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# ADAPTABILITY OF QUALITY OF LIFE IN RURAL SERBIA TO THE NEEDS OF YOUNG PEOPLE: PERCEPTIONS OF AGRICULTURAL EXTENSION OFFICERS<sup>1</sup>

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## Abstract

High quality of life in rural areas represents the key prerequisite for sustainable rural development. In addition to ensuring that the young will remain in these areas, it also indicates rural vitality and plays a key role in rural development policies and local development strategies in all countries. The aim of this article was to examine the extent to which the quality of life in rural Serbia was adapted to the needs of young people in order to ensure their stay in rural areas. Using a semi-structured questionnaire and an online and telephone survey, the author asked 118 agricultural extension officers from all agricultural extension services in Serbia to express their opinions on this issue. The agricultural extension officers evaluated quality of rural life and its adaptability to the needs of the young using a Likert scale ranging from 1 (not adapted) to 5 (highly adapted). The average score for Serbia was 2.4, which indicates that quality of life is slightly adapted to the needs of the young. Quality of life was rated higher (moderately adapted) only in the area of Belgrade, while in the other areas it had the average values for Serbia (slightly adapted). Despite the significant differences between the regions regarding the achieved level of economic development, the Kruskal-Wallis test showed that these differences did not have an influence on the agricultural extension officers' evaluation of the analyzed variable ( $p=0.239$ ).

**Key words:** Quality of rural life, living conditions, rural area, the young, NUTS 2 region, survey.

**JEL<sup>3</sup>:** O18, Q10, R11

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## Introduction

Quality of rural life (abbr. QRL), or quality of life in rural areas is the key precondition for survival and revitalization of rural communities and a prerequisite for endogenous and sustainable rural development (Casini et al., 2018; Wojewódzka Wiewiórska et al., 2019; Wiesli et al., 2021). It ensures that the young will stay in rural regions, and has effects on a farm's viability (Wojewódzka Wiewiórska et al., 2019; May et al., 2019). Using an example of rural communities in Tuscany, Casini et al. (2018) showed that there was a strong connection between quality of life and population decline. Therefore, it plays a key role in rural development policies and rural development programmes in all countries (D'Agostini, Fantini, 2008; Bokić, Čikić, 2014; Boncinelli et al., 2015; Zhang et al., 2022).

Economic development of rural areas in Serbia represents the main direction of the country's balanced development and realization of sustainable development goals. Importance of rural development in Serbia is highlighted by the fact that Serbia is predominantly a rural country (Gajić et al., 2021), and that as many as 38.8% of the total inhabitants in Serbia live in rural areas (Babović, 2022).

Ensuring high quality of life in rural areas of Serbia represents the precondition for retaining the inhabitants in these areas, particularly the young ones who are inclined to move to urban areas for the sake of education and better living and working conditions (Casini et al., 2018; Milenković et al., 2022). If adequately supported by the state and society, the young can play the key role in securing the vitality of villages and survival of farms. They can also bring innovations and encourage the general improvement of local rural communities (Bogdanov et al., 2011; May et al., 2019).

Quality of the living conditions in rural Serbia has been greatly improved by the technological, informational and civilizational development and modernization of society (Janković, 2020). All political structures offer explicit declarative support to rural development. Nevertheless, these regions are still characterized by unfavourable socio-economic and infrastructural conditions. This is further manifested by large migrations of young people, depopulation, rural poverty and low level of social capital in numerous rural communities (Cvejić et al., 2010; Bogdanov et al., 2011; Cizler, 2013; Kotevska, Martinovska Stojcheska, 2015; Jelić, Kolarević, 2018; Janković, 2020; Babović, 2022).

Using the qualitative and quantitative research method, the author aims to examine QRL in Serbia and its adaptability to the needs of the young, based on the perceptions of licensed agricultural extension officers. Bearing in mind the understanding of quality of life in rural development and rural sociology (Bogdanov, 2007; Janković,

2020; Bokić, Čikić, 2014; D'Agostini, Fantini, 2008; Shucksmith et al., 2006; Derčan et al., 2022), this research considers quality of life from the aspect of the existence of comprehensive favourable and attractive conditions for the life and work of local inhabitants.

The extension officers were asked to evaluate QRL from the aspect of needs, aims and interests of the young population, considering the following QRL elements: development of labour market and conditions for initiating and performing entrepreneurial activities; availability and quality of facilities and services in the field of road, utility, energy, communication and social infrastructure; and proximity, i.e. accessibility of larger urban/consumer centres to the local population.

Based on the survey results, the author aims to answer the following questions: What is the current state of QRL in Serbia as estimated by the agricultural extension officers who have daily contacts with farmers during their fieldwork? Can it retain young people in villages? Do the extension officers' evaluations of QRL differ between the NUTS 2 levels?

The aim of the research is to enrich scientific and empirical knowledge in the field of research. In addition, its aim is to provide support to public policy makers when deciding on the future strategies and plans for the development of rural communities while attempting to improve QRL.

## Literature Review

Throughout the literature, “*quality of life*” has been defined in numerous different ways due to the fact that it is a complex and multidimensional concept connecting different spheres of social life. These definitions also differ because the term has been observed from different perspectives and by different scientific disciplines (Fahey et al., 2003; Shucksmith et al., 2006; Theofilou, 2013; Meiselman, 2016). In contrast to living conditions, which are mainly defined by means of the inhabitants' income and expenditure patterns (standard of living), quality of life represents a broader concept and refers to the “*overall well-being of people living in a society*” (Fahey et al., 2003, p. 63).

Different authors measure QRL in different ways and explain it using different components. In the process, they indirectly define QRL. According to Wiesli et al. (2021, p. 1), QRL consists of nine components: *social relations and equality; nature and landscape; education and knowledge; participation, identification, and collective emotions; living; mobility; health and safety; leisure and recreation; and income and employment*. On the other hand, Wojewódzka Wiewiórska et al. (2019) state that it has three components: economic situation, living conditions, and mental comfort.

Using the example of Tuscany (Italy), Boncinelli et al. (2015) analysed QRL through its determinants such as: *“availability of healthcare, education, economic opportunities, environmental conditions, human pressure, and the accessibility of the areas”* (Boncinelli et al., 2015, p. 104). According to Brereton et al. (2011), the respondents in rural areas of Ireland find the following issues important at the local scale: economic indicators, dwelling characteristics, social factors (e.g. belonging to the community) and environment (e.g. access to green spaces, high-quality environment).

Subjective elements, or the inhabitants' subjective opinions and perceptions of the objective (actual) quality of life or living conditions are very significant in the field of rural development and QRL measurement (D'Agostini, Fantini, 2008; Wojewódzka Wiewiórska et al., 2019; Casini et al., 2021; Petrovič, Maturkanič, 2022).

Examining the well-being in marginal areas in Tuscany, Casini et al. (2021, p. 64) highlights that *“the main determinants of well-being are the individual perceptions concerning economic condition, security, environmental quality, and educational opportunities”*. Analysing three components of farmers' quality of life in Poland, a group of scientists found that *“living conditions are significantly and positively correlated with the economic situation and mental comfort, while mental comfort turned out to be negatively correlated with the economic situation”* (Wojewódzka Wiewiórska et al., 2019, p. 1). They explained this conclusion by the fact that *“a farmer's higher engagement in the improvement of their family's economic condition might result in lowering their mental comfort due to the stress and work overload”* (Wojewódzka Wiewiórska et al., 2019, p. 1).

Social capital is significant for improving quality of life (Calcagnini, Perugini, 2019; Murgaš et al., 2022) and its role is particularly important in rural areas (Janković, 2020; Prayitno et al., 2022). On the basis of local development strategies (LEADER approach) and rural development policies, countries and local communities improve QRL by strengthening social capital, building infrastructure, developing rural tourism, as well as creating overall better living conditions of local people (Kachniewska, 2015; Konečný, 2019).

Authors in Serbia deal with QRL issues using a wider context of rural development and rural sociology (Bogdanov, 2007; Bogdanov et al., 2011; Bokić, Čikić, 2014; Janković, 2020; Đerčan et al., 2022), while a number of authors consider this problem from the aspect of young people in rural areas (Jelić, Kolarević, 2018; Milenković et al., 2022).

Janković (2020) states that quality of life encompasses the well-being of society as a whole and does not only refer to material indicators and resources of people

and their households. Analysing the quality of life in rural Serbia, Bokić and Čikić (2014, p. 236) defined this concept as “*manner, scope and level at which individuals and/or social groups manage to satisfy their individual or mutual needs, which is in accordance with their system of values and accepted social norms*”.

Serbian authors consider QRL by means of different parameters (development of rural infrastructure, accessibility of rural services, education, culture and sports, health, economy, household income, etc.). In the process, they highlight the significance of the respondents' subjective evaluation or satisfaction with the objective (actual) living conditions (Bogdanov, 2007; Bokić, Čikić, 2014; Đerčan et al., 2022; Milenković et al., 2022).

Research results differ depending on the research context and on the indicators, which are used when measuring QRL in Serbia. For example, Bogdanov (2007) states that members of small-scale rural households are not satisfied with QRL, and that QRL is not balanced in different villages and regions in Serbia (Bogdanov et al., 2011). Bokić and Čikić (2014) and Đerčan et al., (2022) highlight that there are differences between respondents' subjective evaluation (perception) of QRL depending on their socio-economic and socio-cultural characteristics. When it comes to the studies about the young in rural areas and their opinions on QRL, the results range from the ones stating that the young are satisfied with quality of life (Milenković et al., 2022), to the ones saying that the young face poverty problems in rural areas (Jelić, Kolarević, 2018).

## **Material and Method**

In order to obtain the extension officers' evaluations of the adaptability of QRL to the needs of the young in Serbia, a survey was conducted in cooperation with agricultural extension services. The research involved all agricultural extension services (the total number of 35), while the sample included 118 agricultural extension officers. The sample is significant and well distributed per region having in mind the total number of employed extension officers in Serbia and their territorial distribution (GRS, 2022).

On the basis of a semi-structured questionnaire, the agricultural extension officers were asked to evaluate QRL from the aspect of the young population's needs and interests, using the Likert scale ranging from 1 (not adapted) to 5 (highly adapted). The questionnaire was structured so to provide the respondents with a possibility to give a qualitative evaluation of QRL in the areas where they are legally obliged to provide their services.

The extension officers were asked to evaluate QRL's adaptability to the needs of young people considering the following elements:

- ✓ development of labour market and conditions for initiating and performing entrepreneurial activities;
- ✓ availability and quality of facilities and services in the field of road, utility, energy, communication and social infrastructure;
- ✓ proximity, i.e. accessibility of larger urban/consumer centres for the local population.

In order to make conclusions, the author defined the range and meaning of the average scores assigned to the variable (Figure 1.).

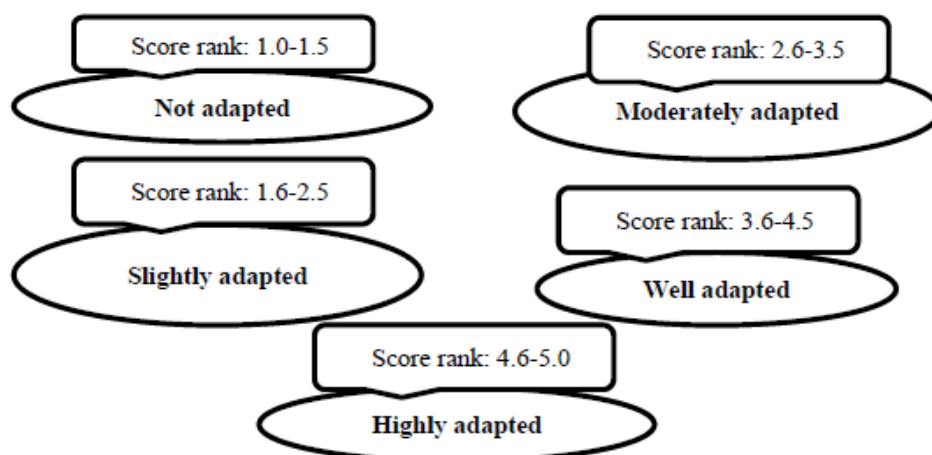
The survey was conducted during the period 2021-2022 using CATI market research, while the authors had personal interviews with part of the respondents.

Since Serbia does not have officially defined rural areas, the extension officers were asked to evaluate the rural areas in which they provide their services and which have density below 150 inhabitants/km<sup>2</sup> according to the OECD definition of rurality (NUTS 5 level). In the area of Belgrade, the following settlements were included: Lazarevac, Mladenovac, Sopot, and Barajevo.

The young were defined according to the definition of young farmers in the EU (EU, 2021, p. 27). Consequently, research involved people aged up to 40.

The data were processed in the statistical software IBM SPSS Statistics 26, using descriptive statistics and the Kruskal-Wallis test.

**Figure 1.** QRL's adaptability to the needs of young people: average scores



Source: The author's presentation based on Paraušić, 2022.

## Research Results

On the Likert scale ranging from 1 (not adapted) to 5 (highly adapted), the examined variable QRL in Serbia and its adaptability to the needs of the young has the median value of 2.0 for Serbia in total (Table 1.). The interquartile range (abbr. IQR) shows that the central 50% of the responses (from 25% to 75%) range from rating 2 to rating 3 (Table 1.). Observed by NUTS 2 regions, the median value ranges from 2 (Kosovo and Metohija and Vojvodina regions) to 3 in the Belgrade region (Table 1., Figure 2.).

**Table 1.** QRL in Serbia and its adaptability to the needs of the young, descriptive statistics

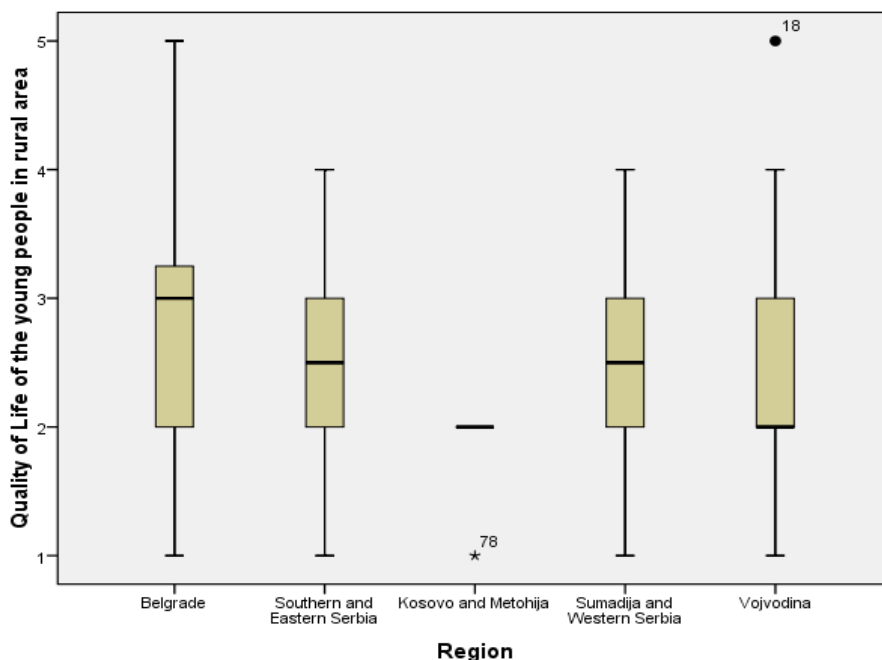
Indicator	Serbia (total)	Belgrade	Southern & Eastern Serbia	Kosovo & Metohija	Šumadija & Western Serbia	Vojvodina
N	118	11	27	5	34	41
Mean	2.4	2.8	2.5	1.8	2.5	2.4
Median	2.0	3.0	2.5	2.0	2.5	2.0
Q1	2.0	2.0	2.0	1.5	2.0	2.0
Q3	3.0	3.5	3.0	2.0	3.0	3.0
IQR	1.0	1.5	1.0	0.5	1.0	1.0

Source: The author's calculation based on Paraušić, 2022.

The box plot shows the distribution of the analysed values based on key points: min, Q1 (first quartile), median, Q3 (third quartile), and max (Figure 2.).

The average rating of the examined variable amounts to 2.4 in the Republic of Serbia (Table 1.). Therefore, based on the classification of the scores given in Figure 1., it can be concluded that QRL is slightly adapted to young people's needs, so it does not ensure their stay in the rural areas.



**Figure 2.** QRL in Serbia and its adaptability to the needs of the young, box plot

Source: The author's presentation based on Paraušić, 2022.

Similar results were obtained by a group of Serbian authors (Đerčan et al., 2022) who used the example of the rural areas of the Srem District (Serbia, NUTS 3 level) to show a medium or low level of inhabitants' satisfaction with most of the indicators of quality of life or well-being. In addition, our results might complement a previous study by Bogdanov (2007), which indicated that bearers of small-scale rural households in Serbia were not satisfied with quality of rural life.

When it comes to studying the young in rural Serbia and their opinions on poverty and quality of life, gained results do not confirm the findings of Milenković et al. (2022). They stated that the young were mainly satisfied with quality of rural life (using a 1-5 scale, the young assigned above-average values to almost all elements of quality of life). Jelić and Kolarević (2018) obtained the results which are more similar to gained results, stating that the young in rural areas in Serbia faced the problems of poverty and social exclusion, which characterizes a low QRL level.

Observed by the NUTS 2 regions, gained results also show that QRL in Serbia and its adaptability to the needs of the young have the highest average score in the region of Belgrade (2.8), while they have the lowest score in the region of Kosovo and Metohija (1.8). In the remaining three regions, they range from 2.4 in Vojvodina to

2.5 in Southern and Eastern Serbia, and Šumadija and Western Serbia (Table 1.). The scores indicate that quality of life is moderately adapted to the young people's needs only in the region of Belgrade (where the capital of Serbia is located), while it is slightly adapted in all other regions.

The highest values of the analysed variable in Belgrade were expected given that this region is the most economically developed one (GRS, 2014; Stamenković et al., 2021). In addition, the municipalities with low population density (Lazarevac, Mladenovac, Sopot, and Barajevo) are spatially well connected to Belgrade, as a large urban and consumer centre. On the other hand, the lowest average score of the variable obtained for the region of Kosovo and Metohija (evaluations of the extension officers in the Agricultural Extension Service Kosovska Mitrovica) can be explained by the extremely unstable political situation in the region, and lack of investment in improving quality of life, particularly in rural settlements.

**Table 2.** QRL in Serbia and its adaptability to the needs of young: Mean rank

Regions	N	Mean rank
Belgrade	11	71.05
Southern and Eastern Serbia	27	63.19
Kosovo and Metohija	5	33.70
Šumadija and Western Serbia	34	61.44
Vojvodina	41	55.51
Total	118	-

Source: The author's calculation based on Paraušić, 2022.

Despite the above mentioned, the research did not confirm the statistical significance of differences in the agricultural extension officers' perception of the analysed variable between the NUTS 2 regions. Namely, the Kruskal-Wallis test (Table 2.) did not discover a significant difference in the extension officers' evaluations of the analysed variable between different regions (NUTS 2): (Gp1, n=11: Belgrade region, Gp2, n=27: Southern and Eastern Serbia, Gp3, n=5: Kosovo and Metohija; Gp4, n=34: Šumadija and Western Serbia; Gp5, n=41: Vojvodina),  $\chi^2(4, n=118)=5.505, p=0.239$ .

It can be concluded that despite significant differences between the developed regions (Belgrade and Vojvodina regions) and undeveloped regions of Serbia (Šumadija and Western Serbia, and Southern and Western Serbia) according to the gross domestic product per capita (GRS, 2014; Stamenković et al., 2021), the economic growth indicators did not affect the agricultural extension officers' perception of the analysed variable. This was also confirmed by other authors, who stated that quality of life did not only involve material indicators (household income, gross domestic product), but

also other indicators related to environmental quality, education, healthcare, safety, social relations, etc. (Brereton et al., 2011; Boncinelli et al., 2015; Wojewódzka Wiewiórska et al., 2019; Janković, 2020; Casini et al., 2021; Wiesli et al., 2021).

The qualitative responses of the agricultural extension officers in the conducted study are very significant and they further explain the observed issue. Namely, a number of the agricultural extension officers stated that the evaluation of QRL must involve subjective opinions of the young, i.e. their perception of the objective (actual) quality of living conditions. This can be explained by the opinion given by one of the interviewed agricultural extension officers during the research: *“Leaving the village is not defined by material conditions or by simple existence. It is rather a reflection of the philosophy of life and the lifestyle chosen by young people, the goals they aspire to achieve, their ambitions, as well as the disappointment they face in farming...”* (Paraušić, 2022). Numerous foreign authors (D’Agostini, Fantini, 2008; Wojewódzka Wiewiórska et al., 2019; Casini et al., 2021; Petrovič, Maturkanič, 2022), as well as Serbian ones (Bogdanov, 2007; Bokić, Čikić, 2014; Jelić, Kolarević, 2018; Đerčan et al., 2022) also highlighted the importance of subjective opinions in the evaluation of quality of rural life.

Generally speaking, the greatest number of opinions of the agricultural extension officers who were willing to express their attitudes towards QRL and its adaptability to the needs of the young underlined the unbalanced quality of life in the villages in Serbia. The most endangered areas are the scarcely populated, remote and inaccessible villages in hilly and mountainous regions. These settlements are characterized by the low quality of living conditions, manifested primarily by the underdeveloped infrastructure and public sector services. At the same time, recommendations of the agricultural extension officers related to the QRL improvement were mainly directed at improving the infrastructure (utility, road, social infrastructure) in villages and enhancing the services related to healthcare, kindergartens, and cultural and entertainment activities. Almost the same recommendations were mentioned by the young in rural areas of Serbia participating in the study by Milenković et al. (2022).

Quality of life should represent a significant and comprehensive aim of public policies. The creators of these policies must understand all aspects and elements of quality of life, not only those related to economic indicators (ESPON, 2021). In the field of rural development, policies must be focused on social dimensions and understanding farmers’ personal opinions and satisfaction with the existing quality of living conditions (Wojewódzka Wiewiórska et al., 2019).

In Serbia, both at the national and local self-government level, rural development policies and programmes are not sufficiently adapted to the needs of local population and QRL improvement (Janković, 2020). There are believes that this study offers valuable empirical knowledge for practitioners, professional public and decision-makers in the process of planning rural community development and QRL improvement. It can be stated that these results have further explained QRL and enriched the scientific literature in the field having in mind that all agricultural extension services in Serbia participated in the research and that the sample involved 118 agricultural extension officers who provided objective and impartial evaluations based on expertise and experience.

Bearing in mind the significance of local development initiatives and local action groups for QRL improvement (Vujičić et al., 2013; Paraušić et al., 2023), future research should analyse the LEADER approach, as well as the role of social capital in the improvement of quality of life in the villages of Serbia.

### **Conclusion**

In this paper, it was examined the extent to which the quality of life in rural Serbia is adapted to the needs of young people based on the attitudes of agricultural extension officers. On the Likert scale ranging from 1 (quality of life is not adapted to the needs of the young) to 5 (quality of life is highly adapted to the needs of the young), the average score of the analysed variable amounted to 2.4. It can be concluded that quality of rural life in Serbia is slightly adapted to the needs of young people and does not ensure their stay in rural areas.

The variable had the highest average score in the Belgrade region (2.8), while it had the lowest score in the region of Kosovo and Metohija (1.8). In the remaining three regions it ranged from 2.4 to 2.5. The agricultural extension officers' evaluation shows that quality of life is moderately adapted to the needs of the young only in the Belgrade region (rural settlements of Lazarevac, Mladenovac, Sopot and Barajevo), while in other regions it is slightly adapted to these needs.

Despite the significant differences between the regions regarding the achieved level of economic development, the Kruskal-Wallis test did not reveal a statistically significant difference in the agricultural extension officers' evaluations of the examined variable between the regions: (Gp1, n=11: Belgrade region, Gp2, n=27: Southern and Eastern Serbia, Gp3, n=5: Kosovo and Metohija; Gp4, n=34: Šumadija and Western Serbia; Gp5, n=41: Vojvodina),  $\chi^2(4, n=118)=5.505, p=0.239$ .

The qualitative responses of the respondents in the conducted research are very significant and they have thrown additional light upon this issue. These responses

confirmed that the quality of life in rural Serbia was unfavourable for young people in all regions. The agricultural extension officers particularly emphasized the lack of cultural and educational facilities and activities, lack of schools and kindergartens, as well as the undeveloped social capital and social life. In addition, the underdevelopment of the road, energy, utility and telecommunication infrastructure represents a major limitation, especially for remote and inaccessible places. Furthermore, part of the agricultural extension officers underlined the importance of subjective opinions of the young when estimating quality of rural life, i.e. the significance of young people's perception of the objective (actual) quality of living conditions.

It can be stated that these results have further explained QRL and enriched the scientific literature in the field having in mind that all agricultural extension services in Serbia participated in the research and that the sample involved 118 agricultural extension officers who provided objective and impartial evaluations based on expertise and experience.

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