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SELECTION OF SOCIAL INDICATORS FOR MEASURING SUSTAINABLE RURAL DEVELOPMENT

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Abstract

Rural development, sustainable development and sustainability are nowadays often mentioned in scientific publications, as well as in political discussions and the media. The concept of sustainability includes three sets of goals: economic, environmental and social. In this paper emphasis is put on the selection of the most appropriate social indicators for measuring sustainable rural development at NUTS 3 level. Objectives of the paper were: (1) to identify the most appropriate social indicators for measuring sustainable rural development already used or proposed in literature, (2) to choose the five most appropriate indicators according to experts' assessment. The analysis of existing research outlined and explained 18 social indicators. After the first phase of selection, an additional selection of indicators by expert evaluation was carried out. Based on the expert evaluation, five most relevant social indicators were identified, namely according to the average grade: age structure (4.70), availability of educational institutions (4.45), educational structure (4.34), availability of health institutions (4.32) and population growth between two censuses (4.32). Looking at separate assessments of each of the expert groups, it is evident that their selection of the five most relevant indicators coincides in three indicators: age structure, availability of educational institutions and educational structure.

Key words**:** *experts' evaluation, social indicators, sustainable rural development*

INTRODUCTION

Rural development, sustainable development and sustainability are nowadays often mentioned in scientific publications, as well as in political discussions and the media. The concept of sustainability includes three sets of goals: economic, environmental and social, which are connected by numerous and complex relationships [9]. Kordej-De Villa [26] believes that economic sustainability means achieving growth, efficiency and equitable distribution of wealth, while social s. implies the participation of the whole community in the decision-making process, their mobility and cohesion, institutional development, etc. As for the environmental dimension, the author says that it respects the integrity of different ecosystems, reception capacity and protection of natural resources.

The strategic goal of the European Union (EU) "to become the most competitive and knowledge-based dynamic economy in the world capable for sustainable economic growth with more and better jobs and better social cohesion" [3] in practice implies that the economic growth supports social progress and cares for the environment, that the social policy supports economic achievements and that the environmental policy is cost-effective. This is particularly important for the preservation of rural areas, which in the EU-28 occupy 52% of the area [11] and 22.8% of the population [10]. In some Member States, rural areas occupy more than 80% of the territory [11]. Differences in the age structure between urban and rural areas of the EU-27 are reflected in a smaller share of the population aged 0-14 in rural areas (15.3%) than in urban (16%) and a higher share of the elderly population (> 65 years) in the rural area (18.6%) compared to the urban (17%). The share of the population with completed minimum secondary school in rural areas of the EU-27 is 70.7%, rural-urban 73.5% while

the highest share is noted in the urban areas where it amounts to 77% [13].

Sustainable development covers many areas, of which sustainable rural development is the most interesting one for the agricultural profession. It is generally recognized as the result of those human activities that use rural resources to increase the well-being of residents [36]. Morgan et al. [30] highlight the multifunctionality of agriculture as one of the goals of sustainable rural development. As a broad generalization, within a large part of Northern Europe, multifunctionality is seen more in terms of the delivery of environmental services, whereas in Southern Europe, multifunctionality is perceived more in socio-cultural terms [38].

The main role in achieving sustainable rural development should be played by the local community, which is also emphasized in Agenda 21, while in Croatia only local authorities, which are only one of the components of the local community, are recognized as the ones who "play a vital role in achieving the main objectives at the local level" [35]. Sustainable rural development can be achieved in different ways and with different tools, i.e. by organizing expert workshops for local people and improving access to information, resources and innovative technologies.

As demonstrated above, the social component of sustainable rural development is indeed very important and therefore the first objective of the paper is to identify the most appropriate social indicators for measuring sustainable rural development already used or proposed in literature. The second objective is to choose the five most appropriate indicators according to experts' assessment.

MATERIALS AND METHODS

The first step of the research was a literature review with the objective of defining theoretical-methodological determinants of the paper and identifying a broader set of social indicators of rural development used in different works of research, as well as the ones only proposed by competent institutions. Those are the indicators that certain institutions (e.g. the European Commission) proposed in their templates for assessing rural space sustainability, but examples of their use in specific works of researchers have not been found.

The second step was the experts' assessment of identified indicators with the objective of a narrower selection.

On a scale from one to five, the experts determined the relevance of each indicator for the assessment of sustainable development.

The experts could also suggest other indicators that they consider important, and were not on the list of offered indicators.

The expert assessment was conducted face to face and via e-mail, among 47 expert representatives of scientific institutions connected with rural development, sociology and economy, representatives of counties connected with rural development and agriculture, representatives of various relevant agencies and associations and leaders of Local Action Groups (LAG) operating in Croatia. The expert assessment included 20 representatives of scientific institutions, 20 representatives of LAGs and associations and seven representatives of local and state bodies (counties, ministries and agencies).

The research was conducted in the period from July to August 2016.

The data was processed in the SPSS Statistic 17.0 program, that calculated the average for each indicator and performed a Chi-square test for the experts' workplace dependence with grades assigned to each indicator.

RESULTS AND DISCUSSIONS

Proposed social indicators for measuring sustainable rural development with results

Based on the literature existing at the disposal, and analyzing the previous works of research on the subject of sustainable rural development, especially its social component, it was singled out a number of 18 indicators.

The names of these social indicators and the names of the authors who studied them are synthetically presented in Table 1 and described below.

Table 1. List of proposed social indicators with specified authors that used/proposed them

Social indicator	Authors using/proposing the indicator
Number of women in local self-government councils in relation to the total number of councilors	Niggemann, 2009; Golusin and Munitlak Ivanović, 2009; FAO, 2013 [32, 19, 16]
Number of agricultural holdings in which women are stakeholders	Niggemann, 2009; FAO, 2013 [32, 16]
Age structure	EC, 2001; EC, 2013 [9, 13]
Number of single person households in rural areas	-
Availability of health institutions – number of general practice clinics per km^2	UN, 2007; Khalifa and Connelly, 2009; Ramos, 2009; OG 30/2009; Global Ecovillage Network (n.a.) [39, 24, 37, 35, 18]
Availability of postal services – number of post offices per km^2	-
Availability of basic groceries – number of grocery stores per km^2	Niggemann, 2009 [32]
Availability of educational institutions – number of primary and secondary schools per km2	OG 30/2009; Global Ecovillage Network (n.a.) [35, 18]
Quality and frequency of public transport lines	Ferrarini at al., 2001; Niggemann, 2009; OG 30/2009; Dolata, 2013; Global Ecovillage Network (n.a.) [17, 32, 35, 7, 18]
Tradition and cultural facilities	Global Ecovillage Network (n.a.) [18]
Voter turnout in the last local and parliamentary elections	Niggemann, 2009; Ramos, 2009 [32, 37]
Crime rate	UN, 2007; OG 30/2009; Ramos, 2009; Niggemann, 2009; Global Ecovillage Network (n.a.) [39, 35, 37, 32, 18]
Number of active theaters, cinemas and cultural and artistic societies in the county in relation to the number of inhabitants	Niggemann, 2009 [32]
County expenditure (NUTS 3 region) for culture	Niggemann, 2009 [32]
Population growth between two censuses	UN (2007); Ramos (2009); OG 30/2009; Khalifa and Connelly, 2009 [39, 37, 35, 24]
Age and gender structure	Niggemann, 2009; EC, 2001 [32, 9]
Institutional efficiency (legislative framework, informal links, governance mechanism)	EC, 2001 [9]
Educational structure	EC, 2001; Ramos, 2009; EC, 2013a [9, 37, 14]

Source: Authors' synthesis based on literature.

Number of women in local self-government councils in relation to the total number of councilors

This and the next indicator belong to the group of gender equality indicators. When measuring this indicator, gender equality is observed within the county assembly. The County Assembly is a representative body of citizens and a body of regional self-government (NUTS 3 level) which adopts acts within the scope of the county and is elected every four years. The assumed ideal ratio of men to women in the convocation is 50:50 [32]. The gender equality indicator is proposed by the FAO [16] and used by Golusin and Munitlak Ivanović [19] to measure sustainable development in the countries of Southeast Europe as a share of women in the parliament. When measuring this indicator, the county whose ratio is closer to ideal is attributed more points.

Number of agricultural holdings in which women are stakeholders

Niggemann [32] also cites differences in income between men and women as one of the indicators of gender equality. Here, the number of family farms with women as stakeholders is taken as an indicator directly showing these inequalities, since agriculture is one of the main sources of income in rural areas. The gender equality indicator proposed by the FAO [16] also coincides with this indicator. The closer the share of women who run a family farm in a particular county (NUTS 3 level) to 50%, the higher the grade attributed to the county.

Age structure

Age structure is related to education level, behaviors, managerial skills, and commitment to agriculture [5]. Age structure determinants are: birth rate, mortality, migration and external factors (economic crisis, war, natural disasters, etc.). Age structure also affects future changes in population movement by determining the birth rate, mortality and population growth rate [41]. As highlighted in the EU Sustainable Development Strategy [9], Europe must face the economic and social impact of an aging population.

The indicator is proposed by the EC [9] in the Framework for Indicators for the Economic and Social Dimension of Sustainable Agriculture and Rural Development. It has also been used by the EC [13] to produce reports on rural development in the EU.

In order to determine the degree of aging, it is proposed to use a special model for evaluating age composition (Table 2). Nejašmić [31]

states that such model is better than the usual one because it scores each parameter separately (young and old population), and by summing these values, allows to obtain a point-based indicator of the aging of a certain population.

Table 2. Scoring procedure of the population aging indicator

Share of young people (%)	Points	Share of old people (%)	Points
0.0-5.0	0.0-5.0	0.0-10.0	70.0-60.5
5.5-10.0	5.5-10.0	10.5-20.0	60.0-50.5
10.5-15.0	10.5-15.0	20.5-30.0	50.0-40.5
15.5-20.0	15.0-20.0	30.5-40.0	40.0-30.5
20.5-25.0	20.5-25.0	40.5-50.0	30.0-20.5
25.5-30 and more	25.5-30.0	50.5-60.0	20.0-10.5
		60.5-70.0 and more	10.0-0.0

Source: [31].

Points are attributed according to the aging standardization given in Table 3.

Table 3. Aging categorization based on point value

Aging point indicator	Type	Characteristic
90.5-100.0	1	On the verge of aging
84.5-90.0	2	Aging
73.0-84.0	3	Old age
65.5-72.5	4	Deep old age
50.5-65.0	5	Advanced deep old age
30.5-50.0	6	Very deep old age
0.0-30.0	7	Extremely deep old age

Source: [31].

Number of single person households in rural areas

Single person households, according to the definition by Eurostat [15], are those households in which a person lives alone in a separate housing unit as well as those in which the person lives independently, as a tenant in a separate room in the same household as other tenants. As seen from Eurostat [15] data, more than 15% of single person households in Croatia are people over 65 years of age.

The starting point here is the fact that elderly single person households in rural areas present a special problem. These people are very often engaged in agriculture (either extensively or intensively) and after their death there will be neglect of the land and space where they lived.

The indicator is measured as the share of single person households in the county, which is then compared with the national average. If the share of single person households in a certain county is higher than the average, the county receives less points.

Presented below are several indicators (availability of health and educational institutions, postal services, basic groceries and quality public transport) that could be collectively called Accessibility of goods and services. The indicator is proposed by the EC [9] in the Framework for Indicators for the Economic and Social Dimension of Sustainable Agriculture and Rural Development, with a suggestion that transport, telecommunications and accessibility of health institutions, social and cultural activities are included within this indicator. Niggemann [32] measures this group of indicators as the distance from one social security (pension) office to another. We are of the opinion that these offices in Croatia are not of key importance for the well-being of the population, and they are neither necessary on a daily basis, which is why the Indicator of the availability of health institutions is proposed here instead.

Availability of health institutions – number of general practice clinics per km²

According to the World Health Organization, primary health care is based on five basic principles [1] of which the most important for this work is the first one: accessibility (equal distribution). This principle applies to the equitable distribution of care to all people regardless of gender, age, race, economic status and geographical location. Primary health care seeks to meet the needs of the whole community and each individual as close as possible to their place of residence and work, at an affordable price and with the use of scientific, practical and socially acceptable methods [23]. In addition to being a value in itself, health is also a prerequisite for economic progress, as it affects economic performance in terms of productivity, labor supply, human capital and public spending

[12]. The importance of health care in rural areas is highlighted by Dolata [7] in Infrastructure and Sustainable Rural Development – Some Theoretical Aspects. The indicator is used in the Community Sustainability Assessment manual [18], where the availability of primary health care, dental medicine, pediatricians, emergency care and other forms of health care and alternative treatment methods is monitored. It has also been used to monitor sustainable development in rural areas of Egypt as the number of hospital beds per 10,000 inhabitants [24]. It is proposed by the UN [39], Ramos [37] and the Strategy for Sustainable Development of the Republic of Croatia [35].

The indicator is measured as the number of patients per doctor, the number of women per gynecologist and the percentage of residents of the observed county who do not have a doctor of general practice in their municipality. The obtained results are compared with the national average and the counties are then ranked.

Availability of postal services – number of post offices per km^2

The basic indicators of the postal network development level according to international conventions are: (1) average number of inhabitants served by one post office, (2) average number of inhabitants per counter, (3) size of territory (in km²) covered by one post office, (4) size of delivery areas and (5) number of mailboxes, vending machines, etc. [25]. The postal sector is an important infrastructural element that provides access to crucial networks and services for the development of economic activities and the overall functioning of society. Ramification and accessibility of the national postal network and its integration into the global networks, as well as the quality of the postal service, directly stimulate economic growth [29].

This indicator is measured as the area of the territory covered by one post office. The county with the lowest score receives more points.

Availability of basic groceries – number of grocery stores per km^2

Lerch [27] states that complex security policies are needed for food security, including the development of sustainable agriculture, food processing and trade; the provision of financial support to vulnerable groups and the fight against malnutrition. In this paper, availability of basic groceries meant the possibility of buying them in the closest possible environment. Since a large rural population is elderly, traveling to nearby cities with larger shopping malls poses a problem (not owning a car, lack of public transport). It is very important for these people that their grocery stores are as close as possible to their place of residence so that they can buy basic groceries on a daily or at least weekly basis.

Niggemann [32] cites this indicator as one of the components within the indicator "Availability of goods and services".

This indicator is measured as the number of grocery stores per square kilometer. Shopping centers and shops in city centers are excluded from the calculation. The county with a larger number of shops per square kilometer receives more points because it is considered that basic groceries are more accessible to these residents.

Availability of educational institutions – number of primary and secondary schools per km^2

The Strategy of Science, Education and Technology states that education in Croatia is available to all under equal conditions and in accordance with their abilities [33]. According to the Primary and Secondary Education Act [34], school institutions network must meet the requirements of accessibility and rational organization of enrollment areas, i.e. school institutions and education programs. Accessibility of school institutions means the possibility of regular upbringing and education in a primary school, i.e. a school building or institution appropriately distant from the place of residence, with traffic connections that do not endanger the safety of pupils. Availability of educational institutions is measured as the

number of primary and secondary schools per km^2. Higher number means better availability. The indicator is used in the Community Sustainability Assessment manual [18], which apart from the availability of primary education, also observes the availability of pre-school education, lifelong learning, secondary and higher education, various seminars and workshops, etc. The indicator was also proposed in the Strategy for Sustainable Development of the Republic of Croatia [35].

Quality and frequency of public transport lines

Mobility is a very important factor in today's society. People who do not own a car often depend on public transportation. Niggemann [32] states that this most often applies to old and young people and disabled persons. He believes that well-developed transport would contribute to better inclusion of residents in the community. Hanžek [21] states that public transport ensures mobility for all but this is not the case with cars. The importance of transport accessibility in rural areas is emphasized by Dolata [7]. The access to public transport indicator was proposed in the Strategy for Sustainable Development of the Republic of Croatia [35]. Public transport in Croatian rural areas is less developed, which is reflected in the small number of public transport lines to city centers, which consequently reduces the mobility of citizens who do not own a car or a driver's license. Ferrarini et al. [17] measure this indicator as a percentage of the population using public transport. In Sweden, Niggemann [32] measured this indicator as the percentage of people living within two kilometers of a train station. The result of 80%, was considered excellent 50% was satisfactory, and 20% was extremely unsatisfactory. The indicator is also used in the Community Sustainability Assessment manual, but in terms of reducing environmental pollution by more frequent use of public transport instead of cars. The indicator is measured as the frequency and proximity of bus lines in a particular area. The county in which transport is more accessible to a larger number of users and where the lines are more frequent receives more points. Due to the complexity of the calculation, it is proposed that the indicator be qualitative rather than quantitative.

Tradition and cultural facilities

The term tradition denotes cultural heritage such as the transmission of knowledge, customs and artistic crafts [6]. The Community Sustainability Assessment handbook [18] emphasizes the importance of cultural events and that they are accessible to all.

Due to the complexity and large scope, this indicator is divided into two sub-indicators: (1) tradition and (2) culture. The tradition sub-indicator is measured as the number of traditional crafts and events with old crafts in relation to the number of households, while the culture sub-indicator is measured as the number of events, performances, festivals and other cultural events in the county in one year.

Voter turnout in the last local and parliamentary elections

Voter turnout indicates the involvement of residents in the community [32]. The indicator is also suggested by Ramos [37]. This indicator is measured as the percentage of turnout in the last local elections, a result closer to 100% means a better county score.

Crime rate

This is a very important indicator that contributes to the overall quality of life in a particular area [32]. Niggemann [32] also states that this indicator is related to economic and social indicators such as unemployment rate and population growth. The indicator is used in the Community Sustainability Assessment manual [18], and is expressed as the frequency of criminal activities in the community. The Strategy for Sustainable Development of Croatia [35] proposes an indicator of the number of recorded violent crimes and murders per 100,000 inhabitants. The crime indicator is proposed by the UN [39] and Ramos [37] and used by Niggemann [32] who compared counties in Sweden. Here, it is proposed to measure the indicators by monitoring the number of reported crimes in the county in relation to the number of

inhabitants, and the national average is taken as a reference value.

Number of active theaters, cinemas and cultural and artistic societies in the county in relation to the number of inhabitants

Although the number of active theaters, cinemas and cultural and artistic societies in a given area does not reflect the number of cultural events or their attendance, their presence can be considered as a prerequisite for cultural events.

Niggemann [32] in her work measures the attendance of cultural events organized by the umbrella cultural organization in Sweden. Here it is proposed to measure the number of active theaters, cinemas and cultural and artistic societies per 1,000 inhabitants. The county with the higher number is attributed more points.

County expenditure (NUTS 3 region) for culture

Niggemann [32] divides the culture indicator into two sub-indicators, one of which is county expenditure on culture. The indicator is measured as the share of cultural expenditures in the county budget. The obtained result is compared with the share of expenditures for culture in the state budget. The county with the higher share is attributed a higher grade.

Population growth between two censuses

Population growth is very important for the sustainable development of an area because no matter how favorable the other indicators are, if there are no people in the area, the system is unsustainable. The indicator is proposed by Ramos [37], the UN [39] as well as the Croatian Parliament in the Sustainable Development Strategy of the Republic of Croatia [35]. It was used by Khalifa and Connelly [24] to monitor sustainable development in rural areas of Egypt.

It calculates the population movement in the past 25 years, i.e. the ratio between then and the present day. If there is no available data for the 25-year period, it is proposed to monitor population movements between the two censuses, which is usually 10 years.

Age and gender structure

"One of the most important population structures is the age structure, as it affects the socio-economic development of a certain population. It is a reflection of population development over a long period of time" [20]. The age and gender structure of a rural area is very important for its sustainability as young people increasingly leave these areas due to the lack of jobs and other facilities. Niggemann [32] calls this indicator population structure, consisting of three sub-indicators: (1) the share of people under 14, (2) the share of people over 65 and (3) the gender structure. The region with the highest share of young people (<14), the lowest share of old people (> 65) and where the gender ratio is equal receives the most points. Both of these indicators are also proposed by the EC [9] in the Framework for Indicators for the Economic and Social Dimension of Sustainable Agriculture and Rural Development.

This indicator is divided into two sub-indicators. The first sub-indicator is age and the second gender structure. To calculate the first sub-indicator, the population aged 0-19 and 65+ is taken and divided by the population aged 20-64 and multiplied by 100. The first two age groups are either too young or too old to work and thus depend on the working population [32]. The higher the number, the higher the county score. The second sub-indicator is the female-male population ratio. The county with the same number of men and women, or with the smallest deviation from the ideal ratio, receives the highest score.

Institutional efficiency (legislative framework, informal links, governance mechanism)

This indicator is listed in the Framework for Indicators for the Economic and Social Dimension of Sustainable Agriculture and Rural Development [9]. Quantitative measurement of this indicator is very difficult, so it is proposed to conduct interviews with several stakeholders in rural development and, based on the obtained data, rank the counties according to institutional efficiency. The questions in the interview should be focused

on the speed of obtaining various permits, availability of information, existence of legal acts regulating the area of rural development and their implementation, as well as existence and implementation of strategies in this area.

Educational structure

According to the OECD, the level of education of farmers and effective farm management as well as the timely adoption of environmentally sound management practices are positively correlated [5]. In terms of sustainability and the CAP, innovation is seen as key to stimulating a greater degree of acceptance of the more significant challenges of the future, including climate change, water conservation, and biodiversity protection [8] and for the acceptance of the innovation, education of farmers is prerequisite [22].

The indicator is proposed by the EC [9] in the Framework for Indicators for the Economic and Social Dimension of Sustainable Agriculture and Rural Development as the share of the population with higher education than the majority of the population; as the percentage of early school leavers; and as the share of the population between 18 and 24 years having only a high school diploma. It is also suggested by Ramos [37]. In addition to the level of completed education, he proposes measuring the share of early school leavers. The indicator was used in the EU Rural Development Report [14] as a percentage of the population between the ages of 25 and 64 with a minimum high school diploma.

Here, it is proposed to measure the indicator as a ratio of residents with completed secondary, higher and tertiary education and those who are without school, have completed only a couple of primary school grades and those who have completed primary school. Higher number means better education.

Ranking of the social indicators of sustainable rural development according to experts' assessment

As stated in the Methods chapter, experts of different profiles evaluated the relevance of the described indicators in the overall assessment of the economic viability of the rural area. Based on the obtained results, the five most relevant indicators with regard to the level of the average grade were selected. The best rated indicators with the corresponding grades are shown in Table 4.

Table 4. List of the most relevant social indicators according to the expert opinion

Indicator	Average grade given by the experts
Age structure	4.70
Availability of educational institutions	4.45
Educational structure	4.34
Availability of health institutions	4.32
Population growth between two censuses	4.32

Source: Own results.

Respondents were given the possibility to suggest indicators that they considered to be very important and were not offered in the survey. Only five respondents (three representatives of scientific and educational institutions and two from associations and LAGs) availed themselves of this opportunity and their suggestions are: life expectancy, population density, average number of household members, involvement in non-governmental organizations (civil society), poverty index, social capital, number of LAGs, number of projects in which the local community participates, number of associations in rural areas, social services, presence of kindergarten and average settlement size.

Below is Table 5 with selected five (or more) indicators and their average grades assigned t by representatives of individual groups that participated in the research.

Table 5. Social indicators with the highest average grades according to the opinion of different groups of experts

Scientific and educational institutions	LAGs and associations	State institutions
age structure (4.85)	age structure (4.60)	age structure (4.57)
availability of educational institutions (4.50)	availability of educational institutions (4.45)	quality and frequency of public transport lines (4.43)
population growth between two censuses (4.50)	age and gender structure (4.40)	availability of educational institutions (4.29)
educational structure (4.50)	availability of health institutions (4.30)	availability of basic groceries (4.14)
availability of health institutions (4.45)	quality and frequency of public transport lines (4.25)	educational structure (4.14)
	educational structure (4.25)	tradition and cultural facilities (4.14)
		population growth between two censuses (4.14)
		institutional efficiency (legislative framework, informal links, governance mechanism) (4.14)

Source: Own results.

The most relevant indicators in the paper are selected based on the average score of all respondents, but it is interesting to consider the opinions of individual expert groups, each participating in rural development with a different capacity. In some groups of respondents, more than five indicators were listed because they achieved the same average grade.

The coincidence in the selection of the five most relevant economic indicators in all three expert groups is visible in the case of three indicators: age structure, availability of educational institutions and educational structure. The importance of education in sustainable rural development projects is also emphasized by Bruckmeier and Tovey [2] and Csurgó, Kovách and Kučerová [4].

Although the choice of indicators varies depending on the workplace of the expert, no significant difference was found between the assessments of experts from different groups. The only exception is the indicator age structure by the Chi-square test, for which a statistically significant difference ($p \leq 0.05$) was determined in the assigned assessment, depending on which expert group the experts belong to.

It is interesting to point out the "quality and frequency of public transport lines" indicator which, according to the average rating of respondents from LAGs and state institutions, would enter among the five indicators with the highest grades, while according to the choice of representatives of scientific and educational institutions it would not. The reason for this is very likely the fact that most respondents who are representatives of scientific and educational institutions live in Zagreb and Osijek, cities where the public transport network is well developed and do not consider public transport important. LAG leaders and representatives of institutions live in smaller communities and understand the importance of having a good public transport network, i.e. they have a first-hand experience of its shortcomings.

This is one of the reasons why it is very important to include different stakeholders in the selection of indicators for the sustainable rural development, from different backgrounds, because each of them has different perceptions of sustainable rural development and experience in how to achieve it. A heterogeneous group of respondents was also selected to reduce the subjectivity of judgments as much as possible because each group has its own priorities determined by the level of education, area of scientific interest, attitudes, background etc. The importance of group heterogeneity in a work of research containing sensitive topics (environment, sustainable development and socially responsible business) is also emphasized by Mardle et al. [28] and Von Solms [40]. The disadvantage of the conducted research is the fact that not all respondents from all groups responded to the research in equal numbers, and as a result, the opinion of the representatives of scientific and educational institutions, who are mostly from large cities, as mentioned earlier, prevails.

CONCLUSIONS

The paper proposed 18 social indicators that have been used in similar research or suggested in professional literature for the purpose of measuring sustainable rural development. Based on the expert assessment on a scale of one to five, the five most relevant indicators were selected with regard to the obtained average assessment: age structure (4.70), availability of educational institutions (4.45), educational structure (4.34), availability of health institutions (4.32), population growth between the two censuses (4.32). Looking at the assessments of each of the expert groups separately, it can be seen that in their selection of the five most relevant indicators, three of them match: age structure, availability of educational institutions and educational structure.

However, no significant difference was found between the assessments of experts from different groups. The only exception is the indicator age structure by the Chi-square test, for which a statistically significant difference ($p \leq 0.05$) was determined in the assigned

assessment, depending on which expert group the experts belong to.

Although not statistically significant, there is a difference in the choice of indicators and it is due to the heterogeneity of expert groups as well as individuals because everyone has their own priorities according to education level, area of scientific interest, attitudes, background and so on.

Because of the above outlined, it is very important to involve as many stakeholders with diverse profiles as possible in order to reach utmost credible results.

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