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ASSESSMENT OF RURAL SOCIAL INFRASTRUCTURE SERVICES IN LITHUANIA AND POLAND IN THE CONTEXT OF GREEN ECONOMY

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This article reveals the importance of social infrastructure (hereinafter SI) services to rural people, overall rural development and its interface with green economy in Poland and Lithuania. Social infrastructure services are recognized as basic services which are useful and used by people in everyday life regardless of where people live. Development of these services is a key issue when it is analysed in the rural context because it includes various services for local community, facilities, relationships and networks which is not always the focus even in scientific discourse. Social infrastructure services can be considered as important element of rural people integration, fostering their capabilities and acknowledging human rights. The research question of this article is – how the importance of social infrastructure services in rural areas appears? The aim of the research is to disclose the importance of social infrastructure services in rural areas. There were used both theoretical and empirical research methods exploring the evaluations about of social infrastructure services in Poland and Lithuania by using empirical data from European Social Survey. The research results disclosed that the differences between two countries are not very strong and between rural and urban areas are slightly noticeable in some aspects. In Poland the state of education services in rural areas and small towns was rated little higher than in Lithuania, while perception of health services is much better in Lithuania, especially in big cities. Lithuanian residents trust the police more than Polish people but their feeling of safety is noticeably lower.

Keywords: social infrastructure, social infrastructure services, rural development, green economy.

INTRODUCTION

Social infrastructure is an important element of the rural social and economic system and important part of rural people daily life. Frolova et al. (2016, p. 7421) pointed out the role of SI in local level - that social infrastructure ensures the development of the municipal unit, satisfaction of the basic needs and interests of the population, creation of the conditions for its subsistence and reproduction. Besides SI services development determines satisfaction of rural people needs, fulfilment of human rights, their choices and alternatives as well can play a vital role in connecting these human aspects. It is assumed in various literature that SI services are created and developed for societal progress. Moreover, this progress is related with seen positive changes in empowering people and reaching higher wellbeing. This remark is very important in the rural context, because rural people according to literature (Satish, 2007; Atkočiūnienė et al., 2014; Frolova et al., 2016) very often stay away from accessibility of SI services and the importance of them in a society is undisputed enough.

SI services include various, but as but as recognized in many countries mostly public services: e.g., education institutions, medical authorities, police forces, post, suppliers of transportation services, banking, communal utilities etc. (Atkočiūnienė et al., 2014; Vaznonienė, Kiaušienė, 2018). Green economy is defined by UNEP (Fedrigo-Fazio, ten Brink, 2012) as one that results in improved human wellbeing and social equity, while significantly reducing environmental risks and ecological scarcities. The interface between social infrastructure services and green economy is quite new aspect in social sciences discourse. Though it mostly related to economic aspect, there appears more and more discussions related to social or environmental aspects (HM Government, 2007; Spicker, 2009). It can be stated that to a large extent social infrastructure services are related to social environment and institutions, but its functioning and development also very much is affected by investments and support provided to rural infrastructure. It also should be noted that provision of SI services depends on institutional collaboration and the supply - demand for them. Rural people needs and their subjective evaluations for these services usually is the biggest factor (but not the only) for their implementation.

The above mentioned lets to formulate *the research problem* of this research – what is the level of meeting needs by selected public services in rural areas in context of green economy aiming at human wellbeing and social equity? *The research object* - social infrastructure services. *The aim of the research* is to disclose the importance of social infrastructure services in rural areas of Poland and Lithuania. The evaluation of SI services in this article is implemented by using the data from European Social Survey about Poland and Lithuania. The research results have suggested that there are no great differences between two countries. Comparison of these two countries enables to see the existing

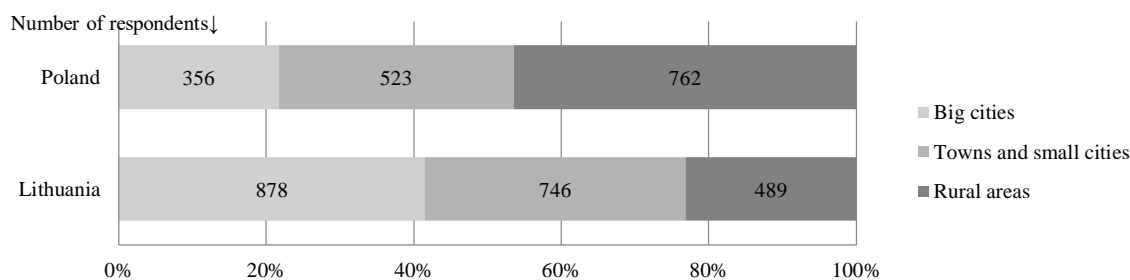
differences in these two neighboring countries in the perceived state of selected public services. Also, the attitude to environmental protection as an important aspect of green economy was shown.

RESEARCH METHODOLOGY

Theoretical and empirical research methods have been employed in this research: analysis and synthesis of scientific literature and documents, abstraction method, comparative analysis, questionnaire survey. The data for analyzing SI services importance for rural areas was used from European Social Survey (ESS) Round 8 (years 2016/2017). ESS is one of the biggest surveys in Europe which covers various topics related to human life evaluations. Some particular questions related to SI services are also included in the ESS questionnaire and based on respondents' subjective perception what do they think or how they evaluate these services. In other words, for this research "bottom up" approach was used in SI services evaluations what means that authors abstract from other stakeholder positions. The main attention was focused on these questions related to the rural people evaluations about SI services:

- B32 Please say what you think overall about the state of **health services** in [country] nowadays?
- B31 Please say what you think overall about the state of **education** in [country] nowadays?
- B8 How much you personally trust the **police**?
- C6 How **safe** do you – or would you – feel walking alone in this area after dark? (as effects of police activities).

Sample size calculation in the ESS are guided by the requirements described in the official ESS internet page (Sampling: https://www.europeansocialsurvey.org/methodology/ess_methodology/sampling.html). ESS responses without the indicated place of residence and with indicated "suburbs and outskirts of the city" were excluded from the study due to the impossibility of assigning a specific area of residence. Categories "Country village" and "Farm or home in countryside" were united into one category: "Rural areas". For the comparison of Polish and Lithuanian evaluations about SI services in rural areas the sample was respectively – 1641 in Poland and 2113 in Lithuania. There were 23 % rural respondents in Lithuania and 46 % in Poland although the difference in number was not high (Fig. 1).



Source: authors' elaboration based on European Social Survey (2017)

Figure 1. Structure of respondents

In the ESS different evaluation scales for questions were used, for example: 1-4, 1-6, 0-10. For comparison of situation in Lithuania and Poland calculations of frequency of answers, median and quartiles for each country separately were made. Also, the mean assessment of certain public services was calculated in different types of areas in each analyzed country. Data was presented using tables and graphs generated with the use of MS Excel and Statistica software.

The importance of social infrastructure to rural areas - theoretical background

Defining and characterising what is social infrastructure services – there can be different notions of it. Various authors (Spicker, 2009; Frolova et al., 2016; Vazonienė, Kiaušienė, 2018) agree that social infrastructure services generally cover education, medical, post, transport, personal security, communication, public catering, communal utilities, police etc. – provided by mostly public sector. On the other hand, SI services also are called like public services, facilities, goods (Dodds, Paskins, 2011; Fransen et al., 2018) which are provided by various institutions mostly public, though they can be private as well. Spicker (2009) emphasized that services in the public sector cannot be analysed by the same criteria as market-based provision where these services operate for profit. He mentioned that services are public if they exist for reasons of policy, provided to the public, they are redistributive and they act as a trust. Their priorities and outputs must serve the public needs. This shows that evaluations of SI services can reveal quite different approaches of its evaluation or state not only the quality of service provided, but it may also reveal the rating of the institution which providing that service or show the demand for them.

Some of the authors give attention to separate SI services and other try to analyse them systematically with emphasis on them as basic services for the rural economy and rural population or as background for rural areas renewal and development. Conceptualising what is SI services the authors of the article have followed some very clear definitions, which give the essence of it. Swanson (1992) has mentioned that SI is formed by various elements like institutions providing social services/consultations (local administration, institutions providing social services, NGOs), human resources (skills, level of education, social structure of local residents/employees), characteristics of social ties (ability to develop innovations, to take over the information, etc.). Atkočiunienė et al. (2014) have characterized SI as territorial and

spatial system of interrelated types of economic and social activity and relations which create conditions for functioning of ecosystems, creation of human, physical and social capitals employed by individuals and community in satisfying their individual and social demands. Clarence and Gabriel (2014) have revealed that SI services are an important element of community social action and interaction, the way how people are engaged. According to specific report about SI services (EU support..., 2015) rural infrastructure in general include both hard and soft infrastructure. The typical physical assets (or hard infrastructure) that support rural areas are roads, bridges, water supply systems, sewers, waste management facilities, electrical grids and telecommunications. In contrary soft infrastructure include public facilities such as schools, kindergartens, sports facilities and community centers, which are commonly referred to as social and cultural infrastructure. This report revealed how both types of SI services help to boost economic growth and can increase the attractiveness of rural areas. Moreover, economic and infrastructural development are important processes of society functioning and in any territorial unit they are interdependent. So, SI services are also important element in the green economy which seeks to strengthen the environmental and social pillars of sustainability, results in improved human well-being and reduced inequalities over the long term (Inclusive Green Growth, 2012; Public Services..., 2013). Green economy – aiming at significantly reducing environmental risks and ecological scarcities - is therefore related to UNDP Sustainable Development Goals and social infrastructure plays an important role as a necessary background helping to achieve some these goals as: Good Health and Well-being, Quality Education, No Poverty, Sustainable Cities and Communities or Industry, Innovation and Infrastructure. Social infrastructure belongs to the group of main factors shaping the possibilities of sustainable development in rural areas, both on an economic, social and ecological level. SI has a significant impact on development processes in rural areas through creating conditions for improving the quality of human capital (Dolata, 2014). Development of services, including public services or enhancing SI contributing to education skills for future generations in rural areas can help achieve social sustainability. This suggests that territorial differentiation of SI services provision depends also on human capacity of social infrastructure objects, it reflects of the existing economic and political trends and challenges. Frolova et al. (2016) has remarked that SI services of the municipal unit (or local level) is a complicated, multifunctional complex that includes a set of institutions, organizations and offices, united by a common goal of development of the municipality, satisfaction of the basic needs and interests of the population, arrangement of conditions for their subsistence and reproduction. She pointed out that social infrastructure ensures the development of the municipal unit, satisfaction of the basic needs and interests of the population, creation of the conditions for its subsistence and reproduction. Fransen et al. (2018, p. 28) have described that SI is a subset of the infrastructure sector and can broadly be defined as long-term physical assets in the social sectors that enable goods and services to be provided.

The functions of SI can be classified taking into consideration the needs of the population they satisfy (Duś, 2002). Therefore, the functions can be: cultural and educational (primary schools, kindergartens, libraries and community centers), social (health centers, pharmacies, playgrounds, sports clubs) and social and organizational (churches, firehouses, etc.). Other classification of SI functions was presented by Witkowski and Starościc (2008) where the authors indicated the following functions: leisure, recreation and health function; educational and cultural function; health function and preventive function (preventing impoverishment, illiteracy and marginalization). They also emphasized the importance of development activation function of social infrastructure and the role of SI in raising skills and competences, as well as the motivational aspect (awakening aspiration and entrepreneurship). The social function of the infrastructure is realized through increasing life satisfaction, which results in restoring good form and wellbeing of people in different age groups.

Arguments that define the importance of SI services at local level or in rural areas are various, but not always perceived by local and national government. SI services play crucial role in shaping any society as well as the economy of different territorial levels in every country. Satish (2007) have noted that rural infrastructure is crucial for agriculture, agro-industries and overall economic development of rural areas. Fransen et al. (2018) analysing SI services have emphasized the nowadays importance of SI. The author pointed out that SI services are dependent factor of rapidly changing needs of rural people, they are affected by significant changes at the demographic level and scarce resources at local or regional levels. European Union various reports (European Commission, 2005; EU support..., 2015) showed that adequate allocation and development of social infrastructure in rural areas can promote the standard of living and wellbeing of local people. So, their evaluations related to separate services can be an incentive to develop certain services, or vice versa, it can be seen which services need not to be developed. Frolova et al. (2016) and Rudenko et al. (2016) highlighted that the link between the level of social infrastructure development and economic stability of the area is evident. According to green economy principles SI services also can become as green services which bring improvements as regards to environmental impacts and rural sustainability policy. The interface between SI services and green economy appears in the discussions related to the economic growth and its possible effect on rural people and rural areas. Level of economic development determines the development of social infrastructure. In turn, the concentration of infrastructure objects in the territory is an additional source of economic growth (Rudenko et al., 2016). Effective or rational development of social infrastructure can also be assumed as a guarantee of political stability (EU support..., 2015), especially if in rural area provided SI services satisfy needs of local people. They make major contribution to the wellbeing of rural people, enable various social groups to participate fully in the society and promote economic development. So, summarizing the notion of SI it becomes clear that these services are crucial instrument for improving the lives of everyone and across all generations, creating inclusive society and significantly affect economic growth.

The findings from different researches about SI in rural areas can be compared between Poland and Lithuania. Research about rural social infrastructure services have received fairly limited attention in Lithuanian social sciences. The main scientific results about SI services include the fields related to mechanisms of SI reformation (Žalimienė, 1993), evaluation of the overall situation of SI in rural areas (Atkočiūnienė, 2000), Lithuanian inhabitants' needs for SI (Kuliešis,

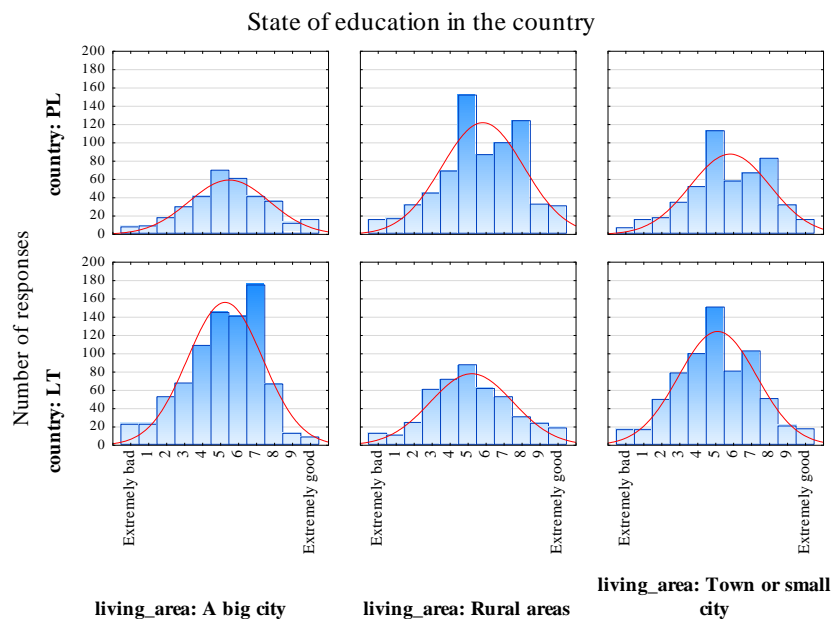
Vidickienė, 2008; Engle et al., 2014), their role to sustainable communities (Atkočiūnienė et al., 2014; Vazonienė, 2015), SI importance for promoting local community wellbeing in Lithuania (Vazoniėne, Kiausiėne, 2018). Other aspects related to SI are not really developed or cover the fields mentioned only partially.

Social infrastructure in Poland is much diversified. On the one hand access to rural culture houses, playgrounds or sport infrastructure as playing fields, outside gyms has improved. On the other hand, access to police or medical services is usually available only in local centres of the municipalities, also access to public transport is in the rural areas very poor (Wolański et al., 2016; Komorowski, Stanny 2017). Studies on social infrastructure in Poland focus mainly on certain regions (Kołodziejczyk, 2006) or local scale, also in rural areas. They show the decreasing number of educational institutions (mainly small rural primary schools) but also increasing number of cultural centers as well as clubs and club rooms, which helps local communities to run social and cultural activities as they often stimulate creativity and cooperation. The situation of public health services in Poland is deteriorating, there are fewer hospital beds and fewer doctors (Tarnowska, 2011). The most common element of social infrastructure in rural areas are fire stations and generally volunteer fire departments, sports fields, and women's organizations (Duś, 2002). In view of the above, the need to discuss the role of SI services for rural areas is becoming increasingly relevant and requires greater attention from the researchers. As there is a general lack of international comparisons, this study aims to fill the lack of knowledge in this field, taking Lithuania and Poland as research area.

RESULTS FROM EMPIRICAL RESEARCH

Analysis of the ESS data allowed to identify the differences in the perceived quality of specified SI services in both countries with a special attention to the differences between rural and urban areas.

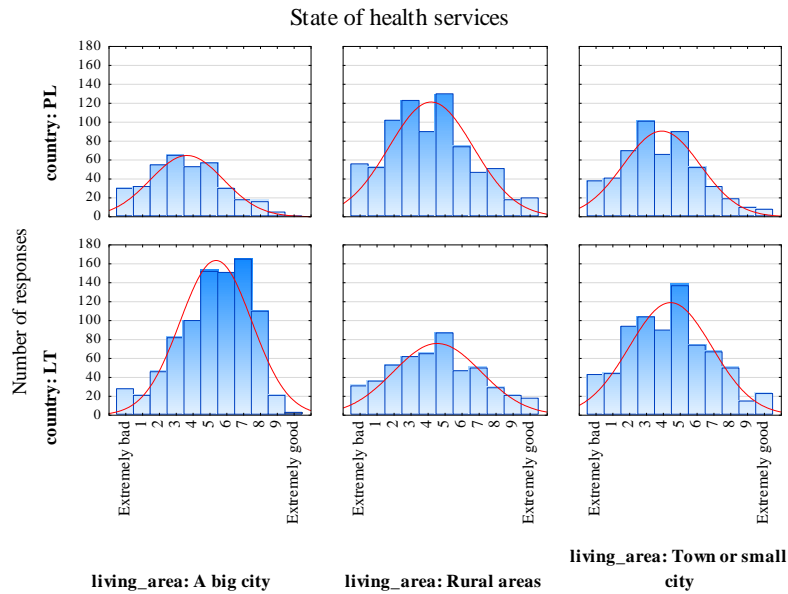
Education services are average seen in both countries, the mean note was 5 both in Lithuania and Poland. Analysis of groups by place of residence shows interesting differences – in Poland the state of education services in rural areas and small towns was rated little higher than in Lithuania (higher notes). In Poland, education in big cities was rated lower than in other types of areas, differently than in Lithuania, where it was rated little higher than in rural areas and towns or small cities.



Source: authors' elaboration based on European Social Survey (2017)

Figure 2. Assessment of education services in Lithuania and Poland

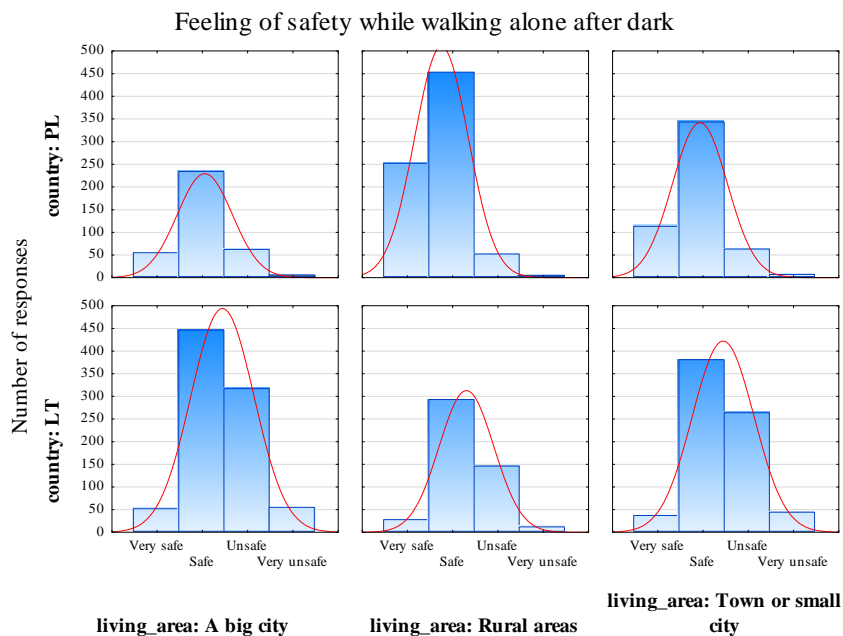
Health services in Poland were rated much lower than in Lithuania in all types of areas, especially by residents of the big cities. In rural areas this difference is not that strong but also noticeable, which may be caused by generally poor and diversified accessibility to hospitals or health centers in rural areas (Stępniaak, 2013). Interestingly, the state of health services in Lithuanian rural areas is seen better than in small towns and cities.



Source: authors' elaboration based on European Social Survey (2017)

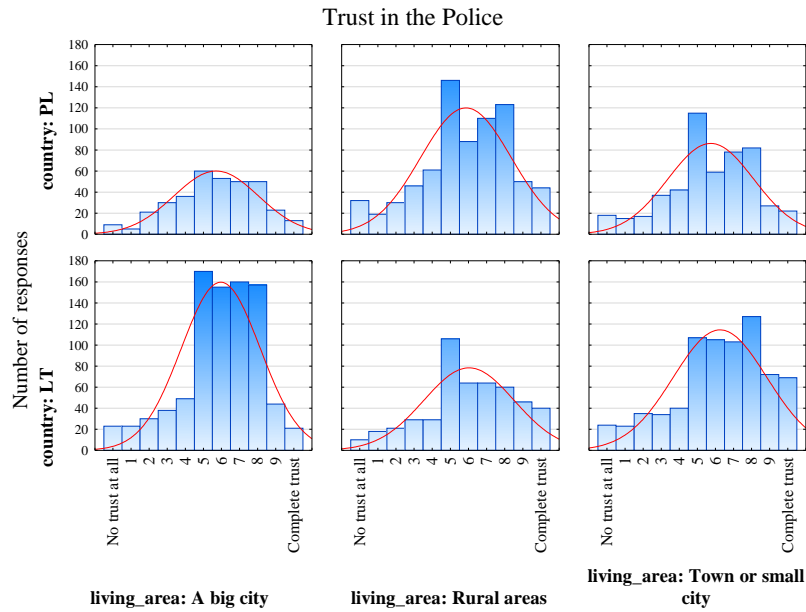
Figure 3. Assessment of health services in Lithuania and Poland

Public security services were assessed using two different questions from the ESS. One of them was feeling of safety when walking out alone after dark. Most inhabitants of all types of areas in both countries felt safe. But in Poland more people felt very safe, especially in rural areas and small towns, in Lithuania there was a stronger unsafety feeling in all types of areas. Residents of Polish rural areas felt the most secure of all groups, which may be caused by good integration in small local communities. Another way to rate public security services was assessment of trust in the police. It was little higher in Lithuania in all types of areas, especially small towns. Lithuanian feeling of safety is noticeably lower although the residents trust the police more than Polish people.



Source: authors' elaboration based on European Social Survey (2017)

Figure 4. Feeling of safety in Lithuania and Poland



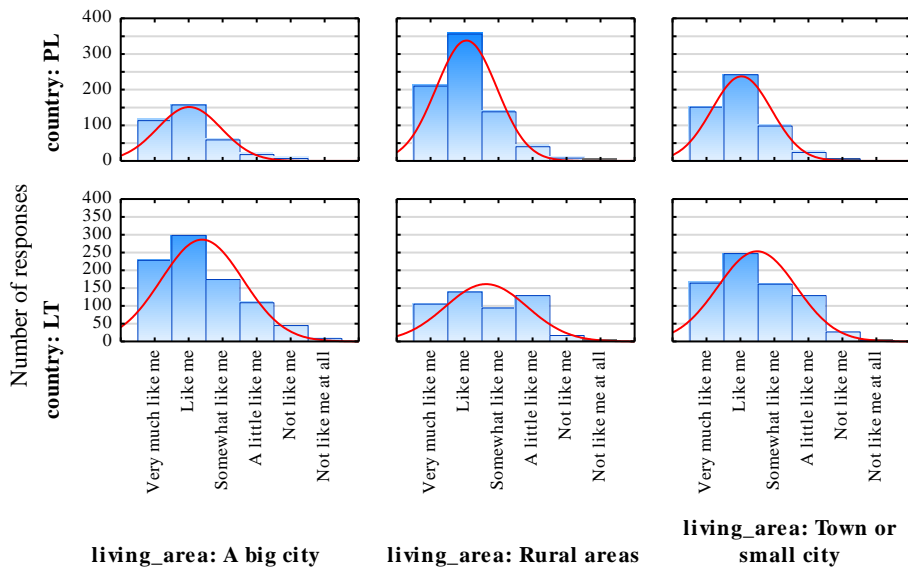
Source: authors' elaboration based on European Social Survey (2017)

Figure 5. Trust in the police in Lithuania and Poland

As one can see, SI plays an important role in supporting the social pillars of sustainability as health or education. To identify the links with attitude to green economy in both countries one more question from the ESS was analyzed. It concerned the importance of care for nature and environment. Most respondents in both countries identified themselves with the necessity to look after nature but there was one significant difference. In Poland environmental awareness was little higher than in Lithuania, but in Polish rural areas it was much higher than in Lithuanian rural areas. Between big and small cities within each country no significant differences were noted.

How much each person described below is or is not like you:

"He strongly believes that people should care for nature. Looking after the environment is important to him".



Source: authors' elaboration based on European Social Survey (2017)

Figure 6. Attitude to care for nature and environment in Lithuania and Poland

Results of this research disclosed that respondents' evaluations about SI services in rural areas is an important factor determining the situation of these services both in Poland and Lithuania. Focus on rural areas SI enables to highlight the directions which SI services should be improved or what of them are important to rural people. This assessment between Poland and Lithuania rural SI services explored that existing differences are conditioned by specificity of rural areas and rural respondents' possibilities to access and use these services. From the point of green economy, it is obvious that rural people evaluate lower and still have lower possibilities to use SI services, because the development and provision

of these services also depend on the economic factors involved in assessing the investment needs for these services, the potential costs, and so on. These aspects could be an interesting field for future research.

CONCLUSIONS AND DISCUSSION

The research allowed to identify the perception of quality of selected SI services in both analysed countries with a special attention to the differences between rural and urban areas. The research results revealed that the difference between rural and urban areas is slightly noticeable in some aspects – in Poland better education services and higher feeling of safety, in Lithuania higher trust in police and better state of health services; in Poland the state of education services in rural areas and small towns was rated little higher than in Lithuania; perception of health services is much better in Lithuania, especially in big cities; Lithuanian residents trust the police more than Polish people but their feeling of safety is noticeably lower. When analyzing these results limitations of the study should be kept in mind. The most important limitations are unknown detailed characteristics of the study group (however, with a large number of respondents) and no distinction in the survey between public and private services in relation to education and health services (as we can observe the difference in quality and customer care can be very high depending on the sector). Different number of rural respondents in ESS Round 8 in Poland and Lithuania also explores separate perceptions in SI services evaluation.

The main conclusions are:

- SI services play an important role to rural areas and rural people because they reveal the level of their needs satisfaction, create conditions for better living environment, they reveal how attractive the rural area is to live and work, it shapes general territorial and spatial system of interrelated types of economic and social activities.
- The interface between SI services (as element of economic and social activity) and green economy occurs in the point how the economic growth and development in rural areas are seen and what possible effects it has to rural areas. On the other hand, the concentration of SI objects in the territory determines economic growth as well and creates preconditions for higher wellbeing of rural people, enable various social groups to participate fully in the society and promote economic development.
- From the research it was found that the importance of SI services manifests itself through: an important role as a necessary background helping to achieve Sustainable Development Goals as good health and wellbeing, quality education, guaranteeing the safety of the rural population. Moreover education, health and public security services play an important role in creating sustainable society and improved human wellbeing.

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