



Original scientific paper

UDC: 911.3:314.15(497.11)(1-22)
<https://doi.org/10.2298/IJGI251223010D>

Received: December 23, 2025

Reviewed: March 6, 2026

Accepted: April 2, 2026



STAY OR LEAVE—UNDERSTANDING RURAL (IM)MOBILITY IN SERBIA

Marija Drobnjaković^{1*} , Vlasta Kokotović Kanazir¹ , Milena Panic¹ , Željko Bjeljac¹ ,
Milan Radovanović¹ 

¹Geographical Institute "Jovan Cvijić" SASA, Belgrade, Serbia; e-mails: m.drobnjakovic@gi.sanu.ac.rs; v.kokotovic@gi.sanu.ac.rs; m.panic@gi.sanu.ac.rs; z.bjeljac@gi.sanu.ac.rs; m.radovanovic@gi.sanu.ac.rs

Abstract: Individuals who remain in rural areas are commonly framed as those who have had limited or no opportunity to leave. However, the theory of immobility argues that staying should be observed as a separate voluntary process and personal decision. This paper focuses on the population's intentions to stay in or leave rural areas in Serbia. It aims to explore differences and similarities between local communities and among population characteristics. The study area encompasses 161 rural settlements in seven municipalities in Region of Šumadija and Western Serbia. The survey was conducted using a standardized electronic or paper questionnaire, with a total sample of 954 respondents. Applied tests included descriptive and inferential statistics and ANOVA. Results indicate that mobility intention depends on the respondents' individual features and induces a different immobility patterns in the sample. Contemporary immobility has become a matter of voluntary decision, rather than merely a reflection of a lack of options. About 70.0% of respondents declared that they intend to stay in the settlement where they live. It was established that stayers are middle-aged persons (50–64), predominantly with secondary education, who live in inherited family houses, engaged in various forms of employment, but are strongly connected to agriculture. Migration intentions are expressed by younger and highly educated respondents, and those who are not in a relationship or married. This study introduces the immobility issue into the Serbian rural and migration studies and contributes to the identification of potential directions for future research and policy development regarding rural areas in Serbia.

Keywords: rural areas; mobility intentions; stayers; immobility; Serbia

1. Introduction

Global social and economic development tendencies have led to weakening of rural areas. The stigmatization of rural areas, as a process that lasts for decades, repulses the youth and accelerates out-migration. Nowadays, more sensitive rural development approaches that rely on local values and assets should be considered from the citizens' perspective and supported by an evidence-based approach. However, neither staying in rural areas nor mobility-related processes should be interpreted exclusively through negative perspectives, nor should they be overly romanticized.

*Corresponding author, e-mail: m.drobnjakovic@gi.sanu.ac.rs

People who are staying in rural areas are usually characterized as those who had no opportunity to leave (Haartsen & Stockdale, 2018). Current trends in research on rural areas development, pointed out that staying should be observed as a separate process within a theory of immobility (Gruber, 2021) which relates to a voluntary immobility (Carling, 2002; Coulter, 2013; Debray et al., 2022; Schewel, 2020) and active decision on staying (Cooke, 2013; Halfacree & Rivera, 2012; Hjälml, 2014; Sheller & Ury, 2006). The concept is designed under the driving factors that support staying.

This paper is focused on the population's intentions to stay in or leave rural areas in Serbia. The main goal is to explore differences and similarities between local communities and among population features based on their mobility intentions. It has been hypothesized that the stayers are not just those with a lack of opportunities, but rather those who enjoy the rural environment and way of life. Based on the stayers' experiences, it is examined how the practice of staying interrelates with the stayers' individual features. Since the phenomenon of staying has been under-researched in Serbia, the main findings will highlight a new direction in rural and migration studies. By introducing this issue into the Serbian geographical scientific arena, the research aims to address this gap and contribute to identifying potential directions for future research and policy development in rural areas.

2. Literature review

The relations between migration and rural areas have been studied broadly in the academic literature. However, it predominantly focuses on the factors that encourage people to leave rural areas. At the same time, staying, as a mobility pattern, was not in focus, due to little explicit consideration, estimation that it is not worth studying (Stockdale & Haartsen, 2018), or its overshadowing by mobility study (Vanden Haute et al., 2025).

It implies that staying in rural areas should be observed within the concept of immobility, which has been considered as an equilibrium state and, in this regard, has been neglected in migration studies (Erickson et al., 2018; Gruber, 2021). Within the concept of immobility, it is necessary to respect the premise of spatial differentiation and understand that all places are not the same. Drivers for staying could be found among various factors. In general, migration research emphasizes the role of specific life-course factors in shaping migration flows and mobility decisions, particularly those related to education, employment, family, and housing (Stockdale & Catney, 2012). Immobility reflects a wide range of heterogeneous situations shaped by diverse reasons, motivations, and lived experiences (Mata-Codesal, 2018). Previous research has identified important individual-level predictors, such as age, sex, race, educational attainment, household income, farming, partnership status, and housing (de Groot, 2011; Erickson et al., 2018). Some studies observed potential stayers through different age cohorts, e.g., the young population (Haartsen & Thissen, 2014), or the elderly (Burholt & Sardani, 2018). Mobility intentions are closely embedded in family life strategies (de Groot, 2011; Erickson et al., 2018; Haartsen & Stockdale, 2018; Hjälml, 2014; Mata-Codesal, 2018), especially during key life-course transitions such as entry into adulthood, family formation, union dissolution, the empty-nest stage, retirement, and job changes. The reduced mobility, which may lead to immobility, has been partly explained by demographic ageing (Cooke, 2013; Kalemba et al., 2020). One of the directions of exploring the staying and immobility underpins the concept of place attachment observed through strong bonds between people and place (Erickson et al., 2018; Haartsen & Stockdale, 2018). This concept

within immobility behavior could be observed as “residential stability” (Hansen, 2005) or as physical attachments related to landscape and quality-of-life perspectives, such as peace, housing affordability, and life courses (Haartsen & Stockdale, 2018). Primarily, the economic factors affect moving intentions; however the amenity and housing effects become more influential later and predominantly shape mobility choices (Stockdale & Catney, 2012).

Exploring the immobility/staying phenomena could lead to the identification of different types of immobility patterns shaped by various factors. These patterns lie at the intersection of personal motivations and resources, as well as place and community attachment (Barcus & Shugatai, 2018; Erickson et al., 2018; Kuhmonen et al., 2016). Stayers are often considered as valuable resource for rural places, since they bear a rural economy and farming, keep tradition and community identity, maintain social ties with those who migrate, foster commuting to support staying, contribute to a quality of life through the infrastructure improvement and resilience of the public amenities (Stockdale & Haartsen, 2018). The immobility pattern characterizes some population subgroups related to particular age or a transitional life stage (elderly, retirees, child-led families); at the same time, these patterns challenge contemporary understandings of mobility and migration (Gruber, 2021).

Within various scientific disciplines in Serbia, especially human geography and migration research, immobility remains largely unrecognized, and the rural population has been observed in a negative context, which becomes evident in the current state and through the dominant research approaches outlined below. Rural areas have been treated as traditional demographic reservoirs for strengthening the urban environment (Vojković et al., 2022). In Serbia, they have undergone profound demographic and socio-economic transformation over the past seven decades. Between 1948 and 2022, rural settlements experienced almost a twofold population decline (Drobnjaković & Kokotović Kanazir, 2025; Drobnjaković & Panić, 2024;). Mobility of rural population has been put in context of emigration (Nikitović et al., 2015) and researched as a cause for rural depopulation (Drobnjaković, 2019; Panić et al., 2022). Rural depopulation has been accompanied by pronounced demographic ageing. In certain rural settlements, the share of the young population (0–14) has fallen to around 7%. In comparison, the elderly population (65+) reaches up to 40% (Statistical Office of the Republic of Serbia [SORS], 2023a), indicating a severe demographic imbalance. Recently, scientific attention has increased regarding the quality of life in rural areas and the local population's perceptions of rural life and their needs (Đerčan et al., 2021; Tešin et al., 2024). Despite agriculture being the dominant activity in rural areas of Serbia, burdened by numerous structural problems that accelerate deagrarization and agricultural land abandonment (Drobnjaković, 2019), diversification of the rural activities and quality of life become a new direction in rural studies in Serbia (Bogdanov, 2007; Cvejić et al., 2010). Immobility as a term has been sporadically and fragmentarily introduced, mainly through political and ethnographic studies, focusing on migrants in transit (Jovanović, 2021). However, the mentioned knowledge gap has been pronounced within rural and population geography studies in Serbia, on which this research is focused.

3. Methods and data

3.1. Methodology design

The methodological framework comprises several interrelated steps (Figure 1), and encompasses three aspects of staying/leaving that underpin this research: (1) Spatial aspect

—selection of municipalities and settlements characterized by similar spatial patterns affecting staying or leaving; (2) Individual aspect—individual characteristics considered as predictors of staying (Erickson et al., 2018) based on Census and survey data; (3) Personal perspective – respondents’ perceptions and migration intentions analyzed: (i) within the total sample and (ii) at the municipal level.

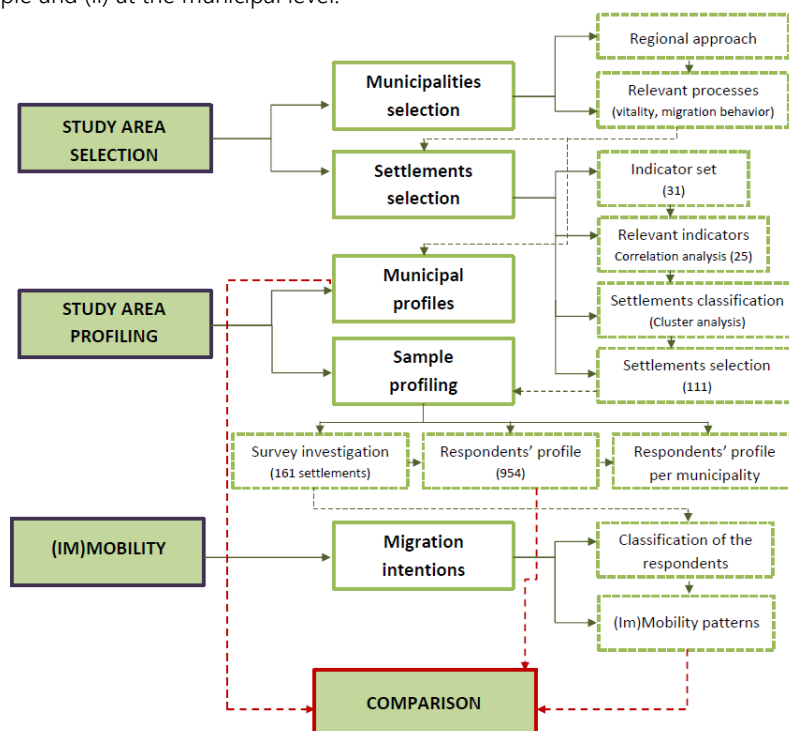


Figure 1. Research workflow.

3.2. Study area selection

The study area selection relies on the two-step analysis (Figure 1). A regional approach was applied, selecting Region of Šumadija and Western Serbia. The region selection was based on previous research that indicates its demographic and economic vitality (Drobnjaković, 2019; Kokotović Kanazir et al., 2024; Marinković, 2025). The next step implies the municipality selection, based on demographic vitality criteria and immobility behavior. In this regard, a longitudinal perspective of the population trends has been observed based on the population change index. The analysis was performed using Census data on a comparative overview of the population from 1961 to 2022. The immobility behavior assessed through the share of autochthonous population in a settlement using Census migration data. The attractiveness was observed through contemporary immigration – the number of immigrants per ten-year period. Official data for immigration from 2011 and later have been used. Based on these indicators, seven municipalities were selected – Užice, Čajetina, Priboj, Bajina Bašta, Loznica, Valjevo, and Ljig.

The second step involved identifying settlements for further analysis, which encompasses only rural settlements. The degree of rurality varies among settlements in the identified

municipalities depending on population density and level of socio-economic development (Drobnjaković & Kokotović Kanazir, 2025). However, authors rely on the existing differentiation between urban and other (rural) settlements, following the official methodology of the SORS.

Thirty-one indicators were identified and subsequently classified into five sets: demographic conditions (population size, population change index, age structure, household size), migration patterns (autochthonous and migrant population, recent immigration activity), functional settlement features (secondary and tertiary functions in settlements, activity rate, employment and unemployment rate, self-employment, population engaged in agriculture, other profitable activities on the agricultural holdings, alternative agricultural production, agricultural land market, pension income, seasonal labor force in the agriculture), settlement development patterns (centrality degree, accessibility, built-up area, population density), and socio-economic characteristics (education level, commuting, occasional use of housing stock, utilization of the female labor contingent and agricultural holdings with female holders). Data from the 2022 Population Census (SORS, 2023a, 2023b, 2023c, 2024a) have been used. Agriculture has been analyzed using data from the 2012 Agricultural Census since data at the settlement level of the 2023 Agricultural Census were not publicly available at the time when the analysis was performed. For centrality and accessibility, available studies were consulted (Drobnjaković, 2019; Drobnjaković & Steinführer, 2024; Geoanalitičari, n.d.). Pearson correlation coefficient was used to assess relationships between the selected indicators. Significant correlations were identified among 25 indicators.

The next methodological step is related to the identification of settlements for in-depth analysis (Figure 1). Hierarchical aggregative cluster analysis and Ward's method (Ward, 1963), were employed on the variable set for grouping settlements. Classification was performed separately for seven selected municipalities. The number of clusters was determined using the dendrogram. The total number of selected rural settlements was 111.

3.3. Study area profiling

Descriptive statistics was used to identify key demographic and socio-economic processes, including indicators such as: population change index, age structure, economic attributes, autochthonous to migrant population. The used data were derived from the aforementioned official data sources.

The second level related to municipal profile creation was based on a survey analysis so-called sample profiling (Figure 1). The main demographic and socio-economic sample characteristics of the respondents have been used as an input. The survey identified migration intentions of the local population in rural areas. It was conducted using a standardized questionnaire structuralized to include the basic demographic, social, and economic characteristics of the respondents (sex, age, marital status, household characteristics, employment, housing, agriculture), their satisfaction with life, attachment to the settlements and the local community, quality of life, their motives for staying, and migration intentions. The survey was conducted in August and September 2024 in 111 settlements within seven selected municipalities. A non-probability quota sample was designed as a minimum of 2% of the population of the selected settlements per municipality.

The survey was performed via electronic (22.5%) and paper (77.5%) questionnaires, using in-person or drop-off-and-collect methods. It was grounded on citizen science principles

that imply voluntary participation. The survey was conducted anonymously with the consent of the respondents. A total of 954 respondents participated. Thirty respondents did not specify their municipality. They were included in the analysis of the total sample, but excluded from the analysis at the municipality level. The number of the sampled settlements was extended to 161, prompted by the promotion campaign. Creating a profile based on the total sample characteristics and per municipality was the next methodological step (Figure 1). The respondents' profile has been created by employing descriptive statistics of their main demographic and socio-economic characteristics given in the questionnaire.

3.4. Classification based on migration intentions

The final methodological step examined differences between respondents based on migration intentions. The classification was based on the question: *Do you intend to leave the village in the next five years?* Respondents have been classified into three groups regarding their answers: 1. "No" - those who intend to stay; 2. "Yes" - those who intend to leave; and 3. "I do not know" - those who are indecisive. In this study, the term "rural stayers" refers to respondents who declared no intention to leave within the next five years.

Determination of the immobility patterns within the total sample was the next methodological step. The attributes of the identified classes were compared to the designed municipal and respondents' profiles in order to establish regularities in migration behavior and immobility patterns (Figure 1).

The analysis examined relationships between continual variables that expresses migration intentions (Leave, Stay, Indecisive) and 13 socio-demographic variables, based on previous research, official statistics terminology, and adapted to the presented study (de Groot, 2011; Erickson et al., 2018): 1. Age (18–34, 35–49, 50–64, and above 65); 2. Sex; 3. Education (incomplete primary, primary, secondary, tertiary education); 4. Marital status – in a relationship (married, relationship) and single (single, divorced, widowed); 5. Type of housing (family houses, family houses with two or more dwellings, second home); 6. Current housing tenure (homeowner – built, purchased house, inherited; renter); 7. Location of the house; 8. Household members; 9. Household composition (single, with partner, with kids, with parents, with relatives, multigenerational); 10. Employment status (employed, temporary employed, temporary-occasional jobs, unemployed, long-term unemployed, pensioner, housewife, student); 11. Registered employment modalities (public, private sector, entrepreneurs); 12. Job distance, and 13. Engagement in agriculture.

The SPSS software was used for the analysis. Descriptive and inferential statistics methods were employed to examine the differences between categories of respondents in terms of socio-demographic and perceptual characteristics. The chi-square test of independence was used to examine the relationship between categorical variables, and Cramer's V test for assessing the association between variables. The ANOVA (F test and Bonferroni post-hoc) was applied as an analysis for the examination of the relationship between continuous and categorical variables, if the assumptions were met. In this research, ANOVA has been performed for four continuous variables: age, education level (statistically significant), household members, and job distance (not statistically significant). As a final step, comparison of the municipal profiles, sample profile, and immobility behavior was done.

4. Results

4.1. Profiling municipalities: demographic and structural context

Population shrinkage has marked rural areas in Serbia but with different scope and intensity. Rural areas in the Region of Šumadija and Western Serbia still expressed vitality. The population of this region decreased up to 15% during the recent inter-census period (Drobnjaković & Kokotović Kanazir, 2025). Selected municipalities faced population decline in rural areas; however, a positive trend and relatively more favorable demographic indicators have been identified. Certain municipalities within the Region (Užice, Čajetina, and Priboj) include demographically resilient settlements where the population has remained stable or has slightly increased (Table 1).

Table 1. Total rural population change in selected municipalities for the period 1961–2022

Municipality	1961/1971	1971/1981	1981/1991	1991/2002	2002/2011	2011/2022
Užice	87.6	87.6	88.2	91.6	89.2	82.1
Čajetina	87.7	81.9	83.2	86.3	84.8	83.2
Priboj	105.6	91.2	86.3	77.6	87.1	83.6
Bajina Bašta	85.6	87.4	80.3	84.3	79.9	80.5
Loznica	97.0	98.5	98.2	92.1	89.3	85.0
Ljig	94.3	95.0	90.3	91.9	87.1	83.9
Valjevo	90.2	90.6	88.6	88.8	85.7	81.7

Note. Data are from “2022 Census of Population, Households and Dwellings in the Republic of Serbia. Comparative overview of the population by censuses 1948–2022 – Data by settlements,” by Statistical Office of the Republic of Serbia, 2024a (<https://popis2022.stat.gov.rs/en-US/popisni-podaci-eksel-tabele/>). In the public domain

Most of the selected municipalities experienced continuous rural population decline between 1981 and 2022, confirming that depopulation in this region began in the late 1960s and intensified over time (Drobnjaković & Kokotović Kanazir, 2025; Marinković, 2025). It characterized all municipalities except Priboj, where a short-term increase was recorded during the 1960s. The mentioned process intensified from the 1980s and became particularly pronounced after 2000, with a population reduction of 15–20% in the most recent inter-census period (Table 1). Short-term stability or slight population growth could be related to isolated rural settlements; the prevailing pattern across municipalities indicates long-term depopulation rather than temporary fluctuation.

Rural population dynamics in this region are characterized by pronounced demographic ageing. The persistent out-migration of younger cohorts and declining fertility has substantially altered the age structure, increasing the demographic vulnerability of rural communities. In the observed municipalities, the share of the elderly population (65+) significantly exceeds that of children (0–14), typically by 10–15 percentage points. Although some municipalities, such as Loznica and Priboj, retain a relatively higher share of youth, ageing is particularly pronounced in Bajina Bašta and Čajetina, where the elderly population considerably surpasses the national average (24%).

Educational attainment represents an important structural dimension of demographic change and a key indicator of local development capacity (Kokotović Kanazir et al., 2024). Educational profiles vary across the observed municipalities. Ljig, Priboj, Užice, and Čajetina display relatively more favorable structures, with a higher share of secondary and tertiary educated population. In

contrast, Bajina Bašta and Valjevo show less advantageous profiles, characterized by a higher prevalence of primary and incomplete education. Within the observed municipalities, differences are visible: Bajina Bašta records the least favorable structure, with higher proportions of low educational attainment, whereas Ljig and Priboj display relatively stronger educational profiles. Incomplete primary education in certain municipalities reflects long-term demographic ageing and the shrinking cohort of younger, better-educated population.

Economic activity further reveals spatial disparities among the selected municipalities. A higher employment share is observed in the more demographically and functionally developed municipalities, e.g., Užice (32.7%) and Valjevo (31.5%); otherwise, Priboj displays the weakest labor market position. Once a strongly industrialized area, Priboj experienced substantial job losses during the post-socialist transition, which contributed to elevated unemployment and partial reorientation toward agriculture and other subsistence activities. Loznica records relatively high unemployment rates, as well, suggesting limited formal employment opportunities. In contrast, Valjevo and Čajetina demonstrate comparatively lower unemployment rates (7.4%, 7.6%, respectively), reflecting more diversified economic bases. The share of pensioners remains high and uniform within observed municipalities, underscoring the strong linkage between ageing and economic dependency in rural areas.

Settlement-level mobility patterns illustrate the predominance of residential stability in the studied municipalities. In all cases, the majority of residents are autochthonous, which indicates relatively low long-distance in-migration. Bajina Bašta exhibits the highest share of long-term residents (62.2%), while Priboj shows a more balanced distribution between autochthonous and migrant populations. Overall, migration flows in the region appear limited in scale and largely short-distance in character. An exception is Čajetina, where tourism-related dynamics contribute to somewhat higher mobility levels.

4.2. Municipality-Level Respondent Overview

In order to understand survey results and identify spatial regularities, the authors examined the demographic and socio-economic features of the respondents (Table 2).

Demographic—The age structure reveals pronounced spatial differentiation, where Čajetina is characterized by the youngest respondent profile, while Priboj and Bajina Bašta display noticeably older demographic structures. The rest of the observed municipalities have an intermediate position, with dominance of middle-aged and older respondent groups. Gender structure of the sample is balanced. Female respondents are slightly more represented in Priboj, Loznica, Užice, and Ljig, while male respondents prevailed in Bajina Bašta and Valjevo. In Čajetina, the gender composition within the sample is even. Marital status indicates relatively stable family structures within the respondents' group. Most respondents reported being married or in a partnership/relationship, which is particularly visible in Čajetina and Bajina Bašta. Ljig records a higher presence of single respondents.

Socio-economic—Educational structure within the sample showed typical rural pattern. Secondary education predominates across the municipalities, while higher education is more present in municipalities with stronger urban influence, particularly Užice and Loznica. Lower educational attainment is more pronounced in Bajina Bašta and Valjevo. Household structure is strongly linked to family housing patterns typical for rural areas. Multigenerational households, including children, parents, or other relatives, are particularly common in Valjevo, Bajina Bašta, and Ljig. Single-person households are less frequent,

mainly recorded in Užice. Differences in household size among municipalities are moderate, although smaller households are presented in Užice and Ljig. Housing conditions confirm that most respondents live in inherited family houses with two, three, or four household members. This is particularly visible in Ljig, Valjevo, and Užice. Newly constructed houses are common in Bajina Bašta and Čajetina, while purchased houses remain relatively rare.

Table 2. Demographic and socio-economic features of respondents

	Užice	Čajetina	Priboj	Bajina Bašta	Loznica	Ljig	Valjevo
Average age	46.2	42.6	52.4	51.7	49.6	46.6	49.7
Youth (18–34) (%)	16.9	33.3	14.3	10.8	18.4	22.5	19.7
Elderly (65+) (%)	6.5	4.2	20.3	22.3	17.8	13.9	19.7
Male (%)	43.1	50.0	49.6	56.8	42.9	65.4	43.4
Married, relationship (%)	75.0	77.5	75.6	79.0	74.8	75.1	61.8
Secondary education (%)	40.8	53.5	64.4	46.9	61.4	55.3	57.9
Highly educated (%)	52.6	35.2	22	20.7	27.6	18.9	22.4
Family house (%)	78.9	88.7	86.3	62.5	82.4	69.1	69.7
Inherited house (%)	84.2	79.7	83.5	68.7	75.0	84.9	89.3
Average household members	3.7	4.3	4.2	4.1	4.0	4.2	3.9
Employed (%)	64.9	80.5	30.1	38.8	49.7	39.9	25.2
Retired (%)	11.7	4.2	27.8	20.4	20.1	13.0	9.5
Housewife (%)	1.3	2.8	13.5	4.8	5.0	11.9	4.8
Commuters (%)	81.4	81.7	70.0	62.3	70.0	83.1	73.7
Engaged in agriculture (%)	79.2	76.4	95.0	92.4	67.5	82.7	68.1
Farming for market (%)	6.5	15.3	24.8	29.0	10.2	39.4	13.9

Note. The participants' responses.

The most favorable employment characteristics were recorded in Čajetina, followed by Užice and Loznica, while Priboj, Ljig, and Valjevo showed less favorable situation. Significant differences are also observed in terms of employment sectors: the public sector dominates in Čajetina, Ljig, and Priboj, while the private sector is more prominent in Užice, Bajina Bašta, and Valjevo. Commuting represents an important livelihood strategy, reflecting functional connections between rural settlements and nearby urban centers, mostly present in Užice, Čajetina, and Valjevo. A pronounced presence of retired respondents was observed in Priboj, Bajina Bašta, and Loznica. Priboj and Valjevo recorded a higher involvement of housewives. Engagement in agriculture remains an important component of rural livelihoods. In most municipalities, agriculture is primarily oriented toward household subsistence, while market-oriented farming is more pronounced in Valjevo, Bajina Bašta, and Priboj. Respondents in Loznica and Ljig are less engaged in agriculture.

4.3. (Im)mobility patterns

The respondents have been classified into continuous categories on mobility scale based on their intentions and desire to migrate, underpinned by real capacities. Based on the research sample, immobility intentions are dominantly present in the study area (Figure 2). About 70.0% of the respondents declared that they plan to stay in the settlement where they live and have no intention of moving in the future. On the other hand, 9.6% of the respondents intend to leave in the next five years. They are sure in their decision and capacities to move

out of rural areas. The respondent group that is unsure of their mobility behavior comprises 19.7% of the sample. They are indecisive regarding their migration intentions and represent a category between endpoints on the mobility scale. Their mobility behavior in the future depends on their expectations and their capacities to realize them.

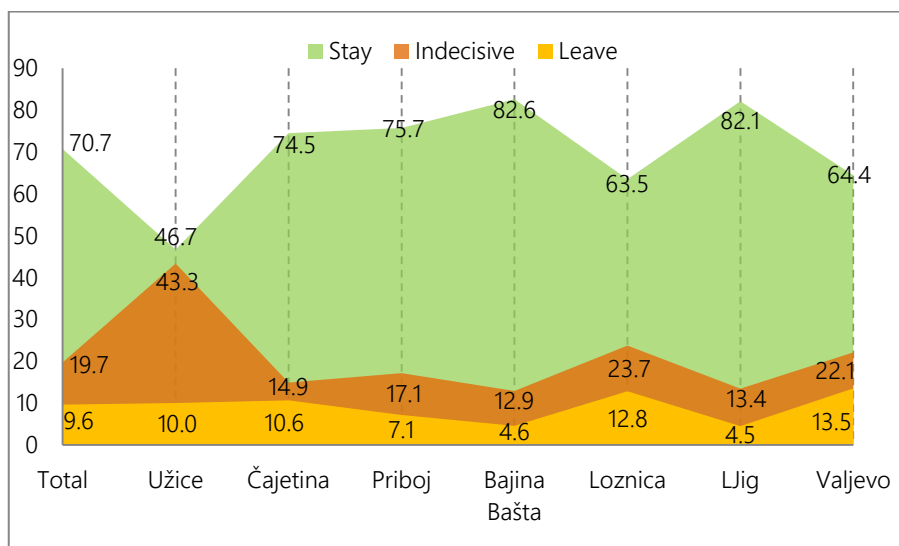


Figure 2. Migration intentions by categories.

Although the respondents who intend to stay in the rural areas prevailed, the relation between the categories in the observed municipalities varies. The immobility pattern is determined by the degree of rurality driven by general development and population density. Dominant immobility is pronounced in the municipalities with a rural character. The largest share of those who intend to stay in rural areas can be found in Ljig and Bajina Bašta, where they exceed 80% of the surveyed respondents. In these municipalities, the respondents intending to leave the rural areas participated with less than 5.0% in the sample. A significant representation of immobility intentions was registered in Priboj and Čajetina, which are marked by higher rurality as well. About 75.0% of the respondents in these two municipalities intend to remain immobile. Užice, Loznica, and Valjevo are characterized by a reduced tendency to stay in the rural areas, while the mobility pattern is more pronounced (over 10.0%). The largest number of indecisive respondents is recorded in these municipalities (Figure 2). In the centers of these municipalities, job offers and employment opportunities are significantly higher, which attracts population from surrounding rural settlements and the risk of leaving rural areas is increased. In this regard, Užice is specific since it is characterized by an approximate number of respondents who intend to stay in rural areas and the indecisive ones. These results indicate that the type of living environment determines the respondents' migration intentions. Hence, the high spatial differentiation of the results in the sample justifies the selection of the municipalities with different degrees of urbanization, spatial features, and a complex of social factors.

In the observed variable set derived from the survey investigation, seven variables (age, education level, marital status, housing current tenure, housing type, employment, and

engagement in agriculture) have sufficient observations for a statistically reliable analysis in all the seven municipalities. The other variables did not show a statistically significant association with the respondents' migration intentions, so their further analysis was omitted.

The results of the ANOVA analysis indicate that age has a significant effect on mobility behavior and a statistically significant difference between groups (Stay, Leave, Indecisive) ($F(df\ 2, df\ 526) = 32.54, p < .001, \eta^2 = .11$). Approximately 11.0% of the total variance of migration intentions can be explained by differences between age groups ($\eta^2 = .11$), implying a moderate influence of this variable. Respondents who intended to stay were, on average, the oldest ($M = 53.04$), while respondents who were indecisive were the youngest ($M = 39.85$). The results show a clear age gradient in migration intentions (Table 3). Post hoc Bonferroni comparisons showed that respondents who intended to stay were significantly older than those with migration intention ($MD = 5.68, p = .026$) and those who were indecisive ($MD = 13.19, p < .001$). These results indicate a clear age pattern: younger respondents are more likely to be indecisive, while older respondents more often report an intention to stay. The intention to leave is the most pronounced among the youngest and decreases with age. The share of the respondents intending to stay increases steadily with age. A chi-square test of independence showed a significant association between marital status and migration intentions ($\chi^2 = 7.52, p = .023$, Cramer's $V = .11$). Respondents without a partner were more likely to intend to leave the rural areas, compared to those who were married or in a relationship.

Table 3. Share of the (im)mobility categories by age and marital status (%)

Indicator		Leave	Indecisive	Stay
Age	18–34	30.8	34.6	11.5
	35–49	35.4	39.2	28.8
	50–64	21.5	20.8	37.2
	65+	12.3	5.9	22.4
Marital status	Married, in a relationship	62.1	74.2	76.1
	Without a partner	37.9	25.8	23.9

Note. Elaborated by the authors based on the participants' responses.

Education varies among and within the observed respondent groups. A chi-square test showed a significant association between respondents' education categories and migration intentions ($\chi^2 = 37.23, p < .01$, Cramer's $V = .167$). The ANOVA analysis shows that this variable has a significant association with mobility behavior ($p < .01$) but with a small effect ($\eta^2 = .04$) and indicates the difference between education level groups ($F(df\ 2, df\ 559) = 9.46, p < .001$). Post hoc Bonferroni comparisons showed that respondents who intended to stay were characterized by a significantly lower average education level ($M = 2.94, SD = .94$) than those with migration intention ($M = 3.32, SD = .94, p = .011$) and those who were indecisive ($M = 3.32, SD = 0.91, p = .001$). No significant difference was found between the categories Leave and Indecisive. These results indicate that higher education is associated with intention to leave or indecisiveness, whereas lower education characterizes rural stayers. Secondary education dominates in all immobility categories (Table 4). However, the variation can be observed between primary and tertiary education among categories. Stayers are characterized by a high share of respondents with primary education and the presence of those with an incomplete education. Stayers are the least represented among highly educated respondents. Highly educated individuals are more likely to leave or are still not sure about their decision to move. In

this regard, higher education attainment could be assigned to the mobility pattern, which is consistent with the ANOVA and post hoc results.

Table 4. Share of the immobility categories by education level and housing (%)

	Indicator	Leave	Indecisive	Stay
Education level	Incomplete primary school	1.5	0.8	3.2
	Primary school	10.4	6.9	22.8
	Secondary school	53.7	61.1	55.6
	Tertiary education	34.3	31.3	18.3
Type of housing	Family house	66.1	77.7	74.3
	Family house with several dwellings	18.5	16.9	24.1
	Second home	15.4	5.4	1.5
Housing current tenure	Built	4.6	9.5	14.9
	Purchased house	7.7	9.5	4.6
	Inherited	86.1	80.2	80.5
	Rented	1.5	0.8	0.00

Note. Elaborated by the authors based on the participants' responses.

Housing patterns are often taken as significant factors influencing migration intentions. In this research, the analysis of housing current tenure and type of housing unit and respondents' intention to leave the rural areas indicate statistically significant ($\chi^2 = 16.80$, $p = .032$; $\chi^2 = 38.14$, $p = .039$), but weak association (Cramer's $V = .114$). However, certain regularities among immobility patterns could be identified. The results indicate that the respondents who live in family houses were most likely to stay or were indecisive (Table 4). On the other hand, respondents who reported living in second homes were more likely to intend to leave. Some respondents from this category rent their living space. That makes them more sensitive and encouraged to move. The majority has inherited the house for living; however, significant investment activity in this segment has been recognized, since the rural stayers record the highest share of built houses. Indecisive category of respondents lives in inherited family houses, but not dominantly. Housing patterns vary within this category (Table 4). The respondents who share living space have been identified, as well as those who use a second home. Some of them built or purchased the house or even rented it. This variability affects their indecisiveness.

Employment status is significantly associated with immobility behavior ($\chi^2 = 56.34$, $p = .00$; Cramer's $V = .208$), indicating a small-to-moderate effect size. The results indicate differences in migration intentions across employment status. Employed respondents were distributed more evenly across groups, with a substantial proportion of rural stayers, which makes it an important precondition for a stable financial situation and staying (Table 5). Their aspirations to move could be explained by the distance to work and commuting frequency. The respondents with mobility intentions express increased daily mobility. Indecisive employed respondents most often commute, while stayers engage in other forms of employment, like working at home and in the settlement where they live. Respondents who express a desire to move recorded the highest representation of students and those who are unemployed (Table 5). On the contrary, among stayers the highest share of inactive respondents could be found, whether they are long-term unemployed, pensioners, or housewives. The activity of the indecisive respondents is between those who intend to stay and leave, but with a similar pattern to those with the intention to move.

Table 5. Share of the immobility categories by employment and agriculture (%)

Indicator		Leave	Indecisive	Stay
Employment	Employed	12.4	22.3	65.3
	Temporary jobs	13.2	32.4	54.4
	Long-term unemployed	2.7	20.3	77.0
	Unemployed	26.7	13.3	60.0
	Pensioner	7.6	7.6	84.7
	Housewife	0.0	13.2	86.8
	Student	33.3	33.3	33.3
Agriculture	Engage in agriculture	6.6	18.6	74.8

Note. Elaborated by the authors based on the participants' responses.

It has been established that an important factor for mobility intentions is engagement in agriculture ($\chi^2 = 53.88$, $p = .00$; Cramer's $V = .204$). The majority of stayers are engaged in agriculture, whether they produce for sale or they are engaged in subsistence farming. By increasing the desire to leave the rural areas, agriculture becomes a less important activity. Indecisive respondents engaged in this activity sector with 18.6%, where half of them was in subsistence farming. The lowest farming engagement was expressed by respondents who intend to leave, justifying their weak association with rural areas.

5. Discussion

In the context of widespread depopulation and limited demographic stability, the population's intentions to stay in rural areas deserve particular analytical attention. The analysis of the demographic and socio-economic characteristics of rural areas indicates unfavorable demographic trends across the study area and the sampled settlements (Table 6). However, it reveals certain localities with development potential.

The average age of the respondents is similar to the average age of the study area, which justifies the sample representativeness. The ageing process marked the observed areas with the similar pattern, confirmed by the survey investigation. Respondents who intend to stay in rural areas are older on average (55.4 years), indicating that the younger population is more likely to move, particularly women. The slight prevalence of males among stayers justifies that fact. Previous studies highlighted the sex structure of respondents for the staying process (Debray et al., 2022; de Groot, 2011); however its relevance in this study was not significant for further analysis. On the other hand, older population remains immobile, which is associated with their ability to stay. Similar to other immobility research, it is represented by certain resources of places and opportunities for individuals (Haartsen & Stockdale, 2018), or with their voluntary decision.

Relations between population age groups have a regressive character. The share of young respondents is significantly lower than in the entire study area, while the share of the elderly is representative. It suggests that the youth have been less represented or insufficiently included in the sample, but the relation between marginal age groups addresses the demographic profile of the selected municipalities and general demographic trends in rural Serbia. Unexpectedly, the group of rural stayers expresses a slightly lower difference between these two age contingents compared to the municipal and sample total share. These results induce the process of voluntary staying presented by Carling (2002) and

emphasize the importance of the spatial aspect that has been drawn in other research as well (Haartsen & Stockdale, 2018; Mata-Codesal, 2018; Stockdale, & Catney, 2012).

Table 6. Comparison between selected municipalities, the total sample, and the stayers group

	Study area	Sample	Stayers
Average age	49.6	48.6	55.4
Youth (18–34)	18.7*	10.1	11.5
Elderly (65+)	27.4	26.5	22.4
Male	50.8	52.0	55.7
Married, relationship	56.9**	68.7	76.1
Household members	2.5	4.1	4.0
Secondary education	51.5	55.2	55.6
Highly educated	8.6	25.6	18.3
Family house	95.5	75.6	74.4
Inherited house	N/A	79.5	80.5
Employed	32.1	47.0	43.6
Unemployed	13.1	21.5	24.7
Retired	29.6	17.6	21.7
Housewife	17.4***	5.8	7.2
Commuters	62.6	74.3	69.2
Engaged in agriculture	69.8****	80.6	86.2
Subsistence farming	N/A	57.5	58.0

Note. Data are from “2022 Census of Population, Households and Dwellings in the Republic of Serbia. Age and Sex, by Statistical Office of the Republic of Serbia, 2023a; Population aged 15 and over by legal marital status, age and sex – Data by settlements,” by Statistical Office of the Republic of Serbia, 2023b (<https://shorturl.at/4xkXa>); “Population by economic activity, age and sex – Data by settlements,” by Statistical Office of the Republic of Serbia, 2023c (<https://shorturl.at/YNDsk>); “2023 Census of Agriculture. Number of farms, number of persons and annual work units and economic size of farms – Data set”, 2024b (<https://shorturl.at/a6kOP>). In the public domain. N/A – This type of data is not available in Population and Agriculture Census.

Household composition and housing features express the expected patterns. Selected settlements are characterized by a certain household stability. There is a high percentage of respondents in a partner relationship who live in four-member families on average. The marital status is dominant among the stayers group (76.1%), which indicates that stable family relationships affect mobility intentions. Previous studies show that various life courses and partnerships affect mobility (Haartsen & Stockdale, 2018; Hjälml, 2014; Stockdale & Catney, 2012). High partnership stability of the stayers in this research justifies such findings and lead to the conclusion that more stable families are less mobile. However, the household members in this research have been assessed as less important determinants of mobility behavior, contrary to previous findings that highlighted the importance of child-based households for staying (Cooke, 2013; Debray et al., 2022; Stockdale & Catney, 2012). A slight impact has been recorded only in multigenerational households.

The analysis led to an important conclusion linked to housing. Individual or family housing characterizes rural areas. A high share of family houses has been recorded in the study area and within the sample (Table 6). Inheritance is the dominant housing tenure in the sample. Staying intention is underpinned by housing investment, since the highest share of those who build their houses are rural stayers. Housing patterns play a significant role in

the staying process, since more than 70.0% of those who intend to stay or at least are indecisive, already live in family houses. In some early life stages, economic factors of places affect moving intentions; however, the amenity and housing effects become more influential later and dominantly shape mobility choices (Stockdale & Catney, 2012).

Key findings related to education structure indicate dominance of secondary education among the rural population, respondents, and stayers. This educational attainment, if narrowly specialized, is considered a significant development generator. A certain inaccuracy can be observed within the educational structure regarding a highly educated population, which is significantly higher in the respondent group. The results show that highly educated population expresses mobility intentions, which is supported by findings from numerous studies (Debray et al., 2022; de Groot, 2011; Erickson et al., 2018; Haartsen & Stockdale, 2018). It justifies the selection of the settlements for this research as an area that potentially could serve as an example for studying affirmative rural life. Educational attainment of the stayers is slightly unfavorable compared to the total sample (Table 6), but indicates the new form of immobility that are increasingly voluntary driven.

The results confirmed the economic vulnerability of rural areas, which are marked by high unemployment rates, inactivity, and retired persons. Municipalities that are more economically developed and demographically vital, such as Užice, Loznica, and Čajetina, are characterized by a more favorable economic structure. In contrast, the municipality of Priboj stands out due to the high share of unemployed residents living in rural settlements, which could be linked to the municipality's economic stagnation following the industrial crisis of the 1990s (Drobnjaković, 2019). Within the respondents' group, stayers are less active, commute to a lesser extent, and with activity deeply rooted in agriculture (Table 6). Their employment is dominantly related to public sector, as a certain guarantee for economic safety and resilience. On the other hand, employment has been seen as a factor that underpins mobility behavior, which Debray et al. (2022) explain with access to information and pursuing migration.

Although this survey is thoroughly designed, based on research across 161 rural settlements, and a substantial sample of 954 respondents, which provides a broad empirical base for analysis, several limitations should be noted. First, the sample could not be considered as fully representative of the entire rural population in Serbia, as the research focuses on selected municipalities within the Region of Šumadija and Western Serbia. This regional focus may restrict the broader transmission and applicability of the results and conclusions (Barcus & Shugatai, 2018; Haartsen & Stockdale, 2018). The findings should be interpreted within the context of the selected municipalities. Secondly, the analysis, which relies on self-reported mobility intentions rather than observed migration behavior of the rural population, could be a limitation for causal interpretation, and it could express discrepancy with real mobility behavior (de Groot, 2011; Stockdale & Haartsen, 2018). Thirdly, potential selection biases related to socio-economic characteristics were considered, but mitigated through thorough interpretation of representative and narrowly specialized literature. On the other hand, this research provides valuable insights into the socio-demographic profiles of rural population who intend to stay or leave rural areas in Serbia, which is valuable from a policy perspective. This research is important for designing targeted policies aimed at strengthening local employment opportunities, supporting young households, and improving access to services and regional centers that may contribute to greater demographic stability and resilience of rural areas (Debray et al. 2022; Stockdale & Catney, 2012).

6. Conclusion

This research highlights the necessity of rethinking the role and value of the rural areas in the 21st century. The findings suggest that immobility and staying should be considered as a meaningful process. Migration intentions reproduced different mobility patterns. Particular focus was on respondents that intend to stay in rural areas. About 70.0% of the respondents declared that they plan to stay in the settlement where they live and have no intention to leave. Their aspirations, main demographic and socio-economic features served for designing a profile of people that are bearers of rural tradition and economy. Their features represent a certain stability and safety, since the staying is associated with the middle-aging (50–64); dominance of secondary education; inherited family housing, with significant investment activity; engagement in various forms of employment, high inactivity rates; activity deeply rooted in agriculture. These results showed that immobility in the Region of Šumadija and Western Serbia should be understood as a voluntary decision.

This research makes a distinct scientific contribution by positioning immobility as an analytically relevant and underexplored dimension within rural and population geography in Serbia. The findings indicate that future research should move toward longitudinal designs that capture the stability and transformation of mobility intentions over time, as well as toward comparative analyses across different regions in Serbia.

Greater attention should be directed to qualitative approaches, particularly in exploring subjective drivers such as place attachment, life-course transitions, and perceived opportunities. From a societal and economic perspective, the results underline the need to reconceptualize rural population not as a passive residual category, but as active subjects whose staying behavior supports local economies, which implies better social and territorial cohesion. This has direct implications for the design of integrated and more sensitive rural policies aimed at balancing demographic trends, labor market opportunities, and quality-of-life improvements. Finally, research limitations could be recognized, including the regional focus of the study and the reliance on self-reported intentions, which may not fully correspond to realized mobility behavior, thus indicating the need for further empirical validation and broader spatial coverage in future.

Acknowledgements

This paper is result of the Project Stay or Leave – spotlight on migration intentions in the rural areas (RurSITU), funded by the Center for the Promotion of Science, under the auspices of the Ministry of Science, Technological Development and Innovation of the Republic of Serbia (Contract no. [1498/23]).

References

- Barcus, H., & Shugatai, A. (2018). Immobile populations as anchors of rural ethnic identity: Contemporary Kazakh narratives of place and migration in Mongolia. *Population, Space and Place*, 24(4), Article e2148. <https://doi.org/10.1002/psp.2148>
- Bogdanov, N. (2007). *Mala ruralna domaćinstva u Srbiji i ruralna nepoljoprivredna ekonomija* [Small Rural Households in Serbia and Rural Non-farm Economy]. UNDP.
- Burholt, V., & Sardani, A. (2018). The impact of residential immobility and population turnover on the support networks of older people living in rural areas: Evidence from CFAS Wales. *Population, Space and Place*, 24(4), Article e2132. <https://doi.org/10.1002/psp.2132>

- Carling, J. (2002). Migration in the age of involuntary immobility: Theoretical reflections and Cape Verdean experiences. *Journal of Ethnic and Migration Studies*, 28(1), 5–42. <https://doi.org/10.1080/13691830120103912>
- Cooke, T. J. (2013). All tied up: Tied staying and tied migration within the United States, 1997 to 2007. *Demographic Research*, 29(3), 817–836. <https://doi.org/10.4054/DemRes.2013.29.30>
- Coulter, R. (2013). Wishful thinking and the abandonment of moving desires over the life course. *Environment and Planning A: Economy and Space*, 45(8), 1944–1962. <https://doi.org/10.1068/a45314>
- Cvejić, S., Babović, M., Petrović, M., Bogdanov, N., & Vuković, O. (2010). *Socijalna isključenost u ruralnim oblastima Srbije* [Social Exclusion in Rural Areas of Serbia]. UNDP, Centar za inkluzivni razvoj, & SeConS.
- Debray, A., Ruysen, I., & Schewel, K. (2022). *Voluntary Immobility: A Global Analysis of Staying Preferences* (Working Papers No. 176). University of Oxford, International Migration Institute. <https://doi.org/10.13140/RG.2.2.20381.18409>
- de Groot, C. (2011). *Intentions to move, residential preferences and mobility behaviour: a longitudinal perspective* [Doctoral dissertation, University of Amsterdam]. UvA-DARE. <https://dare.uva.nl/id/abc3e20b-83b0-481f-9fc0-8d0dbda911af>
- Drobnjaković, M. (2019). *Razvojna uloga ruralnih naselja centralne Srbije* [Development role of the rural settlements in central Serbia (Special issues, No. 95)]. Geographical Institute "Jovan Cvijić" SASA.
- Drobnjaković, M. & Kokotović Kanazir, V. (2025). *Srbija između sela i grada – naselja i njihova strukturna obeležja* [Serbia between rural and urban areas – settlements and their main features]. Statistical Office of the Republic of Serbia.
- Drobnjaković, M., & Panić, M. (2024). Introduction of the Approach for Reviving the Sub-Municipal Level as a Spatial Aspect of Decentralization in Serbia. *Land*, 13(6), Article 752. <https://doi.org/10.3390/land13060752>
- Drobnjaković, M., & Steinführer, A. (2024). Re-thinking rurality: Towards a new research approach and rural-urban spatial gradient establishment in Serbia. *Applied Geography*, 163, Article 103195. <https://doi.org/10.1016/j.apgeog.2023.103195>
- Đerčan, B., Bubalo Živković, M., Gatarić, D., Lukić, T., Dragin, A., Kalenjuk Pivarski, B., Lutovac, M., Kuzman, B., Puškarić, A., Banjac, M., Grubor, B., & Simović, O. (2022). Experienced Well-Being in the Rural Areas of the Srem Region (Serbia): Perceptions of the Local Community. *Sustainability*, 14(1), Article 248. <https://doi.org/10.3390/su14010248>
- Erickson, L. D., Sanders, S. R., & Cope, M. R. (2018). Lifetime stayers in urban, rural, and highly rural communities in Montana. *Population, Space and Place* 24(4), Article e2133. <https://doi.org/10.1002/psp.2133>
- Geoanalitičari. (n.d.). *Remote detection of (de)population processes in Serbia*. Depopulacija.rs. Retrieved December 20, 2025 from <https://shorturl.at/esMUo>
- Gruber, E. (2021). Staying and immobility: new concepts in population geography? A literature review. *Geographica Helvetica*, 76, 275–284. <https://doi.org/10.5194/gh-76-275-2021>
- Haartsen, T., & Stockdale, A. (2018). Selective belonging: how rural newcomer families with children become stayers. *Population, Space and Place*, 24(4), Article e2137. <https://doi.org/10.1002/psp.2137>
- Haartsen, T. & Thissen, F. (2014). The success-failure dichotomy revisited: young adults' motives to return to their rural home region. *Children's Geographies*, 12(1), 87–101. <https://doi.org/10.1080/14733285.2013.850848>
- Halfacree, K., & Rivera, M. J. (2012). Moving to the countryside And staying. Lives beyond representations. *Sociologia Ruralis*, 52(1), 92–114. <https://doi.org/10.1111/j.1467-9523.2011.00556.x>
- Hansen, S. (2005). Perspectives on the geographic stability and mobility of people in cities. *Proceedings of the National Academy of Sciences*, 102(43), 15301–15306. <https://doi.org/10.1073/pnas.0507309102>
- Hjältn, A. (2014). The 'Stayers': Dynamics of lifelong sedentary behaviour in an urban context. *Population, Space and Place*, 20(6), 569–580. <https://doi.org/10.1002/psp.1796>
- Jovanović, T. (2021). Forced (Im)Mobilities En Route: 'Justified' Violence of the Border Regime in Balkans. *Glasnik Etnografskog instituta SANU*, 69(2), 433–455. <https://doi.org/10.2298/GEI2102433J>
- Kalemba, S. V., Bernard, A., Charles-Edwards, E., & Corcoran, J. (2020). Decline in internal migration levels in Australia: Compositional or behavioural effect? *Population, Space and Place*, Article e2341. <https://doi.org/10.1002/psp.2341>
- Kokotović Kanazir, V., Panić, M., & Drobnjaković, M. (2024). What is our demographic reality? The first results of the 2022 Census in Serbia. *Geographical Reviews*, 56–57, 65–78. <https://doi.org/10.37658/GR2456-57065kk>

- Kuhmonen, T., Kuhmonen, I., & Luoto, L. (2016). How do rural areas profile in the futures dreams by the Finnish youth? *Journal of Rural Studies*, 44, 89–100. <https://doi.org/10.1016/j.jrurstud.2016.01.010>
- Marinković, I. (2025). Populaciona dinamika u Republici Srbiji u međupopisnom periodu 2011–2022 [Population dynamics in the Republic of Serbia in the intercensal period 2011–2022]. In V. Nikitović (Ed.), *Stanovništvo Srbije – dinamika i strukture* [Population of Serbia – dynamics and structures (pp. 11–26)]. Statistical Office of the Republic of Serbia.
- Mata-Codesal, D. (2018). Is it simpler to leave or to stay put? Desired immobility in a Mexican village. *Population, Space and Place*, 24(4), Article e2127. <https://doi.org/10.1002/psp.2127>
- Nikitović, V., Predojević-Despić, J., & Marinković, I. (2015). Migrantsko stanovništvo [Migrant population]. In V. Nikitović (Ed.), *Populacija Srbije početkom 21. veka* [Population of Serbia at the beginning of the 21st century (pp. 98–127)]. Statistical Office of the Republic of Serbia.
- Panić, M., Drobnjaković, M., Stanojević, G., Kokotović Kanazir, V., & Doljak, D. (2022). Nighttime lights – Innovative approach for identification of temporal and spatial changes in population distribution. *Journal of the Geographical Institute "Jovan Cvijić" SASA*, 72(1), 51–66. <https://doi.org/10.2298/JGI2201051P>
- Schewel, K. (2020). Understanding Immobility: Moving Beyond the Mobility Bias in Migration Studies. *International Migration Review*, 54(2), 328–355. <https://doi.org/10.1177/0197918319831952>
- Sheller, M., & Urry, J. (2006). The New Mobilities Paradigm. *Environment and Planning A: Economy and Space*, 38(2), 207–226. <https://doi.org/10.1068/a37268>
- Statistical Office of Republic of Serbia. (2023a). *2022 Census of Population, Households and Dwellings in the Republic of Serbia. Age and Sex*. Statistical Office of Republic of Serbia.
- Statistical Office of Republic of Serbia. (2023b). *2022 Census of Population, Households and Dwellings in the Republic of Serbia. Population aged 15 and over by legal marital status, age and sex – Data by settlements*. [Data set]. <https://shorturl.at/4xkXa>
- Statistical Office of Republic of Serbia. (2023c). *2022 Census of Population, Households and Dwellings in the Republic of Serbia. Population by economic activity, age and sex – Data by settlements*. [Data set]. <https://shorturl.at/YNDsk>
- Statistical Office of Republic of Serbia. (2024a). *2022 Census of Population, Households and Dwellings in the Republic of Serbia. Comparative overview of the population by censuses 1948–2022 – Data by settlements*. [Data set]. <https://popis2022.stat.gov.rs/en-US/popisni-podaci-eksel-tabele/>
- Statistical Office of Republic of Serbia. (2024b). *2023 Census of Agriculture. Number of farms, number of persons and annual work units and economic size of farms*. [Data set]. <https://shorturl.at/a6kOP>
- Stockdale, A. & Catney, G. (2012). A Life Course Perspective on Urban-Rural Migration: the Importance of the Local Context. *Population, Space and Place*, 20(1), 83–98. <https://doi.org/10.1002/psp.1758>
- Stockdale, A. & Haartsen T. (2018). Editorial introduction: Putting rural stayers in the spotlight. *Population, Space and Place*, 24(4), Article e2124. <https://doi.org/10.1002/psp.2124>
- Tešin, A., Dragin, A. S., Mijatov Ladičorbić, M., Jovanović, T., Zadel, Z., Surla, T., Košić, K., Amezcua-Ogáyar, J. M., Calahorra-López, A., Kuzman, B., & Stojanović, V. (2024). Quality of Life and Attachments to Rural Settlements: The Basis for Regeneration and Socio-Economic Sustainability. *Land*, 13(9), Article 1364. <https://doi.org/10.3390/land13091364>
- Vanden Haute, L., Scheerens, C., Ruysen, I., & Toma, S. (2025). Involuntary immobility and well-being: a scoping review of existing literature and future research directions. *Globalization and Health*, 21, Article 35. <https://doi.org/10.1186/s12992-025-01116-5>
- Vojković, G., Kokotović Kanazir, V., & Bakić D. (2022). Ka boljem razumevanju demografskih dispariteta u Srbiji [Toward better understanding of the demographic disparities in Serbia]. In G. Vojković & Gligorijević, V. (Eds.), *Stanovništvo Srbije – Kako upravljati demografskim izazovima* [The population of Serbia – How to cope with demographic challenge (pp. 9–29)]. University of Belgrade – Faculty of Geography.
- Ward, J. H. (1963). Hierarchical Grouping to Optimize an Objective Function. *Journal of the American Statistical Association*, 58(301), 236–244. <https://doi.org/10.1080/01621459.1963.10500845>