DETERMINANTS OF POPULATION TRENDS IN RURAL AREAS

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In recent decades the continuous decline of the rural population permanently raise concerns about the rural vitality – rural traditions, values and way of life of the rural population, which need to be supported. This is treated as a public good. Rural population is vital factor. Numerous scientific studies are devoted for investigating the ways and incentives how to encourage them to stay. The scientific problem of the study was to identify the factors behind the population variation trends in the same municipality while in some wards it increased and decreased in others. The study experts were executives of rural wards, who ranks the factors in order of importance in determining of the population trends. The results showed that executives consider population decline due to the changed geopolitical situation in Lithuania related to the accession to the EU, while the growth is caused by ward's proximity to the central municipal city, favorable environment and availability of community gardens, where citizens are moving.

Key words: rural wards, rural areas, determinants of rural vitality.
JEL Codes: J11, R11, R50.

1. Introduction

The relevance of the problem. The rural areas, rural population, their activities, traditions and way of life in the scientific literature is identified as one of the public goods, the role of which in all countries is of increasing importance. This is especially relevant to both, aging Europe and Lithuania. The main factor that determines the development of the rural areas is the people. Both in Europe and in Lithuania, the number of the population of the rural areas is steadily decreasing. The rural areas are ageing. Young people moves to cities to study, to search for a jobs and rarely comes back. That is why rural areas shrinks, they become a places for the elderly.

In recent years, both in a public and scientific literature pays a lot of attention on the following issues. Objective and subjective reasons of this phenomena, the policy measures, which are taken by the governments of countries, are discussed. The main feature of Lithuanian regional policy issues was a provision of mechanisms to encourage the balanced development of all regions.

However, in a shrinking population, this attitude should be re-discussed, because, on the one hand, it does not work, on the other, is not correct in the current tendencies of population changes. According to the data of the Department of statistics of Lithuanian population and housing census in 2011 the population from 2001 declined in 80 % t of Lithuania's rural wards, in 20 remained stable or slightly increased. The residents moved to the areas where are certain objective conditions and circumstances. This study was designed to identify those conditions and circumstances.

The scientific problem. What factors determine that in the same municipality, the number of residents in some wards stays stable or even rises and in the others (great majority) at the same time the number of residents decreases.

The aim of the study is to identify the factors determining population increase or decrease in rural areas.

The methodology of the study. For the objective analysis most proper would be statistical data, but the problem is that necessary data for such investigation of rural wards is not collected by the Department of statistics of Lithuania. At the level of wards only a demographic data like population distribution by age, sex is collected. On the other hand, information, which is necessary for this research could not be identified as statistical. That is information about wards environment, natural and infrastructure situation (logistical (roads), business (number of business subjects), social (access to social services), location (place of the ward in the territory: closeness to center town of municipality), also the degree of community activities.

A preliminary analysis on the possibilities of obtaining this type of information, led to the conclusion that such information best could be provided by executives of rural wards. With the support of association of local authorities of Lithuania the questionnaires were distributed to 450 executives of rural wards and 370 answers, that composes more than 80 % t of rural wards, were received. . The answers had to show what the key factors are determining the expanding of population in one wards and decrease in others.

The questionnaire was formed on the ground of rural vitality, migration factors literature analysis, the interview of experts. Two groups of factors, which in the opinion of the authors were important in an analysis of population number changes in wards were distinguished. The four common factors, important for both population increase and decrease, where were chosen: a) successful (or not) functioning of business subjects, b) the attractiveness (or not) of ward in a nature viewpoint, c) developed (or not) social infrastructure, d) strong (weak) rural community. The tree additional factors were added:

- for the wards, where population number decreased: new opportunities to live, learn to work in EU countries; remoteness of the ward; ageing community;

- for the wards, where the population of the area increased: the territory of the ward borders with the territory of the central town of municipality; the territory of ward is crossed by important highway and the specific conditions of Lithuania – community gardens were urban residents move to live, are.

Executives of rural wards were asked to indicate four basic factors from the given factors list which are in their opinion the most affected the population changes in their wards in the last 14 years. Respondents had an opportunity to claim their

opinion about factors, which are significant for changes of population trends in their wards. It should be noted that respondents didn't use this possibility.

2. **Rural vitality and factors determining population migration trends**

The vitality of the rural areas is a broad concept, which covers the many dimensions. There are many works, devoted for analyzing the determinants, influencing rural vitality. The vitality of rural areas is recognized as a public good (Hart, 2011). Rural way of life, customs, traditions, environment are worth of conservation, support and improve. On the basis that rural vitality as public good is one of the bases for the EU financial support for rural areas. K. Hart and D. Baldoc (2011) describes the viability of the countryside as a certain level of economic opportunity, access to a minimum level of services and facilities, the capacity of the population and functioning social networks.

Cook, C. C., Crull, Bruin, M. J., Yust, B. L., Shelley, M. C., Laux, S., Memken, J., Niemeyer, S. and White, B. J. (2009) as the factor of rural vitality housing in rural areas. Vitality was described as economic strength and social well-being. In the study the authors came to the conclusion that the housing issues plays a very important role to rural vitality, that's why it is very important political decisions, local initiatives, efforts in this regard.

In the broad sense J. M. Husar (2011) vitality defines as the ability of the area to survive and grow. Similarly, rural vitality defines and I. Spilanis (2003) arguing that rural vitality depends on the ability to maintain the existing resources of the area and to attract new ones. J. Cavey (2001) argues that the rural community viability depends on the community's ability to maintain the infrastructure, the availability of servings and assurance of opportunities for business and economic. Vitality is related to community relations and local cooperation.

The analysis of the ongoing processes of migration, looking for opportunities to keep existing resources or to attract new, the various group of the factors are analyzed. The analysis of the factors allows solving population attraction questions, to develop one or another sphere, which makes certain area more attractive to settle down. Typically for rural vitality measure the sets of indexes are used (Koomen, 2011; Turcanu, 2012), some authors base their analysis of the migration processes (Kwiatek-Sołtys, 2014; Cook, 2009).

T. Niedomysl and W. Clark (2014), after discussing the importance of economic (employment opportunities) and social (environmental amenities rural ones) factors for the internal migration processes came to the conclusion that analysis must by more complex and the broader analysis of micro and macro levels should be done. O. Oner (2015) the local ability to attract residents investigates analyzing the availability of a retail sector, availability of shops and its impact on the ability of the population to consume. According to the author, the network of the shops makes a significant impact on the attractiveness of urban areas to live in, but little correlates with the attractiveness of rural areas.

Summarizing the various definitions of the authors, the viability of rural areas depends on economy (the structure of employment, the tourism, cost of living), popu-

lation (age structure, migration, births, deaths, social capital, the involvement of the population, the community life), the environment (natural environment, infrastructure, service, remoteness of the area, climate).

In the light of the socio-economic changes, rural vitality depends not only on the services, infrastructure, the base is local residents and it is the main rural resource the quality of which the rural life depends. Vital areas, communities are defined as retaining stabile or growing number of residents (Husar, 2011; Cook, 2009). All above factors are closely related.

The increasing population will increase the demand for services, employment, shrinking population inspires declining demand for that area – the area is less attractive to settle down, and the opportunities for the forward development is less. In this way, the viability of certain territories depends on factors which attracts and or push away – push or pull factors. So talking about viability we should talk about migration (emigration or immigration). The factors, that influence migration chose are endogenous (age, income, motives, family history, values, desires) and exogenous – environment, community, economic conditions, infrastructure, natural amenities. In this paper the exogenous factors are analyzed. Migration processes – are „voting by foot" process which clearly shows which areas are vital and people are going to stay there and which are not.

3. **The results**

After the completion of the survey the 370 completed questionnaires were received. 80 % t of which were from wards where the population is declining and only 20 % t of those where the population has remained stable or increased.

Table 1 shows the respondents' views on the factors that lead to depopulation trends in the wards. The survey was organized so that the respondent could select up to 4 main factors from the list. The table below shows the breakdown of respondents' ratings who indicated accordingly 4, 3, 2 and 1 factor. It is interesting to note that rating of factors such as the friendly environment, social infrastructure and the lack of a strong rural community of the respondents who choose four possible answers dropped from 1–8% to 0% of those who opted one possible answer. Faintly were rated also such factors as remoteness of the wards and business environment where their share decreased from 18–22% for those who chose 4 answers to 4–6% who opted just one response.

Table shows, that the greatest impact on depopulation trends in the wards had a geopolitical factor. When Lithuania became a member of the EU and opportunities for citizens to move freely through the EU countries emerged: to find a better-payed jobs, to get an education and so on. The next by importance was named aging community factor. In assessing this factor it is important to note that, on the one hand, an aging community itself is not an attractive factor that could encourage young people to go there, to create families, to develop new business, but on the other hand, the youth exodus from the regions automatically make the remaining society (the community) to get older and a vicious circle is formed.

Table 1. Factors contributing to depopulation trends, %

	Number of factors marked			
	4	3	2	1
Number of respondents	72	98	80	49
Number of answers, %	100	100	100	100
Factors marked by respondents as having importance to leave:				
The opening up new opportunities to live, work, study in EU countries	22	29	43	59
Wards remoteness (far municipal center, the big cities)	18	7	7	4
The shortage of successfully functioning of business entities	22	28	13	6
Unattractive natural environment (air pollution, forests, rivers, lakes absence)	1	0	0	0
Underdeveloped social infrastructure	8	5	2	0
Missing strong, proactive rural communities	5	2	0	0
The aging community	25	30	36	31

Population decline is common and has long become the norm in Central and Eastern European countries. And the reasons are, if not clearly identified, at least intuited. The research has confirmed it. Population is declining because more opportunities arise to solve people's material problems and realize oneself wishes somewhere else, not in one's home country. It is an objective factor and it not much can be done at both national and local government levels.

Slightly different situation is investigated with areas where the population is growing. These territories are influenced by some specific factors that are unique to this particular territory and uncharacteristic to nearby location. Table 2 shows the respondents' views on the factors that determine population growth trends in the wards. If in the first case, when factors for depopulation was ranked crystallized by decreasing of number of selected answers, in this case, there were no significant differences of respondents ratings of the factors that positively affected the population growth.

As it can be seen, the valuations of those who have chosen four and one possible answers differs slightly. 4 the most important factors were identified: the proximity of the municipal central city, highway, passing through the ward, an attractive natural environment and presence of community gardens. Further investigation (through the phone calls to executives of rural wards asking to provide more detailed explanations) showed that 2 factors: the proximity of the municipal capitals and highway passing through the ward are closely related to each other. That is, if the ward is located nearby the municipal center, that is, in fact, there are convenient transport links available.

We found an interesting link on factors such as the attractive natural environment and community gardens, but a more detailed study did not show that it is somehow intrinsically linked. However, it was found that such a subjective factor as an attractive natural environment, often means no more than absence of an old, neglected infrastructure, buildings and so on.

Table 2. Factors affecting population growth trends, %

	Number of factors marked				
	4	3	2	1	Average
Number of respondents	17	14	23	16	x
Number of answers, %	100	100	100	100	100
Factors marked by respondents as having importance to stay:					
Wards borders with the central urban area of the municipality	15	26	24	19	21
Ward is crossed by important highway	19	17	24	19	20
Attractive natural environment	24	19	22	31	24
Community gardens are located in the ward	15	12	22	19	17
Community gardens are located in the ward	10	12	0	0	6
Developed social infrastructure	10	5	2	6	6
A strong, proactive rural community	7	10	7	6	7

Community gardens are likely Lithuanian phenomenon, as we didn't detect studies related to this issue in other country's research works. Due to various circumstances: too expensive life in cities, the desire to obtain additional income for renting the remaining housing, or simply the desire to be closer to nature, not only in the summer months, residents often move to live in the gardens, which often was an administrative territory not of the city, but of the rural ward, so we see the increase of population in these areas.

Table 3 presents the 13 municipalities where at least in one of the municipality's ward population was increasing. For all other municipalities there were no wards with increasing population. As can be seen, main districts with growing population it is Kaunas district (16) and Vilnius district (12) municipalities. It should be noted that respondents of the wards of these municipalities, more or less equally evaluated the attractiveness of such factors as the proximity of the territory, availability of community gardens and attractiveness of natural environment factors. Most of them disagreed in assessing communities roles for population trends in the rural areas. Kaunas gave 14, where, meanwhile, Vilnius residents only 3 % t of votes.

Further investigation showed, that the population increased mostly in Kaunas – Vilnius regions rural wards, which includes: Elektrėnai, Kaunas, Prienai, Šalčininkai, Švenčionys, Trakai, Vilnius municipalities. It comprises 43 out of 73 all wards from which the answers were received or some 60%. Interestingly, the factors that respondents identified as the most important due to population growth both Kaunas and Vilnius regions are very similar. The greatest weight was given to proximity to the central municipal city, highways presence, favorable natural environment and availability of community gardens. They get 70 to 80% of votes.

Table 3. The factors which have led to population growth in the wards, %

Municipality	Number of wards, where population increased / decreased	Wards borders with the central urban area of the municipality	Ward is crossed by important highway	Attractive natural environment	Community gardens are located in the ward	Community gardens are located in the ward	Developed social infrastructure	A strong, proactive rural community
Elektrėnai	3 / 4	33	22	22	11	11	0	0
Kaunas	16 / 2	14	14	20	20	6	14	14
Kelmė	2 / 8	20	20	40	0	0	0	20
Klaipėda	4 / 5	27	9	18	36	9	0	0
Marijampolė	3 / 2	29	0	29	29	0	14	0
Plungė	3 / 4	33	33	11	11	11	0	0
Prienai	3 / 4	10	30	30	10	10	0	10
Šalčininkai	3 / 6	0	20	40	0	0	0	40
Švenčioniai	2 / 6	33	33	33	0	0	0	0
Telšiai	4 / 6	17	8	25	8	8	17	17
Trakai	4 / 3	13	27	20	7	20	0	13
Vilkaviškis	2 / 7	40	40	0	0	0	0	20
Vilnius	12 / 5	19	16	22	22	11	8	3

4 municipalities are from of Samogitia region of Lithuania: Klaipėda, Kelmė, Plungė and Telšiai, 2 from Suvalkija region: Marijampolė and Vilkaviškis. It should be noted that this table does not include the fourth and the fifth largest cities of Lithuania – Šiauliai and Panevėžys municipalities. That is because neither one of the 6 respondents of Šiauliai and the 2 respondents of Panevėžys wards indicated the population growth. In order to evaluate such a phenomenon a more detailed investigation is required. The general trend is that the smaller the size of the municipal central city, the more significantly is valued the community factor in the population growth in the ward.

Summarizing the valuations of the factors which were important to population growth, both, respondents of the wards with declining and growing population, indicated factors such as social infrastructure, community and business opportunities as non-essential and not seriously affecting the wards population trends. The role of such factor as natural environment was valued differently by respondents from wards with decreasing and increasing population. While the respondents form the wards where the population increased ranked it among the 4 most important factors, the respondents form the wards where the population decreased, granted it minor role.

4. Conclusions

1. Rural vitality – the traditions, values and way of life of the rural population is treated as a public good, which needs to be maintained. The population of the Lithuania is constantly declining, but sometimes in adjacent wards population trends

are just opposite, there are those where the population is stable or increasing. It is important to identify the factors that determine the uniqueness of certain areas, what factors attracts new residents, which induce to leave. On the basis of that the future politics may be developed.

2. Evaluations have shown two main causes of depopulation: emerged new opportunities to live, work, study in EU countries and an aging community. Population increase was driven by four main factors: an allocation to ward – the closeness of the municipal central city, highway, crossing the ward, availability of community gardens and a favorable natural environment.

3. Lithuania's regional policy is now focused on reducing disparities between regions, but such a policy, given the fact that 80% of the wards shows steadily declining of population is only inefficient waste of scarce public resources, and it seems reasonable to re-examine it concentrating on areas where the population is growing naturally.

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VEIKSNIAI LEMIANTYS GYVENTOJŲ SKAIČIAUS POKYČIUS KAIMO VIETOVĖSE

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Santrauka

Pastaraisiais dešimtmečiais nuolat mažėjant kaimo gyventojų, susirūpinta kaimo gyvybingumu – kaimo tradicijų, vertybių, kaimo gyventojų gyvenimo būdo palaikymu. Tai traktuojama kaip viešoji gėrybė. Kaime gyvenantys žmonės yra šių vertybių pagrindas. Kaip juos paskatinti, sudominti likti kaime yra daugelio mokslinių tyrimų objektas. Tyrimo tikslas – identifikuoti veiksnius, lemiančius gyventojų skaičiaus didėjimo tendencijas tos pačios savivaldybės vienose kaimiškosiose vietovėse ir mažėjimą kitose. Tyrime pasirinkti ekspertai – kaimo seniūnijų seniūnai, kurie surangavo svarbiausius veiksnius, lemiančius seniūnijos gyventojų skaičiaus kitimo tendencijas. Tyrimo rezultatai parodė, kad seniūnų nuomone, gyventojų skaičiaus mažėjimą lemia pasikeitusi Lietuvos geopolitinė situacija, susijusi su įstojimu į ES, o didėjimui didžiausią reikšmę turi seniūnijos artumas savivaldybės centriniam miestui, palanki gamtinė aplinka ir sodų bendrijos, į kurias dėl įvairių priežasčių keliasi miestiečiai.

Raktiniai žodžiai: kaimo vietovės, kaimo seniūnijos, kaimo gyvybingumo veiksniai.
JEL kodai: J11, R11, R50.