 11 to 16 September 1989 in Szymbark (Poland) a seminar was held on: "The Processes of Depopulation of Rural Areas in Poland and Other Central and East European Countries". The seminar was organized by the Institute of Geography and Spatial Organization in cooperation with the Institute of Rural and Agricultural Development of the Polish Academy of Sciences. Representatives of the following countries participated in the seminar: Bulgaria, Byelorussian SSR, Czechoslovakia, Finland, Hungary, Latvia, Poland, Ukrainian SSR and the United Kingdom. Also a paper from Yugoslavia was received.

The seminar has shown that the problems discussed are of great importance for shaping spatial development in each of the countries. It has also been emphasized that there is a need to conduct further in-depth studies and to organize a permanent exchange of information and international cooperation of the Central and East European Countries in the field of migration and settlement policy, with special reference to rural areas.

To achieve this goal, the participants think it is necessary to create an International Centre for Rural-Urban Migration Studies. Its research should be devoted mainly to the problems of spatial and socio-occupational mobility of population and their consequences for socio-economic, settlement policy.

Main fields of the Centre's activities will be:

1. initiating theoretical, methodological and empirical studies,
2. developing scientific cooperation with other institutions and organizations interested in this field,
3. organizing scientific exchange between participant countries,
4. organizing systematically international scientific meetings, subsequently in each of the participant countries,
5. promoting editorial activities,
6. promoting mutual scientific and technical assistance through exchange of statistical data, maps and other scientific materials, and, in addition, by arrangement, if possible, of a common use of scientific technical devices (computers, printers, etc).

The Centre should be opened for interested researchers from other countries. The participants of the seminar welcome the initiative of the

authorities of the Institute of Geography and Spatial Organization of P.A.S. to affiliate the Centre with the Institute.

For purposes of starting the organization and, leading the activities of the Centre a Coordinating Committee has been created with following persons:

Chairman: Professor Dr A. Stasiak (Poland),

Members: Professor Dr A. Naukkarinen (Finland),
Professor Dr A. Rakov (Byelorussian SSR),
Dr Z. Ryšavý (Czechoslovakia),
Professor Dr J. Tóth (Hungary).

Secretariate:
Professor Dr P. Eberhardt (Poland),
Professor Dr I. Frenkel (Poland),
Professor Dr W. Mirowski (Poland).

Other persons may be included in the future.

Signatures:

G.Geshew (Bulgaria), A.Rakov (Byelorussian SSR), S.Řehák (Czechoslovakia), Z.Ryšavý (Czechoslovakia), A.Naukkarinen (Finland), J.Tóth (Hungary), E.Markausa (Latvia), A.Stasiak (Poland), A.Khomra (Ukrainian SSR), W.B.Morgan (United Kingdom).

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