

THE IMPORTANCE OF POSTAL SERVICE PROVISION FOR THE SUSTAINABILITY OF RURAL AREAS

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Received 15 January 2023; accepted 5 March 2023

Abstract: The trend of depopulation of rural areas affects the reduction of the number of local facilities such as schools, post offices, and shops. There is often a fear that the closure of a local facility will negatively affect the availability of certain services and amenities of rural life. The concept of postal service has changed in parallel with the development and progress of human society. Today, this term goes beyond its primary role of connecting at all levels of society and becomes a service through which broader social goals are achieved. Due to its importance, which is reflected in the specific social value for both individuals and legal entities and the social role in the achievement of Sustainable Development Goals, positive impact on the environment, traditional cooperation with other state bodies, strengthening of patriotism, safety, and security, there is a need to this humane concept is protected, developed, diversified and maintained especially in underdeveloped and devastated areas and especially for the most sensitive population groups.

Keywords: postal services, postal network, social value, rural areas, sustainability.

1. Introduction

Postal systems around the world have well-developed infrastructure and traditional connections to local communities. These systems are in constant interaction with the environment and various factors that can be classified as political, economic, socio-demographic, and technological, as well as changes in the environment, that is, the work environment. Through a strategic analysis of the environment, that is, an analysis of external influences, trends, and changes in the market, certain laws can be determined that take into account the specificities of local communities and the importance of postal services for their maintenance.

This paper aims to determine the specifics of service provision in rural areas, define problems and challenges, and offer a response to the postal sector through further diversification, innovation, investment, and partnership by providing a new group of services - social services. Building a special reputation through historical development and daily interactions with users, the postal sector establishes a unique position of trust in many communities. The postal sector is being transformed through the development of new business models by building strategic partnerships with governments, non-governmental organizations, and multilateral agencies seeking ways to achieve defined social development goals. Support for social

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development also provides the possibility of increasing profitability and user satisfaction.

The Universal Postal Union (UPU) defines postal social services as services that are explicitly designed to provide a direct benefit to society, are provided regularly, reliably, and are widely accessible (Hale & Alexander, 2021). Key sustainable development challenges for the next 20 years include reducing poverty and inequality, meeting the needs of an aging population, and supporting an increasingly mobile society recovering from the widespread impact of COVID-19. The postal sector has a large number of activities aimed at fulfilling the 17 Sustainable Development Goals, especially for the goals: 8 – Promote inclusive and sustainable economic growth, employment, and decent work for all), 9 – Build adaptive infrastructure, promote sustainable industrialization and encourage innovation, 11 – Making cities and human settlements inclusive, safe, adaptive and sustainable and 17 – Strengthen the global partnership for sustainable development (Milutinović *et al.*, 2019). The postal sector can offer solutions by helping people meet their needs in areas such as health, education, community connectivity, and access to government services, utilities, and technology. Some social services generate direct income for the post office, while others represent an opportunity to achieve goals defined through a socially responsible business strategy or to improve visibility and brand recognition.

This paper is divided into several parts. After the introductory remarks, some of the specificities of the rural areas of Europe and Serbia were presented. Then, the characteristics of the service sector in these areas are presented, with a special emphasis on the postal sector. Further, the concept of

special value - social value of postal services is defined with research that illustrates the importance of postal services in rural areas of the Republic of Serbia, and, finally, concluding considerations are given.

2. Characteristics of Rural Areas

Rural areas represent the place of life and work of the rural population, but, on the other hand, today they take on a whole series of new functions according to the global society. Newer rural development policy measures focus on the integration of environmental protection principles into agricultural production and sustainable use of resources. A competitive rural economy requires a balance between agricultural production, various economic activities, environmental protection, and social development to improve the quality of life, reduce poverty, and carry out the fight, both against social degradation and against the degradation of the environment and natural resources.

The identity of rural areas is increasingly moving away from the agrarian one. These environments are becoming places suitable for a quality life, as opposed to the environment from which one used to flee to the city. They assume the function of places for rest, recreation, tourism, hunting, enjoyment of natural beauty, and places for the temporary return of urban people to nature. This change has the effect that rural areas become places of specific consumption and not only places of production. The modern European village is becoming an increasingly urbanized settlement with living conditions that are more and more similar to those in the city. The role of the state in this area is very significant because rural development is only a part of overall social development.

Investing in agriculture is only one segment of rural life, so it is necessary to find a balance, that is, to invest more in rural development. The share of funds earmarked for rural development from the total EU budget of individual countries in the EU 27 averages 32%, for New Member States 43%, and for EU old member states 29%. Malta (over 70%), Finland and Austria (over 60%) stand out the most. Following this trend of EU countries, it can be said that very little is allocated in Serbia for rural development measures, both for investments in agricultural or non-agricultural activities and rural infrastructure. Rural development in EU policy is gaining more and more importance (from sectoral, it is growing into regional policy), among other things, due to the EU enlargement process and numerous problems in rural areas faced by the countries acceding to the EU, as well as some new member states.

The study by Bertolini *et al.* (2008) points to some specific problems that characterize rural areas and tries to determine the risk of poverty and exclusion for the rural population in 15 European countries. These problems are related to demography, distance, education and the labor market, which interact to generate a “vicious circle” and reinforce the phenomenon of rural poverty. The finding of the study is that rural areas are characterized by a higher degree of poverty based on income compared to urban areas in all countries for which such a comparison was possible due to the inconsistency of the methodology and available socioeconomic data, as well as the heterogeneity of the observed countries and suggests the following priorities in labor policies:

- Building a more formal job search network and providing tailored training to reduce job-skills mismatches;

- Providing transport and logistics solutions in order to reduce accessibility problems;
- Providing care for children, supporting the elderly and providing social services.

One of the prerequisites, but also a consequence of the creation of local identity and the connection of residents with the local community, is the existence of common interests, intensive interaction among the local population, as well as the possibility that most of the basic needs in the village can be met “in the local area”. Residents’ connection with the village and the desire to survive and stay positively correlates with the degree of local integration. The immediacy characteristic of small local communities that have their own cultural identity creates specific forms of thought, belief and behavior, which is in line with findings on the importance of social capital.

On the part of the users, as part of the conducted research project on the position of the elderly in the countryside (Janković *et al.*, 2016), one of the main problems is reduced access to health and social care services, the inability to be informed about rights and services, and the inability to recognize mental illnesses. Service providers, due to the limited market, low population density and limited access to transport capacities, are not interested in providing services in these areas. Elderly households are characterized by social isolation, small numbers and poor access to social and cultural content. The majority of the elderly in the countryside (78%) have the capacity to take care of themselves and independently perform daily activities to maintain personal hygiene, while one in ten is completely independent and depends on someone’s help and support. The elderly in the countryside are mostly

outside the institutional system of assistance services and support, so informal services are their main support.

The trend of population migration from the city to the countryside, which is characteristic of some European countries, is not currently in Serbia due to a series of related aggravating circumstances, so pensioners who have the opportunity to live in the countryside do not accept it as a permanent solution. For the elderly population, one of the problems is the low availability of primary health care and the low quality of services. The gerontological service is usually not represented in rural areas, while the response of emergency teams on call is very rare. Going to the city or a nearby larger village using public transport due to the need for a bank, post office, or pharmacy is required due to poor traffic connections.

The able-bodied population that is employed in the countryside (agriculture, rural tourism, civil service) rarely decides to move from the city due to difficult living conditions, and the main problems are related to the limited number of preschool institutions, kindergartens and schools. It is considered that the quality of work with children in these institutions is below city standards, while, in general, due to the small number of children, their socialization in the countryside is questionable because they often have no contact with their peers. Most of these problems can be easily solved if there is a suitable road infrastructure connecting the village and the city.

More than 30 institutions deal with agriculture and villages in Serbia, but despite a series of promises of improvement, it is getting harder for the village, and every

fourth one disappears. According to the Constitution of Serbia, there are no villages, but settlements, so the situation in settlements-villages is (Gulan, 2019):

- Out of 4,709 settlements, i.e. villages, 1,200 are in the process of disappearing;
- There are 50,000 empty houses in the settlements, and on another 150,000 it is written that no one lives in them at the moment;
- 2,000 villages do not have a post office;
- As many as 500 villages do not have an asphalt road or connection with the world;
- There are no shops in 400 villages in Serbia, so residents have to travel to buy food;
- Even 73% of villages do not have a center of culture or a library;
- There is no primary school in 230 villages;
- In 2015, 173 schools had only one student each;
- There are no kindergartens in 2,760 villages;
- In two-thirds of the villages, there is no ambulance;
- In Serbia, there are more than 200 villages without a single resident under the age of 20;
- The average pension is 10,800 dinars (92 euros);
- 2-4% of the state budget is invested in agriculture in Serbia, while more than 40% of the EU budget is earmarked for agriculture.

3. The specificity of providing postal services in rural areas

The topic of the study by Barnett (2017) is the specificity of the use of postal services in rural areas by individuals and small businesses, where the historical importance

of postal network units for rural local communities is emphasized, but also the role of the postal sector in the future in a changing technological environment for the maintenance of these communities. Several of the most significant findings of this study support this:

- Users in rural areas use postal services more often than users in urban areas. It is believed that some of the reasons are the smaller number of competitive organizations and the larger number of the elderly population,
- Post offices are a part of daily village life - a place for exchanging local information, a place for informal support and meeting citizens,
- Business entities in rural areas use postal services to a greater extent, especially financial transactions. 71% of these organizations believe that, without the presence of a local PNU (Postal Network Unit), their costs of accessing postal services would increase significantly,
- 6 out of 10 residents of these areas consider that mail is “very” or “extremely” important to them. The greater the rurality of the observed area, the greater the importance of the post office for the population. Perceived importance also increases with age, among those with limited mobility, and among people who are digitally excluded.

The trend of reducing the number of permanent PNUs is one of the priorities of European postal operators, but for this process, criteria must be chosen very transparently and very carefully so that the impact on users of postal services is the least possible (Milutinovic *et al.*, 2020).

In the study by NEF (2006), the authors discuss in detail the economic impact of closing post offices on businesses and the local economy, as well as the wider community - especially the most vulnerable social groups. Postal financial services provide a base for local wealth creation and the individuals and businesses they support.

The most significant economic effects are:

- Additional costs for businesses that, by closing the post office, are forced to meet their needs for postal services at another, distant location,
- Loss of a place where the demand for banking services can be realized, which creates additional costs and affects security,
- The closure of the post office affects the business of surrounding businesses - users change their habits and earlier trips to the post office and local cafes, shops, now they direct to another location, which negatively affects the desirability of a certain location for housing, so the closure may have a long-term effect on the reduction of the number of residents or a change residence.
- The most significant social effects:
- Additional costs for users due to travel to a new location, adjustments to timetables for public transport users and longer queues due to a larger number of users,
- Loss of meeting places, exchange of information and seeing acquaintances and friends,
- Loss of free services – advice and assistance from employees in administrative affairs, news and notices in the mail, information on Government measures and actions,

- Vulnerable groups are particularly dependent on postal services - depending on the category, they are usually persons with less ability to pay or reduced mobility, so any change of location can significantly affect them and create a subjective feeling of anxiety and dissatisfaction.

4. Social Value of Postal Services

Postal services can be classified as a resource that is multifaceted for the community because, by providing these services, users' demands that are essential for everyday life are realized (Comber *et al.*, 2009). Values represent one of the most significant constructs of social sciences. They are crucial in determining who we are and what is important in our lives, i.e. what makes us different from other people (Gurel-Atay & Kahle, 2019). Unlike the economic value of a service, which implies an improvement in the market value of something, social value is created when the service leads to improvements in the lives of individuals or the entire society. A study by Pindus *et al.* (2010) refers to the elements that contribute to social value as "social benefits". Social benefits are difficult to quantify, but they contribute to the general sense of well-being of an individual or community, and are therefore valuable. Through various literature dealing with the history of the post office, welfare economics, and community development, through interviews and focus groups, the authors determined certain groups of benefits for individuals, legal entities, and non-profit organizations, classified into several broad categories: individuals, legal entities, safety and security, environment, state branch for Government

services, information exchange, making social contacts and preserving community identity and patriotism.

There is a certain number of research, both in the domain of postal traffic and in the domain of community development, in which a certain methodology for measuring social value has been applied. When assessing value, an important aspect is whether the value is assessed from the side of the service provider or the user, and if this value is assessed for the community, it will differ between generations, types of settlements, socioeconomic groups, etc. Some of the methods that have been used in the past are: Willingness to pay, Intercept surveys, Foot traffic, Social capital measurement validity, Valuation of civil society on the socio-economic well-being, Economic benefits of local places of meeting, Comparable Community and Business Mix Analysis, Welfare economics analytic framework, Hedonic price function, Social return on investment, Happiness economics.

For research that deals with the life of local communities and their development, the analysis of the concept of sustainability of mail and postal services, which carry the specific value of social connection and civic engagement, is also important. One of the basic problems within any applied method is the availability of relevant databases.

4.1. Willingness to Pay Studies

One of the basic market evaluation techniques is to investigate the customers about their preferences (Dobrodolac *et al.*, 2016). These preference techniques attempt to determine preferences directly

from consumers, through the use of questionnaires. This group of techniques includes: Conditional valuation method and Hypothetical choice modeling method.

In CV - Contingent valuation research, individuals are directly asked about their readiness, i.e. willingness to pay for some benefit or how much they are willing to pay to avoid some harm. Two concepts can be used to estimate the total economic value of non-market goods:

- WTP Willingness to pay – willingness to pay for something extra;
- WTA Willingness to accept – willingness to accept compensation to give up a right or lose it.

The situation that the respondent evaluates is hypothetical, that's why it is called "conditional", but he is expected to give an answer as if he were in a real situation on the market. Econometric techniques are applied to the survey results obtained in this way, through which the average offered value is found out, and then extrapolation is made to the entire population. Various studies have shown that WTA approaches lead to higher value estimates than using the WTP approach because, unlike WTA, the WTP value is constrained by a budget. Users are more likely to give up a good or service they already own than they are willing to pay for using the good or service. Also, it was determined that the concept of understanding WTP in relation to WTA is much clearer to respondents and that they give more realistic answers. This concept in scientific works has a significant application in medicine, pharmacy, and environmental protection, and it was also used in several studies that dealt with determining the social value of the postal network and postal services. The first paper in this field was

published in 1963 (Davis, 1963), while the intensive application of this method took place in the early nineties of the last century. The book by Carson (2012) gives extensive research on the use of this method and states that until then about 7,500 scientific papers and studies in this field from about 130 different countries have been published. During its many years of use, this method had a large number of advocates and critics. Some of the shortcomings are related to understanding the hypothetical situation and separating possible and realistic scenarios and, for this reason, setting an unrealistically high or low price. Opponents of this method agree that a hypothetical question gives a hypothetical answer, and proponents that this method represents a good starting point in the analysis of a specific problem and is suitable for comparison with other methods due to its flexibility.

To obtain a WTP value, different approaches can be used. A CV includes several assessment methods that ask the user to value a good or service in different ways. Several questionnaire formats were used in the research: open-ended CV, bidding games, payment card contingent valuation (PC CV), dichotomous choice CV - single bounded dichotomous choice, and double bounded dichotomous choice. A common practice in creating questionnaires is to: define a representative sample, describe the research scenario to which respondents should respond, collect answers, analyze data, determine the mean value (or median) of WTP of the analyzed population, and calculate the total value by multiplying the mean value (or median) of the WTP of the total population units.

Through several different studies, it has been determined that the value of WTP can

be influenced by some user characteristics (demographic - age, gender, education, race, marital status, education; geographic - geographical location (countries, regions, settlements); psychographic - lifestyle, status, affiliation, activities, interests, attitudes, behavior; socio-economic - purchasing power, savings...).

4.2. Willingness to pay Studies in the Postal Sector

The WTP method has been used to measure the social value of postal networks and services in several studies that will be presented below.

The purpose of qualitative studies is to gain insight into which aspects of services are most valued by a certain group of users. Although they provide significant information about what users value, these surveys do not tell us how much a particular attribute users value. If the survey asks whether users would be willing to pay a certain amount of service maintenance costs on a monthly basis, then that amount is used to estimate respondents' "willingness to pay" to maintain service or acquire a new level of service. This amount is used either to compare the benefit of the social value of a service and the net cost of providing that service, or it can give an insight into which services from a certain range or which service attributes are important. If users are not offered a payment mechanism, they generally opt for the status quo in the survey because they have no reason to voluntarily choose a lower level of service (USPSOIG, 2014).

The basic idea within the provision of UPS (Universal Postal Service) by the DPO (Designated Postal Operator) is that this

service satisfies a social need and achieves a level of service that cannot be achieved on the market, while at the same time DPOs are looking for a way to reduce the net costs of providing UPS. The direct benefit comes from those users who enjoy the availability of UPS, and the indirect benefit comes from the value citizens place on maintaining access to basic postal services for other people. Thus, users who are not dependent on postal services may still care about the protection of vulnerable users who are dependent on postal services and they may be willing to pay for basic services offered to those vulnerable groups.

The authors of the study for the European Commission (2018) reviewed 12 relevant studies dealing with the analysis of UPS within European countries. Their most significant findings are that there is great heterogeneity between countries in terms of overall UPS needs, which means that national specificities need to be taken into account. The most sensitive to the change of characteristics are certain groups of users, and therefore it is very important to describe such groups and define their characteristic requirements. These are residents of rural areas, small and medium-sized enterprises, especially those based in rural areas, and elderly users.

A quantitative study by Rohr *et al.* (2011) on the properties of UPS involved the users of three European countries - Italy, Poland, and Sweden. Through the study, it was determined that there is no big difference in the way natural and legal entities value the attributes of UPS. The authors believe that the emphasis should be on attributes that directly relate to the user, and not on the organization of the postal network and the parameters of service provision.

Research by NERA (2003) was carried out to estimate the costs and values of rural post offices in Great Britain. Based on this research, the UK Government should have decided on the strategy that should be undertaken to ensure access to rural post offices from 2006 onwards. The key objectives were: quantifying the value of posts and services for local rural communities, including vulnerable groups, and quantifying delivery costs. NERA found that almost all rural post offices have more expenses than they generate and that relatively few post offices are profitable. However, the social value for the local population significantly exceeds the costs of rural post offices. This report contributed to the development of the rural post regulator's policy.

Quantitative research by NERA (2009) was conducted in Great Britain with the aim of determining the total value of the postal network and postal services. To evaluate the total value of the postal network, two methods were used to determine the lower and upper limits of the WTP value. One of the conclusions of the study is that both legal and natural persons highly value the existing postal network. Households where pensioners live have a lower than average WTP, while households in both rural and urban areas suffering from some form of deprivation have a higher than average WTP. The authors found a big difference between the value for the postal network and individual services, which they interpret as users valuing the broader role played by the post office.

In 2012, the regulator Ofcom conducted a quantitative survey of UPS attributes for the operator Royal Mail (Ofcom, 2012). Respondents were offered seven scenarios

representing different combinations of UPS attributes with the intention that they would choose one. More than 90% of legal and natural persons consider the current system to be acceptable. The survey found that customers would tolerate a significant reduction in service to maintain the current price level or a minimal price increase.

The main purpose of the research by YouGov (2016) is to assess the social value of The Post Office postal network for individuals and legal entities. Postal products and services are divided into 8 categories with a division into services of general economic interest (SGEI) and services outside that scope (non-SGEI). In addition, respondents evaluated individual services and especially services of general economic interest. Some of the main findings of the survey are that 95% of people visit the post office at least once a year and that all respondents highly value the services offered. Users highly value the following aspects of the quality of the postal service: distance to the nearest post office, waiting time in the queue, and working on Saturdays.

A quantitative survey on postal services that are part of the UPS (USPSOIG, 2015) is the first survey of its kind conducted in the USA. The study focused on four attributes of UPS: delivery type, access to postal services, delivery frequency and price. The common opinion of the respondents is that there is a clear need for the delivery of shipments to every address in the country, as well as the need for uniform prices throughout the national territory. Examining the given attributes, the authors determined that for natural persons the frequency of delivery has the least importance, that the price is important, but that the most important characteristic is the form of delivery.

In research by Deloitte Access Economics (2018), it was found that Australia Post has exceptional importance for its residents. The average Australian (over 18 years of age) is prepared to pay a certain amount on an annual basis, in addition to the prices they pay regularly, to purchase Australia Post products and services, to ensure the continued existence and operation of Australia Post and its network.

Lindhjem & Pedersen (2012) made an assessment of the value of UPS. Users are offered 3 alternatives, each of which is compared to the existing situation. After analyzing the obtained results, it was determined that both legal and natural persons prefer to lose delivery on Saturdays at the expense of transmission time, as well as that Alternative 3 only brings a net profit (cost savings are greater than the loss of benefits for the consumer). If users were asked to rank alternatives without payment mechanisms, they always chose the existing state.

4.3. Results of Research on the Social Value of the Postal Services and Postal Network in Rural Areas of the Republic of Serbia using the WTP Method

The research was conducted through a questionnaire consisting of several parts. In the introductory part, respondents were given basic information about the purpose and goal of the research, followed by a part about getting to know the needs of users, their habits in using postal services, and determining to what extent the postal network and postal services are significant for users in rural areas.

It is planned that natural persons who fill out the questionnaire will give answers at

the household level. The questionnaire for households has 21 questions and, which was important to the respondents, is anonymous. The first part of the questionnaire is related to demographic categories of the population (gender, age, educational status, and work status). In the second part of the questionnaire, the user's habits in using postal services were examined. Respondents were then asked to rate specific categories of postal services, frequency of use and importance to them and the community, as well as general attitudes towards postal services and available alternatives. In the central part of the questionnaire, they were put in a hypothetical situation where they were asked to imagine a scenario in which the current postal network does not exist and they cannot realize their need for postal services. It was emphasized that they are asked to try to look at the situation as realistically as possible and determine the amount that their household would be willing to pay monthly in Euro currency for postal traffic to function in the previously defined manner. A scale ranging from 0-100 is offered, which is considered to be able to cover all possible answers that correspond to the thinking and real situation of the respondents. In the last part of the questionnaire, population mobility, availability and purpose of using the Internet, belonging to sensitive groups, and data related to household characteristics - number of household members and total monthly income - were examined.

558 respondents participated in the research on the social value of postal services and the postal network for individuals in rural areas. 500 respondents received the questionnaire in printed form, while 58 respondents answered via the Internet and the offered Google form. Out of 558 respondents, 253

(45.3%) are male, while 305 (54.7%) are female. The population of working age mostly participated, and the largest number of respondents had completed high school. Over 40% of households have incomes up to 60,000 dinars (511 euros), while 44.4% of households did not want to answer. The assumption is that, although the survey was anonymous, users did not want to answer because of their relatively low income. About 13% of households do not have a car. In 20% of households, there is a person who has a certain health problem that limits the respondent or one of the household members to a greater or lesser extent.

The largest number of users (over 90%) are users of postal services with a lower or greater frequency, while the largest percentage of users use postal services at least once a month (38.4%).

When considering post office proximity, it is important to know whether users use the PNU closest to where they live or work. Since the largest number of respondents is the working-age population, the distribution of answers indicates that when considering the number of users who gravitate towards a PNU, the number of legal entities located near the post office should also be taken into account, because employees during breaks or after working hours can also go to that way to realize the demand for postal services.

When it comes to the distribution of the means of travel to PNU, more than 60% go to PNU by car, and a small number by public transport, which may indicate an inappropriate timetable or inadequacy of stops. A large number of users - 25.8% walk to the post office, which can be beneficial for the local economy.

Depending on the type of means of transport they use most often on the way to PNU, the travel time subjectively estimated by the user varies. As a consequence of the fact that a certain number of respondents were from smaller villages and hamlets that are oriented toward one post office in a larger place that represents the center of gravity for a given area, the data appears that almost 40% of respondents are 20 or more minutes away from the nearest post office, i.e. the one they use most often. 34.8% of respondents are within a relatively short distance from the post office (up to 10 minutes).

A large number of users (36.9%) mostly use one PNU, while 3, and fewer PNUs are used by over 90% of respondents, which indicates that postal services are most often provided in the place of residence or the nearest places that have a post office.

In the next part of the questionnaire, respondents are asked to determine on a scale (not important to me at all - mostly not important to me - both yes and not important to me - mostly important to me - very important to me) for different qualitative parameters of postal services each of the offered parameters is important for them. The qualitative assessment of these parameters can be useful in further consideration of the change in UPS parameters, i.e. determining the importance of certain attributes that could be quantified through the WTP method in a subsequent phase of UPS sustainability analysis.

In the evaluation of the parameters, users chose the answer significant (collectively - mostly significant to me and very significant to me) as follows:

- Range of services provided - 45.2%;
- To be open in the late evening hours - 37.8%;
- To work on weekends - 50.0%;
- That it is the closest post office to the place from where they usually go (home, work) - 59%;
- To have a parking lot relatively close to the post office - 47.3%;
- Friendliness of the staff – 77.1%;
- Quality of service at the post office – 77.3%;
- That it is relatively accessible if you use public transport - 47.8%;
- To be open early in the morning - 48.0%;
- Waiting time in line - 71.4%.

Therefore, for users, the quality of service at the post office, the friendliness of the staff and the waiting time in the queue are of the greatest importance.

On the other hand, for the largest number of residents of the surveyed areas, the parameters that are the least important (the largest sum of responses are mostly not significant to me and not significant to me at all) are:

- To be open in the late evening hours - 27.4%;
- Having a parking lot relatively close to the post office - 27.3%;
- That it is relatively accessible if you use public transport - 24.4%.

Several interesting findings can be found in this section:

- The range of services is more significant for users with higher paying power and for the younger population.
- The importance of non-standard post office hours (early in the morning or late in the evening) is greatest for single households and households with more

than 5 family members. Also, post office work early in the morning is important for housewives, and work in the later hours for schoolchildren and students. The possibility for the post office to work on weekends is of the greatest importance for large families, employees and people with a higher degree of education and respondents from the category of severely reduced mobility. The assumption is that it could be simpler for those respondents, with the support of neighbors or relatives from the group of working-age population who are busy on weekdays, to transport and realize the demand for services or families with a member from this category, it is easier to organize care on a non-working day.

- Proximity to the post office is of the greatest importance for the youngest population and the working-age population, single households and users with the lowest paying power, which is in line with the appearance of additional costs for going to another PNU.
- The criterion that the post office is relatively accessible if you use public transport is somewhat more significant for women compared to men, which is in line with the assessment that women are more frequent users of public transport in these areas and that fewer women drive vehicles. Also, this criterion is important for pensioners, families with a member with limited mobility and small households with 1-2 members.
- Queuing time is an important parameter, but it is most important for the younger population, the working-age population, the population with a higher educational status, users with higher paying power and small households.
- Service quality is one of the most important parameters for all categories

of users, as well as the friendliness of the staff, with this parameter being somewhat more important for women, users with a higher educational status, users with limited mobility and users from small households.

In the following part, respondents were asked to determine how often they use different groups of services, whereby postal services are divided into 6 categories. According to the distribution of answers, where aggregate answers from the category at least once a year were given, it can be determined that the use of services can be ranked as follows:

- Payment of bills - 93.0%;
- Sending and receiving shipments - 84.8%;
- Payment/payment from a current account - 71.7%;
- Sending and receiving money - 54.8%;
- Picking up a pension at the post office or receiving a pension through the postman - 25.6%;
- Payment of social benefits - 15.4%.

Some of the significant findings in this section are:

- The largest number of users from all the mentioned categories (50-60%) send and receive shipments from once a month to once a year. There are no big deviations by category. The largest number of respondents who answered “never” are from the oldest age group and are members of small households.
- A large number of respondents (40-50%) in all categories declared that they “never” send and receive money, which can only point to the accuracy of the statement of the National Bank of Serbia that a large part of money transactions take place outside of legal payment flows and that the development of this service

has great potential in underdeveloped areas, especially those characterized by significant external migration.

- The largest number of respondents from the group of the oldest, pensioners and small households, do not use payment/payment services from a current account, but at the same time, they are the most numerous users of the service of collecting a pension at the post office or receiving a pension through the postman, so, in this segment, informing users from of this population about the possibilities and advantages of using current accounts, cooperation with commercial banks, could be of importance for the development of financial services intended for the elderly. Also, a large number of housewives (over 30%) never use transactions related to a current account, so empowering this part of the population, providing information and the possibility of inclusion in regular financial flows can be of great importance.
- Bill payment is a very important transaction for all categories of users - less than 10% of users from all categories never use this service.
- Payment of social benefits is a relatively little-used transaction, and this finding is in line with previous research where the largest number of residents in rural areas do not apply for this type of service, except for child allowance.

The users were asked to determine for the services, divided into 6 categories, to what extent they are important for them, and to what extent for other users, i.e. society as a whole, where the distribution of the answer “It is important” (collectively, it is mostly important and very important) individually

for users and other users, i.e. society as a whole, indicates an interesting trend - that users, who valued the importance of the service relatively low through their use, showed exceptional empathy through the understanding that, even if a certain group of services is not for them importance, for other users, from vulnerable categories, or the entire community, those services can be of great importance.

For different groups of services, users were asked to consider whether and to what extent each of them has a suitable alternative available within another service organization - a large number of respondents - at least 35%, are not sure if there is one for any of the listed groups of services suitable alternative. The majority of respondents believe that there is an alternative for bill payment services and transactions related to current accounts, but they also believe that social services related to pensions and payments of social benefits have the least suitable alternative. Also, when comparing answers by categories of respondents, it can be noted that the largest number of users who declared that they do not have different types of services or do not have a suitable alternative come from the group of oldest users, pensioners and members of small households.

According to the distribution of responses in which way and for what purpose they used the Internet in the past few months, the largest number of users answered for searching, for entertainment, access to news and sports content. Electronic mail was used by 24.4% of respondents, and a very small number (9.5%) used electronic banking. Also, a significant number of respondents did not use the Internet - 21.7%. This distribution of answers points to the

necessity of digital literacy and the possible role of the Post of Serbia in that process, like some other large postal administrations.

Users expressed their opinion about postal services by choosing a rating in the range of 0-10. The largest number of respondents expressed their general attitude about postal services with the highest rating (22.6%), while 90.9% of respondents gave a rating of 5 or more. The average grade is 7.35.

In the final part of the research, the respondents were presented with a hypothetical situation in which they should imagine that the current postal network does not exist and that there is no way to realize their need for different postal services, which aims to determine the importance of the postal network for the respondents, their household, as well as for society as a whole. It was emphasized that the proposed amounts chosen are hypothetical and will not affect the change of tax policy, but are meant to describe the proposed solutions.

The specific question was formulated as "What is the maximum amount you would be willing to pay at the household level monthly in order for postal traffic to function normally as it did in the previous period (before the closure of all PNUs)?" and users were asked to mark the amount for which they decided in the range of 0-100 in euro currency. The average amount received is 18.34 euros. This leads to the conclusion that respondents are willing to financially support postal services in their region. However, these limited resources should be carefully allocated to adequate postal infrastructure to achieve sustainability of postal service provision (Dobrodolac *et al.*, 2012; Lazarević & Dobrodolac, 2020).

Therefore, in the previous research that has been mentioned, the analysis was not done partially by rural/urban areas, but for the total population in the entire national territory, so the obtained result cannot be compared with other research. If a comparison were to be made, the distribution of the population by category (rural/urban), GDP, socio-demographic, economic, and other characteristics specific to the observed countries should be determined to be able to compare with countries with similar characteristics. Also, in previous research, there are big differences in the obtained values if different methods are used, and the calculations were performed not only for the entire postal network but also for certain groups of services or for individual services.

The obtained social value of the postal network in the research carried out in Serbia indicates directly the importance of the post office and the postal system in rural areas, and indirectly the importance of postal services provided through this system and the specific value offered through this service activity.

In further research, the task could be to calculate the cost of providing UPS and the sustainability of the existing business model (number of PNU, infrastructure, labor costs) in these areas and compare it with the obtained value, which may indicate further definition of steps towards changes in the scope and manner of providing UPS or the eventual introduction of targeted measures, that is, steps in the restructuring of the postal network. To support the mentioned activity, some of the mathematical models would be welcome to use (Ralević *et al.*, 2016).

Also, qualitative analysis of individual postal services, i.e. attributes of postal services,

indicates the lesser or greater importance of certain characteristics of UPS for the population of rural areas, and this qualitative part of the research can provide a good basis for continued research and quantitative analysis of attributes of postal services in the process of considering the redefinition of the concept of UPS.

5. Conclusion

Rural areas are characterized by diversity in terms of natural, economic, infrastructural and other important conditions for life and work. These changes affect the heterogeneity of the rural area in terms of ecological characteristics, economic and social development, cultural and demographic trends, which is reflected in the quality of life and work in the countryside. One of the results is a change in the demand for services. In many rural areas, certain services are not available or are available at significantly higher prices and/or lower quality than in urban areas.

For users, an expanded range of postal services can improve the quality of life - this leads to an increase in the user base, greater loyalty and opportunities for induced sales of postal services. Certain postal social services are designed to support governments in implementing their social obligations and policies. Strengthening relations with the government, in this way, ensure a better strategic position for the postal sector, which remains a relevant partner that is provided with future subsidies, investments and income from contracts. UPU has defined six important areas within which there are about 40 services that various postal administrations already offer: health and well-being; education; social cohesion, participation and inclusion; access to

government services; waste, recycling, energy and communal services; data and technology. For countries that are entering the process of providing social services, a key question is how to identify and prioritize these potential services. A reasonable starting point is to look at the variety of social services already offered by other posts, but also to consider national social priorities and conditions, upgrade existing forces and resources and engage with the wider, both local and national, innovation community. An additional recommendation would be to analyze the postal flows and by that determine the activities of certain regions (Svadlenka *et al.*, 2016). Based on this information, policymakers could make better plans for future developments.

In the conducted research, it was determined that in rural areas the postal network and postal services are of great importance. The postal sector responds to these changes by building strategic public-private partnerships, sharing resources and infrastructure, developing social postal services, diversifying existing services using digital technologies, further strengthening reputation and brand, increasing participation of all employees in the creation of innovative services, strengthening user orientation's approach with a full understanding of the needs and demands of the local community.

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