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Social, economic and demographic changes of rural areas in Lithuania

Abstract: *The article deals with the problems of the economic and demographic situation in the rural areas of Lithuania. The article contains a brief review of distribution of farms according to the size and area of cultivated land. Special attention is paid to the changes of rural population and the determining factors thereof, the spatial analysis of natural increase and old age index in rural municipalities, and the transformation of the network of rural settlements in Lithuania.*

Keywords*: rural areas, distribution of farms, depopulation, natural increment, rural settlement.*

Brief review of the economic situation in rural areas

The rural areas of Lithuania are represented by the territories outside the administrative boundaries of the cities: various types of villages, boroughs and their environs with a certain population, definite living conditions, mode of life, based on regional culture, and specific activities. The rural areas, accommodating one third of the population (1,148,100), make up for about 97% of the total Lithuanian territory. The coordination of the rural policy of Lithuania with the policy of the EU, giving priority to sustainable development of rural areas, has recently been the main concern of the government of Lithuania. Lithuania has so far had no regional agricultural and rural development policy. This is demonstrated by the regional imbalance of investments. More than 60% of the total of investments go to the region of Vilna. Though in comparison with the neighbours (Latvia and Estonia) Lithuania has inherited a rather evenly developed territory, we can hardly expect an effective balanced development of rural settlements in the nearest future.

Lithuania has good conditions for development of agriculture and rural settlements, sufficient agricultural resources and their natural productivity, a high proportion of reclaimed lands, and climatic conditions, which are supportive of dairy and meat farming, stock-breeding and growing cereals, potatoes, vegetables, fruits, flax, sugar beets and other plants characteristic of this latitude.

Among the weak points of rural development we can mention low capitalisation level of the agrarian sector, lack of modern machines and poorly developed cooperation. Moreover, rural policy is unstable – the restitution of landed property is not finished, land market is in a rudimentary state, hindering the land consolidation processes, and small non-competitive farms, unable to attract investments, are dominant. The lingering restitution of land and unfinished land reform are the main obstacles to social and economic development. The earnings from the family farms do not ensure even the minimum living conditions. Regions of social depression are developing. Sociologists and geographers have warned about the expanding areas of poverty in many rural areas, especially in the Northeast and South of Lithuania (Baubinas, Stanaitis 2001; Marcinkevičiūtė 2002).

Agriculture is the fifth largest economic sector in Lithuania: 6.4% of the total added value was produced by agriculture in 2001. In the same year the agricultural products and foodstuffs accounted for 12.4% of exports. The plant products account for 60% and the stock breeding products – for 40% of the total agricultural produce of Lithuania. In the opinion of the farming experts this ratio is unfavourable for the agricultural sector (Stanikūnas 2003). It should be changed in favour of stock breeding because the added value of dairy and meat products is higher.

The number of people employed in rural areas has been decreasing since 1990 and in 2001 it was equal 417,000 (44.9%), i.e., by one fifth less than in 1998 (59.5%). This share of 45% of employed people in the rural areas included 8% of pensioners. Then, 238,800 persons were employed in agriculture – 16.5% of the total of working population in the country. Though the number of people occupied in the sphere of services has been increasing at the expense of agricultural activity the index mentioned remains higher than in many new members of the EU (Table 1).

Table 1. Persons employed in agriculture (in percent of total employment)

	1998	1999	2000	2001
EU-15	**4.7**	**4.5**	**4.3**	**4.2**
EU candidate countries				
Bulgaria	–	–	13.2	9.7
Cyprus	–	4.7	5.4	4.9
Czech Republic	5.6	5.3	5.2	4.9
Estonia	9.5	8.8	7.0	7.1
Hungary	7.3	7.0	6.5	6.1
Latvia	18.7	17.2	14.4	15.1
Lithuania	**20.7**	**21.4**	**18**.4	**16.5**
Poland	–	–	18.7	19.2
Romania	42.0	44.0	45.2	44.4
Slovak Republic	–	7.2	6.9	6.3
Slovenia	12.1	10.8	9.6	9.9

Source: Employment in Europe 2002 – Recent trends and prospects.

The number and size of farms

According to provisional data, as of 1 June 2003, there were 279,000 farms producing agricultural products (further – farms), whose land property consisted of one hectare of agricultural land or more, or whose agricultural land, though being less than one hectare, gave income from agricultural products sales no less than forty minimum standards of living. Those farms owned 2,939,000 hectares of land, of which 2,542,000 ha constituted agricultural land. On the average one farm had 10.6 ha of land, with 9.1 ha of agricultural land. The average size of a farm in Lithuania equals half the average size of the farm in the EU, and is equal the average farm size in Portugal.

As many as 332,000 small land users owning up to 1 ha of agricultural land and growing agricultural products, raising cattle or poultry have been registered. They used 91,000 ha of land, of which 35,000 ha is agricultural land. On the average, this meant 0.27 ha of land and 0.11 ha of agricultural land per land user. Thus, altogether 611,000 land users producing agricultural products have been registered. They used 3,030,000 ha of land, with 2,578,000 ha of agricultural land.

The land inventory data revealed that the greater portion of farmland was by 45,000 registered farms, which accounted for almost half (46%) of the total area of farmland. The average size of farms in this category was 25.7 ha, i.e. a double of the average in Lithuania. It is expected that in 2010 the land owned by such farms will account for 80% of the total. According to the registration data of January 1, 2002, the number of young people occupied in farming increased. About 14% of farmers were aged 40 and younger, 37% – 40 to 60 and 49% – 60 and older (in 1998 – 8%, 32% and 60% respectively). People younger than 40 years of age accounted for 17% of farmers in the Marijampolė and Šiauliai counties. Younger farmers owned larger farms.

Yet the elderly age of farmers reduces the initiative and readiness to work under the conditions of serious competition in the EU. This is demonstrated by the data obtained from respondent farming enterprises. It appears that farmers of the pensioner age earn by 20–22% less from 1 ha of farmland than farmers aged 35–45. Many owners of small farms get state pensions and have no stimulus to increase productivity and restructure their farms.

The family farms (233,000) owned about 43% of farmland but their farms were half the acreage (4.7 ha or 52%) the average farm. Since 1995 the number of family farms has been decreasing annually by 20,600. Their number is likely to dwindle in the future and in 2010 it will be at 165,000. Ageing of the population and „small weight“ of such farms on the market are the main causes of such reduction. Most family farms are social rather than commercial in character. They constitute only the means of subsistence for families without other source of income, pensioners, as well as intelligentsia and other persons, employed in business structures and public sector enterprises.

Though the output from the family farms is small the total contribution to agricultural produce is still tangible because of their great number. These farms are active participants in the vegetable, potato, fruit, berry and dairy markets. The growing economy and increasing demand for labour force in other branches of economy will reduce the number of family farms. This would create better conditions for farmers whose main source of earnings is agriculture.

The number of agricultural companies, public and private companies, co-operative companies, as well as farms of other categories was equal altogether 600. They owned 395,000 ha of land (290,000 ha of agricultural land). The number of agricultural and other kinds of rural enterprises will significantly decline. Many agricultural enterprises will change their legal status. The modern agricultural enterprises will consolidate their positions.

Thus, so far the Lithuanian agriculture is predominated by small – up to 10 ha – farms. The group of farms of 3–10 ha of area is the largest (Table 2). Such farms account for 46% of the total. Large farms (owning 100 ha and more) account for only 1% of the number, but their farmland make up almost 26% of the total area.

Table 2. Distribution of farms according to the size and area of cultivated land in 2003

Groups of farms according to total acreage, ha	Number of farms, in thousand	Cultivated land, in thousand hectares	Share, in %	
			in the number of farms	in the land cultivated
0–3	102,33	228,48	36.7	9.0
3–10	127,99	664,80	46.0	26.0
10–20	30,03	411,03	10.8	16.1
20–50	12,95	382,68	4.6	15.0
50–100	3,04	207,66	1.1	8.1
100 and more	2,06	657,92	0.8	25.8
Total	278,40	2552,57	100	100

Source: *Provisional results...* 2003.

The three groups of the Lithuanian farms (small – up to 10 ha, average – from 10 to 50 ha and large – 50 ha and more) cultivate almost equal shares of land – 35%, 31.1% and 33.9%, respectively (the farms of the EU-15 – 16%, 32.2% and 51.8%, respectively) (Table 2). The small Lithuanian farms turn out agricultural products on an area share twice the one of the EU small farms. Analysis of the changes in farm size show certain increase of the portion of farms owing 10 ha and more. Yet, the number of farms owning from 3.1 to 10 ha remains quite high – 128,000 (according to the survey data collected by LAEI in 1999 the number of such farms was 128,900).

Economic analysis suggests that under severe market competition many small farms (making at present almost half of the registered farms in Lithuania) will

go bankrupt. The problems related to small producers intensified after Lithuania's accession to the EU on May 1, 2004.

The censuses in the neighbouring countries were conducted at approximately the same time. Therefore, some indicators of agricultural development can be compared (Table 3).

Table 3. Agricultural development indicators of Lithuania and the neighbouring countries

	Lithuania	Latvia	Estonia	Poland
Average size of farms by agricultural land, ha	9.1	12.4	12.7	8.4
% share of farms with up to 5 ha of agricultural land	61.6	40.7	64.0	72.4
in the total number of farms in agricultural land	18.9	8.8	8.8	18.7
% share of farms with 50 ha and more	1.8	3.1	2.9	0.7
of agricultural land in the total number of farms in agricultural land	33.7	33.2	55.8	25.6
Structure of crop areas, %				
Cereals	65.7	51.7	46.1	77.0
Potatoes	5.8	6.1	2.9	7.5
industrial crops	8.2	2.9	4.8	7.1
Per 100 ha of agricultural land				
Cattle	34.8	19.9	32.1	32.7
of which cows	17.5	10.5	14.6	17.0
pigs (per 100 ha of arable land)	74	31	56	110
poultry (per 100 ha of grain crops)	992	806	828	1176

Source: *Provisional results*... 2003.

During the censuses (in Latvia and Estonia – in 2001, in Poland – in 2002) similar agricultural indicators were registered. The average size of farms differs quite insignificantly, whereas concentration of agricultural land is rather uneven. The farms disposing of 50 and more hectares (such farms constitute in the above countries from 1 to 3% of all farms) account for the highest share of agricultural land in Estonia – 56%; followed by Lithuania – 34%, Latvia – 33%, and Poland – 26%.

The structure of agricultural crop area is fairly alike: the comparative weight of cereals is quite similar to that in Poland, though markedly higher than that in Estonia and Latvia; the comparative weight of potatoes is the highest in Poland. The subsequent countries in terms of this indicator are Lithuania, Latvia, Estonia. The relative weight of industrial crops is the highest in Lithuania. Regarding the number of cattle and cows raised per 100 ha, the highest figure is in Lithuania; as to pigs – in Poland.

Some economic and social indices

The strategic plans of agriculture forecast two trends of farms development: specialized competitive farms, producing traditional products and supplying them to processing and trading companies; farms engaged in non-traditional activity and producing ecological products, which realize their produce in market niches. Smaller cooperative farms will develop along with the large commercial farms.

Cereal, pig-breeding and dairy farms will dominate in the regions of intensive agriculture. The number of large specialized farms, growing cereals, rape and flax, will increase. Products of greater added value (dairy, meat) will be produced in greater amounts. The increase of production of fruits and vegetables is also expected.

The breeding of meat cattle and sheep will intensify on unproductive areas. Priority will be given to natural and ecological products.

The following non-traditional and small farm occupations will develop: growing of officinal plants and mushrooms, rabbits, turkeys, fur animals, beekeeping, fishery in the inland waters and alternative activities – rural tourism, handicrafts, services, and other small trades.

According to the expert opinions the problems of occupation of rural residents, their earning and economic activity will continue in regions with unproductive lands (Lietuvos 2003). Therefore, means for encouraging the development of non-traditional and small trade activities should be envisaged.

Conform to the data of the jobcentre about 7,000–7,500 of the jobless were registered monthly in rural areas in 1999–2002. Total unemployment in rural areas in 2002 (October 1) was 72,000 (*Pranešimas...* 2002).

Women made up 35% (33,200) among the unemployed in rural areas. Every tenth registered rural unemployed person was aged 25 or younger. More than half of the rural unemployed was aged 40 and more.

The demand for labour force in agriculture was small (every tenth vacant place). The employment in rural areas was of seasonal character. Day-labour was rather widespread. The demand for specialists in agriculture with higher education has been decreasing, but the demand for specialists in service, trade, advertisement and information technologies has been increasing.

Until 1994 construction of residential houses had been quickly decreasing. In 1995 the situation stabilized. In the years 1995–1997 1122 houses were built on the average per annum in the rural areas. In 1998–2001 the building rates dropped again (934 houses built annually, and 828 in 2001). In the last years the building of living houses in rural areas accounted for 21% of total buildings. Most of rural residents (86%) were living in family houses or flats (two thirds in family houses, 15% in parts of houses); 15% of residents employed in rural activities were living in blocks of flats (78% in the cities). The average size of

accommodation in the rural areas was 70 m^2, in the cities – 52 m^2. The sizes of living space were as follows: 26.0 m^2 per head of rural population and 20.1 m^2 per head of urban population.

The rural accommodations were more spacey, but less supplied with communal facilities. According to the data for 2001 only 41% of rural residents had centralized water supply (city residents – 93%), 50% (93%) – central heating and 54% (85%) – wire telephone.

Changes in the rural population and the determining factors

An intensive migration of rural population to cities was the main cause of population decrease in rural areas. In the time period 1951–1990 alone about one million of rural residents abandoned rural areas. The natural increase compensated for only 37% of the population loss. Moreover, in 1987–1985 and then since 1990 the natural increase of rural population has been negative. Between the population censuses of 1959 and 1989 the Lithuanian rural areas lost 29.1% of their population (the urban population during the same time increased by factor of 2.4). The rates of population decrease varied in different decades. The loss of rural population in 1959–1970 amounted to 6.6%, in 1970–1979 – to 13.1% and in 1979 – to 12.4%.

The territorial distribution of the changes of rural population in 1959–1989 in Lithuania, small as it is, was rather differentiated (Figure 1). The highest population reduction rates were recorded in six north-eastern and eastern districts of Lithuania – more than 42%. An intensive emigration from these districts to rapidly growing industrial cities – Vilnius, Panevėžys and Utena – in the 1960s and 1970s and intensive depopulation since the beginning of the 1980s account for this value. In the other 16 municipalities of the eastern, southern and north-western parts of Lithuania the population decrease was almost equally rapid: 35.1–42.0%. Not only the processes of urbanization but also unproductive lands were the main causes of population migration to cities in these two groups of regions, marked by the highest rates of population decrease. In the Middle Lithuania, where the farming conditions were most favourable the rural population decrease amounted to 21.1–28.0%. In the suburban rural areas of large cities (in the Šiauliai, Klaipėda, Panevėžys municipalities) and in the western part of Kretinga municipality the population decrease was only 15.1–21.0%. In 1959–1989 population increase was recorded only in two Lithuanian districts – the suburban areas of the cities of Vilnius (+12.9%) and Kaunas (+30.1%).

The changes of rural emigration from rural areas of Lithuania bore a character of demographic transition from the farming to the industrial society (Stankūnienė 1995a). In the initial stage of Lithuanian industrialization (1953–1964) migration from rural to urban areas was monocentric (to Vilnius city). Beginning with 1964, after the adoption of the Urbanization Scheme, migration from rural areas became decentralized. The flows of migration to cities did not reduce, but they

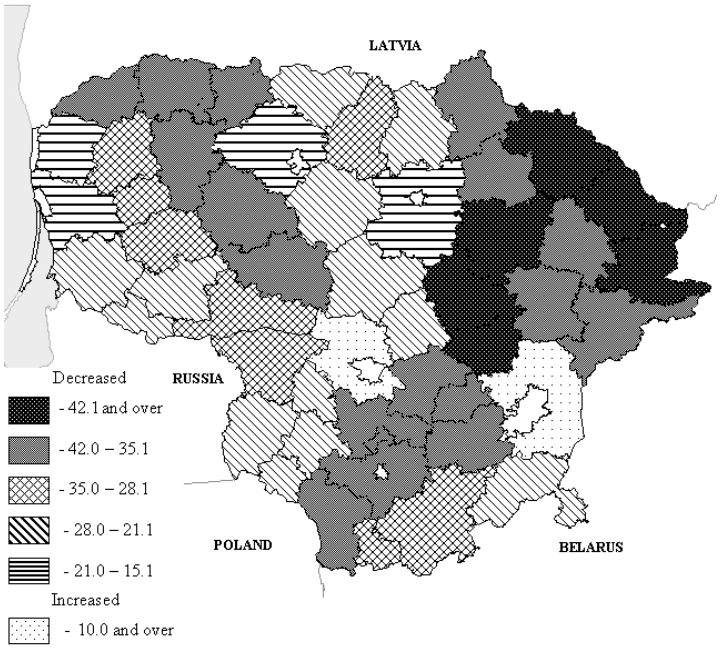

Figure 1. Change of rural population in 1959–1989 (%)

tended towards the newly developing average and small Lithuanian cities. The outflow of people from rural areas in 1959–1970 was by 260,300 bigger than the inflow. Until the middle of the 1970s the total migration rates had considerably increased and the migration from the rural areas to cities reached its maximum in 1971–1975. In later years this index started to decrease. Yet in 1976–1980 it was still high – 119,900. This time frame marked the end of the period of intensive urbanization and extensive industrialization and changed the qualitative characteristics of urbanization. There appeared a new mobility phenomenon – the pendulum migration. Cities with „sleeping wards" were developing and migration flows tended not only to towns but to suburbs of large cities as well. This stage lasted until the turning point of 1989, when migration from rural areas to cities appreciably reduced.

The period of demographic transition ended in the 1970s when stabilization of demographic processes set in. Between 1989 and 2003 rural population had decreased from 1,188,000 to 1,145,200, i.e., only by 3.6%. These were the lowest rates of rural population reduction in the second half of the 20th century. The recent stabilization of rural population is determined by other migration trends than in the Soviet years. The transformation of economic structures and forms of property under the present conditions of urbanization is responsible for the migration equilibrium between rural and urban areas. Since 1992 the net migration has even been positive (except for 1998 and 1999, when the value was slightly negative). There is a question whether this is a phenomenon of suburbanization, characteristic of the developed countries, an outcome of land

privatization, or the escape from cities due to particularly low living standards. Moreover, the abolition of compulsory permanent residence registration when seeking a job has reduced the accuracy of records and the statistical data lack the reliability necessary for comparisons (Stankūnienė 1995b).

A slightly positive migration balance will play a minor role in the stabilization process of rural population, insofar as it is the elderly people that are the majority of the flow to rural areas. The process of depopulation is likely to play the principal role in regulating the number of rural population in the nearest future.

Territorial analysis of the natural increase and the old age index

Analysis of the natural increase (NI) in the rural areas in 1990–2003 revealed its spatial and territorial variations. There is a clear general trend of depopulation in the last years of investigation. It includes not only the eastern regions of Lithuania but also its western municipalities, which for a long time have preserved positive values of NI. In 1990–1994 the average NI across Lithuania was -1.8‰. In 14 districts out of 44 the birth rates were still higher than the death rates. Most of such districts are in the western part of Lithuania and in the rural suburbs of Vilnius, Kaunas and Klaipėda. In 1995–1999 the average NI dropped to -4.1‰. The positive values were recorded only in the western Šilutė and Šilalė districts and in the Kaunas district. The average rural NI in 2001–2003 was –4.4‰. The number of births exceeded the number of deaths in none of 51 (after the administrative reform) municipalities of Lithuania. The territorial differences in the NI were quite pronounced. The values ranged from –15.6‰ in the Ignalina municipality and –14.1‰ in the Utena municipality to –0.1‰ in the Kaunas and –0.4‰ in the Klaipėda municipalities.

The aging rates of rural population were determined by migration processes in the past and are determined by the NI at present. The age structure of population is changing in favour of the elderly. The senility ratio (Rs) in combination with the NI is used in territorial evaluation of depopulation processes in the Lithuanian rural areas. This ratio shows the number of persons aged 60 years and older per one hundred children aged 0–14.

The rural Rs in Lithuania in 2001 was 130.5. The highest Rs was recorded in the Utena – 221.8, and Ignalina – 217.3, municipalities. Only in 17 municipalities Rs was smaller than the average value across Lithuania. In 34 municipalities it was higher.

According to the NI and Rs the Lithuanian rural areas can be classified into four main groups (Figure 2).

1) Group I – municipalities with the lowest NI (<7.3‰) and the highest Rs (>140.3) values. Districts belonging to this group are extending as a continuous belt from the eastern part of Lithuania down to some southern municipalities. It

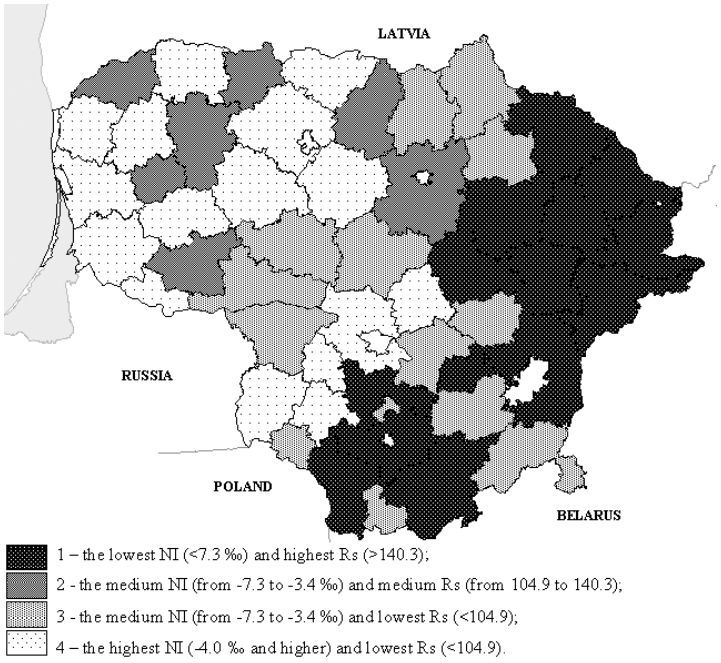

Figure 2. The senility ratio (Rs) in combination with the natural increase (NI) in rural municipalities in 2001–2003

should be pointed out that the rural municipalities of Ignalina and Utena districts are characterized not only by the lowest values of the NI (–15.6 and –14.1‰ respectively) but also by the highest Rs (Ignalina – 217.3, Utena – 221.8). Municipalities with the NI values lower than –10.0 ‰ (Anykščiai, Rokiškis, Varėna, Molėtai) are also distinguished for the highest Rs (160-190). It is expedient to distinguish a sub-group with the lowest NI and an average Rs. It includes two municipalities – Alytus and Elektrėnai (Rs values of 121.4 and 136.6 respectively).

2) Group II – municipalities with the average NI (from –7.3 to –3.4‰) and Rs (from 104.9 to 140.3). It includes 11 municipalities of the North (Bir ai, Pasvalys, Kupi kis), Middle and South Lithuania. In two more municipalities (irvintos and Druskininkai) with the average NI the Rs values are among the highest (156.7 and 161.2 respectively).

3) Group III includes seven municipalities (mainly in the western part of Lithuania) with the average NI and lowest Rs (<104.9).

4) Group IV with the age structure most favourable in terms of reproduction include 15 municipalities whose NI is the highest (–4.0‰ and higher) and Rs is the lowest (<104.9). These are mostly the municipalities of West and, some of them, Middle Lithuania (Vilkaviškis, Marijampolė, Jonava), as well as suburban municipalities of Vilnius, Kaunas and Klaipėda. It should be pointed out that the Rs values in the Pagėgiai and Šilutė rural areas are the lowest among the rural

areas in Lithuania (83.7 and 84.6 respectively). In two municipalities (Kelmė and Kazlų Rūda) with the highest NI value the Rs value is average.

Transformation of the network of rural settlements

The number of rural population in the 20th century has been decreasing at a double rate compared with reduction of the number of rural settlements. In the time frame of about one hundred years (1897–1989) rural population decreased by 1.2 million or 51% whereas the number of villages – by 7,300 or 28%. The highest reduction rates of rural population and settlements were characteristic of the last three Soviet decades (between the population censuses of 1959 and 1989) (Vaitekunas 1989).

In 1959 the number of average villages (26–200 residents) was 14,450, while in 1989 – only 5,885. Yet, in this time frame the number of villages with one homestead (up to 5 residents) increased 2.5 times (from 1,843 to 4,597). The number of large villages (501–1,000) increased from 109 to 295 (2.7 times) and the number of very large villages (more than 1,000 residents) – from 24 to 108 (4.5 times).

The share of rural population residing in large (500–1,000) and very large (more than 1,000 residents) villages increased from 0.5% in 1959 to 32.1% in 1989. The number of residents in the single homestead villages (up to 5 residents) increased from 0.4% in 1959 to 1.1% in 1989. The number of people residing in average villages (101–200) dropped three-fold – from 30.6% to 12.7%. The complicated economic reforms of the Soviet years manifested through the enlargement of rural settlements and extinction of individual homesteads have brought results. Only 105,000 single homesteads could be counted in Lithuania in 1989, while had been 400,000 of them in the 1950s. Lithuania has converted during the Soviet years from a country of individual homesteads into a country of average and large compact rural settlements.

The changes of the network of rural settlements that occurred in the Soviet years were predetermined by migration, extinction of individual homesteads and other specific regional processes. The specific regional processes depended on the following circumstances:

- Uneven size of rural settlements. The smaller the settlements the denser is their network and the smaller the population (e.g., in the Eastern Lithuania). On the other hand the sparser networks of large settlements were more resistant to socio-economic changes and for a longer time preserved their structures (e.g., in the Western Lithuania);
- Different number of individual homesteads and their liquidation intensity;
- Different regional demographic processes (especially the differences in the NI and migration balance).

Between 1989 and 2001 the networks of rural settlements and the share of rural population have not actually changed notwithstanding the reverse agrarian

reform toward privatization and restoration of individual homesteads. At this point it is expedient to analyse the recent characteristics of the Lithuanian rural settlements, discovered during the population census of 2001.

The recent system of Lithuanian rural settlements included a great number (92.2%) of small villages (up to 100 residents) accommodating only 28.3% of the rural population. The average settlements (100–500) accommodated 39.9% of the rural population and one third of rural population (31.8%) resided in 386 large settlements (>500).

The population number per one rural settlement in 2001 was 62.3 persons. The total of rural settlements in Lithuania was 21,825 including 3,364 deserted villages. The average size of villages was marked by high territorial variability. In some settlements of the north-eastern municipalities the average village population was up to 30 people (Zarasai – 22, Molėtai – 23, Ignalina – 25, Švenčionys – 28). On the other hand the Western Lithuanian rural settlements were 4–6 times larger. E.g., the average population in the rural settlements of Kretinga municipality was 128 people, in Mažeikiai – 114, in Šilutė – 110, in Plungė –105, in Skuodas – 104. The average population of rural settlements in the Marijamolė municipality was 140 and in the suburban municipality of Kaunas – even 180 people per settlement.

The density of rural settlements in Lithuania is 28.3/100km^2. The territorial differences in density are conspicuous, the highest values being several times higher than the lowest ones. In the sparsely populated forested Druskininkai and Varėna rural municipalities the density of rural settlements is 12.8 and 13.0/100km^2. Many Western Lithuanian municipalities also have a sparse network of rural settlements. E.g., the density of rural settlements in the Akmenė municipality is 14.8, in Mažeikiai – 15.2, in Rietavas – 15.5, in Kretinga – 17.7, in Pagėgiai, Plungė and Šilutė – 17.9/100km^2 each. On the other hand the network of rural settlements in the Eastern Lithuanian municipalities is considerably denser – Širvintos – 43.8, Zarasai – 46.5, Vilnius – 47.3 and Molėtai – even 58.2/100km^2.

There is a direct link between the size of rural settlements and their density. The smaller the villages the greater is their density. The rural settlements grow larger and their density sparser as we move from East to West. Taking into account the indices mentioned the Lithuanian rural settlements can be classified into the following five groups (Figure 3).

Group one (1), with the dominant feature being small size (up to 54 people), includes 19 municipalities. According to the density of the rural network these municipalities can be subdivided into two sub-groups:

Sub-group 1.1 – includes smallest villages, which form the densest network (more than 33.6/100km^2). It comprises 14 eastern municipalities including the Vilnius municipality, where the dense network of rural settlements is combined

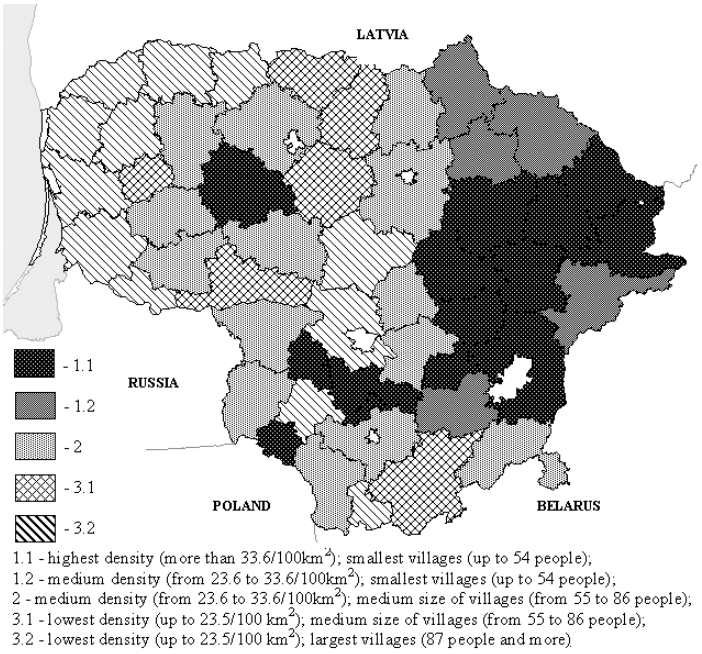

Figure 3. The characteristics of density and size of rural settlements in rural municipalities in 2001

with the greater average size of villages (the impact of Vilnius city) – 82 residents.

Sub-group 1.2 – includes five municipalities (Rokiškis, Bir ai, Kupiškis, Trakai and Švenčionys municipalities) with the smallest villages and average network density from 23.6 to 33.6/100km^2.

Group two (2) includes 14 municipalities, mostly situated in the Middle and Western Lithuania. The characteristics of these rural settlements are comparable with the average values for Lithuania – average size of villages (from 55 to 86 residents) and average density of their network (from 23.6 to 33.6/100km^2).

Group three (3). Low density of rural settlements is its dominant feature (up to 23.5/100 km^2). This group includes 18 municipalities, which according to the village size can be subdivided into two sub-groups:

Sub-group 3.1 includes average settlements (from 55 to 86 residents) which make up a network of average density. This sub-group embraces 6 municipalities (Varėna, Rietavas, and the rest situated in the Middle Lithuania).

Sub-group 3.2 includes largest villages (87 people and more) forming the sparsest network. Twelve municipalities of the western part of Lithuania are ascribed to this sub-group.

Under the present circumstances, marked by an unbalanced rural demographic system it is rather difficult to forecast the future demographic trends. The political, economic and social changes, the transition to market economy and the economic crisis have interrupted the long-lasting demographic trends, facilitated formation of new trends and loss of demographic equilibrium. The success in overcoming the obvious adverse impact of the economic crisis on the demographic processes (very low natural increase, reduced number of marriages, high emigration rates) and the duration of the demographic decline will depend on the general economic status of the country and targeted steps taken by the government in regulating the demographic processes. The new conditions change the value system and models of demographic behaviour. They will, undoubtedly, affect the future demographic processes.

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