

Abstract: Differentiation between rural and urban areas in Serbia is a disputable issue, usually based on the most commonly used indicators which do not reflect the functional and social local features. This research starts from the hypothesis that labor market gender inequality is strongly correlated with urban-rural dichotomy and patriarchal patterns on women's position. It follows the hidden idea of rural life in Serbia beyond the social and economic local features, introducing a gender dimension as a significant element. The cluster analysis is performed, which involves ten variables that represent the differences in women's social and economic engagement. Results enabled the identification of five municipality clusters, whose interpretation illustrated women's current position and significance in shaping (under)developed municipalities and urban/rural societies.

Keywords: female labor force participation, female unemployment, urban-rural disparities, spatial inequalities, Serbia

Highlights

- Urban-rural disparities are driven by differences in labor market outcomes.
- Developmental impact on gender equality depends on the socioeconomic context.
- Urban environment offers more opportunities for women's employment.
- Rural women are still recording higher unemployment rates.
- Women's inactivity is related to cultural norms and religious beliefs.

1. Introduction

An urban-rural differentiation represents a complex issue, commonly adapted to national context. The corpus of existing national definitions of rural and urban areas is characterized by their substantial overlap, based on a broad criteria set, without standardized methodology, which reflects an abundance of their geographic and socio-economic realities (Ananian & Dellaferrera, 2024). The most commonly used indicators are based on population size and population density, with variation in thresholds, and administrative criteria; however, some countries supplement the national methodology by introducing plenty of socio-economic indicators, like accessibility, economic activities, and importance of agriculture, land use, etc. (Copus et al., 2008; ONEP, 2012). The harmonization of national definitions of urban and rural areas would require various additional country data sources. In this regard, some international organizations (OECD, 1994; 2011; EUROSTAT, 2010; EU Commission, 2013; FAO, 2017; etc.) put efforts into building and refining a methodology for harmonized differentiation of rural and urban areas that would enable international comparison, but still support national relevance. The most recent attempt by six international organizations provides a detailed methodology for the improvement of urban-rural distinction that relies on higher spatial and temporal accuracy, beyond the existing administrative boundaries (European Commission & Statistical Office of the European Union, 2021). The basis of this new approach is the DEGURBA methodology (Dijkstra & Poelman, 2014; Eurostat, 2021). It is performed on a 1 km² population grid based on a geo-referenced point dataset with a high spatial accuracy, classified according to their population density, population size, and contiguity. The urban-rural differentiation is represented by the spatial gradient introduced in the GHSL project. The purpose of such an approach is not to replace national definitions but to complement them to promote international comparability of statistics.

There is no clear differentiation in the line urban-rural at various geographical levels, regardless of obvious varieties that are proved in numerous studies, documents, and practices. The heterogeneity of the rural areas and their distinction from the urban environment allow variety in their understanding, assessment, and delimitation (Drobnjaković & Steinführer, 2024). The national and local diversity justified

the differences in selected approaches and relevant criteria in a national context, adapted to their local assets and understanding of rural and urban areas. Nevertheless, the analyses usually addressed the demographical, functional, or morphological structure of the observed areas, while some social relations are less transferable.

An important dimension of urban-rural distinction in many national definitions is functionality, measured by various indicators. The disparities between rural and urban addressed, to some extent, the differences in labor market outcomes, however, it is noticeable that there is a lack of studies that tackle this issue. It is the pronounced causality between the share of the population living and working in rural areas and the country's development level (Ananian & Dellaferrera, 2024). Functional disparities between rural and urban areas reflect differences in labor market features in terms of employment and labor incomes, which usually imply possible disadvantages faced by people living in rural areas. The insight into the labor market's spatial dimension shows the significant urban-rural discrepancies in terms of occupational diversity, job stability, job seasonality, commuting patterns, and annual income (Fuguitt, 1991; MacDonald & Peters, 1996). Many developing countries record lower unemployment rates in rural areas resulting from the higher incidence of poverty, job instability, or the lack of financial support that forces the rural population to engage in any available job regardless of its quality (ILO, 2013).

The assessment of urban-rural gaps in labor force participation could lead to a deeper understanding of the urban-rural divide. It should be based on a functional basis by taking into account the specific socio-demographic characteristics of people living in these two types of areas, like labor force participation and unemployment that could highlight to some extent the rural-urban divide in the labor market outcomes, but supplemented with other features including, gender, age, and educational attainment (Kabeer 1996; Chatterjee, Murgai & Rama, 2015; Ananian & Dellaferrera, 2024).

Many studies highlight the difference between developed and underdeveloped societies/countries based on gender and their role in the labor market and shifting to paid work (Dixon, 1982; Godlin, 1995; Ferrant & Thim, 2019; Majid & Siegmann, 2021; Heath et al., 2024). The least and most developed countries have the highest levels of female labor force participation (FLFP) and, contrary, countries with intermediate development levels have the lowest (González & Viridis, 2021). Strongly service-oriented economies create more favorable conditions for increasing (FLFP), while monostructural economies oriented toward heavy industries, agriculture, etc., led to a marginalization of women's economic activity. However, as González & Viridis (2021) stated, the relationship between the FLFP and economic development is complex and multidimensional. Recent findings indicate that FLFP is not solely attributed to economic growth, but is determined by non-economic country-specific characteristics, e.g., religion, language, culture, social attitudes or moral norms, level of education, human capital, number of children, social or other unquantifiable factors (Lechman & Kaur, 2015; Klasen et al., 2020; González & Viridis, 2021; Card & Hyslop, 2021; Jayachandran, 2021; Heath et al., 2024). There is a difference between women's activity and job engagement in urban-rural areas. General concentration or "crowding" of women into fewer occupations (consumers, services) of lower decision-making status is often found in rural areas due to a smaller number of employment opportunities, as well as limited access to education and training (MacDonald & Peters, 1996; ILO, 2013; Korotayev et al., 2014; Lari et al., 2022; ILO, 2023). Women are more likely to be economically inactive if they are more than 30 years old, less educated, and live in rural areas (Kadić Abaz & Hadžić, 2020). Recent studies indicate the rural gender pay gap, which is affected by "selective" FLFP, especially in developing countries (Ananian & Dellaferrera, 2024). On the other hand, urban environments offer more opportunities for women's employment, which is strongly determined by preconditions expressed through individual characteristics such as age, health, and education, as well as family-cultural orientations associated with a specific economic (service) structure (MacDonald & Peters, 1996; Jensen, 2017; Lari et al., 2022). As some studies showed, women's decision to work negatively correlates with household income (Hafeez & Ahmad, 2002; Klasen & Pieters, 2012). In a low-income household, women participate in the labor force to increase their income (Tsani et al., 2012), while, in high-income households, women can afford to be economically inactive (Kapsos et al., 2014).

Gender-related rural-urban discrepancies are evident in terms of labor force participation, (un)employment gap and job opportunities, socio-demographic features, and their effects on labor market outcomes. Globally, in 2022, the FLFP rate was 47.4%, compared to 72.3% for men, which pointed out that for every economically inactive man, there are two such women (ILO, 2023). The most recent EU statistics indicate that the employment gender gap is slowly decreasing (by 0.1%) due to a faster increase in the women's employment rate in most of the EU countries (Eurostat, 2024a). However, in 2023, the lowest gap was reported in Finland, Lithuania, and Estonia, and the highest gap was recorded in Romania, Italy, and Greece, which is conditioned by the lower participation of women in the labor market (Eurostat, 2023). Most EU Member States recorded that women with higher education prevailed in rural areas (Eurostat, 2024b), however, with unfavorable labor market outcomes. In 2021, the employment gender gap in rural areas was 12.3%, higher than in the total population (Eurostat, 2024c), and expressed significant fluctuation due to inconsistency in the women's employment rate.

Rural-based FLFP rates have risen faster than those of urban women over the past decades, however, rural women still record higher unemployment rates (Lichter, 1989). Some common patterns regarding rural women's labor force have been identified: i) women's jobs are distributed more evenly across space and branches (Godlin, 1995; MacDonald & Peters, 1996); ii) women are more likely to find employment closer to home due to family-related reasons (MacDonald & Peters, 1996; ILO, 2013; ILO, 2023); iii) women's transitions to unemployment are associated with more traditional gender-role attitudes (Reichelt, Makovi, & Sargsyan, 2021); iv) traditional family roles are associated with lower women's economic activity (Godlin, 1995; Hakim, 2000), iv) relative women's inactivity in rural areas, since they are actively included in housework, and unpaid domestic production (Dixon, 1982; Leschke & Jepsen, 2009; Craig & Churchill, 2020). Previous research indicates a U-shape of FLFP which is in line with economic development degrees (Durant, 1975; Schultz, 1988; Goldin, 1995). However, their role in developed and developing countries differ since it is a country-specific issue (Heath et al., 2024). The lower employment rates for rural women were detected in 19 of the 27 EU Member States, including all of the eastern and Baltic Member States; while the developed countries (Sweden, Finland, the Netherlands, France, Austria, Germany, Belgium, and Malta) expressed higher female employment rates than average (Eurostat, 2024c). The high level of women's inclusiveness in employment in developed societies is driven by an increase in women's education, a structural change and emancipation, which induced a women's decrease in routine housework and a shift toward paid work (Godlin, 1995; Ferrant & Thim, 2019). In developing countries and underdeveloped societies, it has been determined by the necessity of additional family income predominantly from family farms and enterprises (Bhalotra & Umana-Aponte, 2010), and burden with cultural norms, social practice, and sometimes religious beliefs (Marcus & Haprer, 2015; Besamusca et al., 2015). Most of all, as Korotayev et al. (2014) claimed, a woman's decision to join the labor force is the result of a joint decision-making process in her household.

In this regard, the central premise of this research underpins the relationship between FLFP and their role in the local labor market with development degree and type of area (Godlin, 1995; Jensen, 2017; Ananian & DellaFerrera, 2024). The women's role in the development and balanced structure of the labor force refers to the gender issue within the labor force and could be seen as an important aspect of urban-rural differentiation. There is a large share of women who are not actively working, which could be seen as labor force reserves, especially in traditionalist, patriarchal societies and rural areas (Leschke & Jepsen, 2009). It makes women a vulnerable category and a neglected segment of society in countries with such a tradition (Fortin, 2005; Spierings et al., 2010; Karshenas & Moghadam, 2021). On the other hand, modern capitalist countries and urban societies treat women as the most powerful drivers of economic growth, given their good education and increasing employment, which directly affect the increase in GDP (Fortin, 2005; Savić & Mihajlović Mihić, 2010; Tsani et al., 2012; Nikolić & Petovar, 2015; Mulugeta, & Tajani, 2021). Likewise, female entrepreneurs represent the fastest-growing category of entrepreneurship worldwide, especially in recent years, where women have a significant contribution (Hechevarría et al., 2019; Cardella, Hernández-Sánchez & Sánchez-García, 2020).

This study strives to establish urban-rural differentiation of municipalities based on women's role in the labor market and socio-demographic characteristics of the female labor force determined by the degree of local development and cultural norms. It is a novel approach to urban-rural distinction in

Serbia. So far, official delimitation of rural areas in Serbia has been conducted at the district level (GRS, 2010; 2011), with huge generalization, and at the settlement level in several studies (Pantić, 2016; Drobnjaković, 2019), but still there is a disagreement. However, rural municipalities were rarely researched. The differentiation of urban and rural municipalities was based on several common indicators (Bogdanov, Meredith, & Efstratoglou, 2008; Njegovan, Pejanović, & Petrović, 2008; Martinović & Ratkaj, 2015; Gajić, Krunic, & Protić, 2018), which partially reflect the functional and social features of these local entities. This study emphasizes the women's role in the local labor market beyond existing gender stereotypes, intending to differentiate municipalities where women represent an important resource of development, inherent to postmodern and developed societies, which could be identified as 'more urban', or municipalities where women are a vulnerable category like in traditionalist (underdeveloped) societies, which could be characterized as 'more rural'.

2. Methods and data

This research is based on a set of selected methods that try to establish and describe the role of the women's labor force in the labor market, with a particular emphasis on the unemployed female contingent and its characteristics. In this regard, a set of indicators was selected to analyze the position of women in the labor market and their spatial mapping at the municipality level. For this purpose, indicators were selected based on available data sources, which provide insight into the structure of the workforce at the local level and a detailed representation of the characteristics of women in the category of unemployed. Ten relevant indicators were identified, of which three are general indicators, calculated based on the latest valid data (SORS, 2020a) on the labor market before the changes initiated by the COVID-19 pandemic. The general ones indicate a trend in terms of population changes, with limited and indirect impact on women's labor force development and utilization, while the other seven are specific ones:

- 1) The female working-age contingent (FWAC) represents a reservoir for the labor force, expressed by the demographic size of the contingent. For this research, the observed WAC encompasses all persons aged between 15 and 65 years, despite the differences among countries (OECD, 2021; Ghio, Natale & Goujon 2021; Drobnjaković et al., 2022).
- 2) The fertility rate, as an indicator that provides insight into long-term demographic changes, is the basis for the labor force formation, and numerous studies from both developed and developing countries indicate the relationship between women's labor supply and fertility (Anić, 2019).
- 3) The average woman's age, as a general indicator.

The remaining seven indicators were used for a deeper analysis of the unemployed women's contingent features:

- 4) The women's unemployment rate (WUNR), directly indicates gender inequality in the labor force, labor force underutilization, and the inability of an economy to generate employment. The unemployed women at the municipality level are represented by working-age persons who are: a) without work during the reference period; b) currently available for work, i.e., were available for paid employment or self-employment during the reference period; and c) seeking paid employment or self-employment (ILO, 2013);
- 5) The young women's unemployment rate (YWUNR), indicates the degree of the labor market development and utilization of young women within the labor force. It was calculated as the share of the female population aged 15 to 34 registered in the unemployment register of the National Employment Service in the total number of women of the same age;
- 6) The older women's unemployment rate (OWUNR) is another specific indicator that enables a deeper analysis of the age structure of unemployed women. It served as a benchmark for women's adaptability in the labor market and indirectly measured the flexibility of the local economies for the qualifications of older workers. It was calculated as a share of unemployed

women aged 55–65, represented by labor force exit cohorts in the total female population of a given age (Aiyar, Ebeke & Shao 2016; Ghio, Natale & Goujon 2021; Drobnjaković et al., 2022);

- 7) Highly educated unemployed women (HEUNW), indicate the significant potential of the labor force and development degree of society (Leschke & Jepsen, 2009; Savić & Mihajlović Mihić, 2010; Jokić, Dželebdžić, & Petovar, 2015). It is calculated as the share of unemployed women with a high educational attainment in total unemployed women. It aims to provide insights into the human capital dimension of unemployment with potential implications for both employment and education policy (ILO, 2013).
- 8) The long-term unemployment of women (LTUNW) is a specific indicator that enables recognition of particular problems within local economies and the labor market, such as a monofunctional and inflexible economic system, the local development, the labor market absorbing capacities, etc. It pointed out the coexistence and mismatching of the unemployed and existing job vacancies. One year (12 months) of unemployment was taken as the threshold for long-term unemployment (Hay, 2002; EU Commission, 2005; RASP, 2011). This type of unemployment will persist beyond the processes that hide it (e.g., emigration) (ILO, 2013).
- 9) Newly registered unemployed women (NRUNW) show the possibility of young women's inclusion into the labor market. It was calculated by the share of newly registered women in the unemployment register (National Employment Service) in total unemployed women;
- 10) The women's inactivity (WINA) represents a significant indicator related to women's role in the local labor market. In some areas, especially traditional ones, the WUN is not a relevant indicator due to the low inclusion and motivation of women in the working process. Most of them declare themselves as inactive persons, and in that way disrupt the analysis of unemployment (SORS, 2020b). In this research, two categories of inactive women were selected as potential participants in the labor market – housewives and women with income derived from renting property.

After the selection of relevant indicators, the correlation within the variable set was examined. This was performed using the correlation test, where individual variables showed a different degree of linear correlation within the variable set, measured by Pearson's coefficient. The assessment of the correction of the selected variables was primarily performed. The general variables, Fertility rate, and Average women's age, showed a significant correlation, while the correlation with the other variables in the observed variable set was not statistically significant. The mentioned general variables do not show a significant correlation with other variables. The correlation coefficient of moderate values is recorded only between them and with the FWAC, which is also a general indicator, but already profiled towards the targeted group. These two variables are excluded from further analysis. However, the variable related to reproductive norms and patterns of the female population was used for additional explanations and monitoring of changes within identified groups of municipalities, since it is affected by cultural norms and religious beliefs. Other variables were further structured according to the needs of the research, referring to some of the specific characteristics of the studied population group.

Tab 1. Representative relations between variables. Source: elaborated by authors

Variable I	Variable II	Pearson correlation coefficient
YWUN (up to 34)	OWUN (55–64)	0.872
FWAC	HEUNW	0.770
NRUNW	YWUN (up to 34)	-0.769
NRUNW	OWUN (55–64)	-0.753
WINA	HEUNW	-0.757

In the group of specific indicators, variables representing the unused part of the women labor force (unemployed women, share of inactive women) and their characteristics (by age – rates of young and old unemployed women; level of qualifications – the HEUNW; structure of the employed according to length of job search – the NRUNW and the LTUNW). Among the variables of this type, more significant relations were observed, with higher values of the correlation coefficient. The highest values were recorded among the variables indicating unemployment (Table 1). Also, statistically significant correlation values were observed within variables that depict similar tendencies in the labor market (Women in the WAC, The unemployed old women rate). On the other hand, the variable Long-term unemployment expresses a weak linear correlation in the set of variables, but based on domain knowledge, it was retained in further analysis to indicate the specificity of the problems to which local labor markets are exposed.

The methodology is supported by census data, which provides comprehensive information on the structure and changes of the labor force in a longer time series. This research is based on overlapping data sets from various sources, to provide an overall insight into the characteristics, development, and utilization of the labor force in Serbia. The used data sets are:

- General data on the labor force contingent (Statistical Office of the Republic of Serbia – SORS);
- Data on employment (source: SORS; National Employment Service – NES);
- Data on job offers (source: National Employment Service – NES);
- Administrative borders of the Republic of Serbia (source: Republic Geodetic Authority).

The research embedded 165 municipalities. Four municipalities were additionally excluded from the analysis, two municipalities due to unavailability of the official data, caused by recent administrative changes, and the other two from the territory of the East and South Serbia Region due to incomplete official data. The city of Belgrade is observed through 17 urban municipalities. Kosovo and Metohija Region were excluded from the analysis due to the complete unavailability of official data. To establish the basic spatial patterns of women's characteristics in the labor market, municipalities were grouped by cluster analysis, a non-hierarchical grouping method, using Ward's method. The analysis was performed in SPSS and visualized by QGIS 3.16.5.

3. Results

3.1 Women in the Serbian labor market – an overview

The tendency of labor force reduction in Serbia was reflected in the gender structure, with different dynamics, and gradually reduced the gender gap. The decline in the labor force was recorded already after 1981 (Kokotović Kanazir, Panić & Drobnjaković, 2024a), among women particularly after 1991 (Radivojević, 2015). The distribution of the labor force by gender is quite even, with a slight advantage of the female population at 50.02% female compared to 49.97% of the male population in 2019 (SORS, 2020a; Kokotović Kanazir, Panić & Drobnjaković, 2024b).

Women's participation is evenly distributed among municipalities in Serbia (Figure 1). Only 13 municipalities of highly urbanized centers (capital and regional centers) recorded a significant share of women in the labor force, while 20 municipalities with predominantly agrarian orientation, small by population size, or demographically endangered expressed lower women's participation. This distribution pointed out the greater mobility of women, the pronounced education trend, and the abandonment of agriculture, with which they tend towards larger urban centers. This was reflected in slightly higher participation of the female population in the older cohorts of the labor force (Figure 2), while the share of the young labor force was evenly distributed.

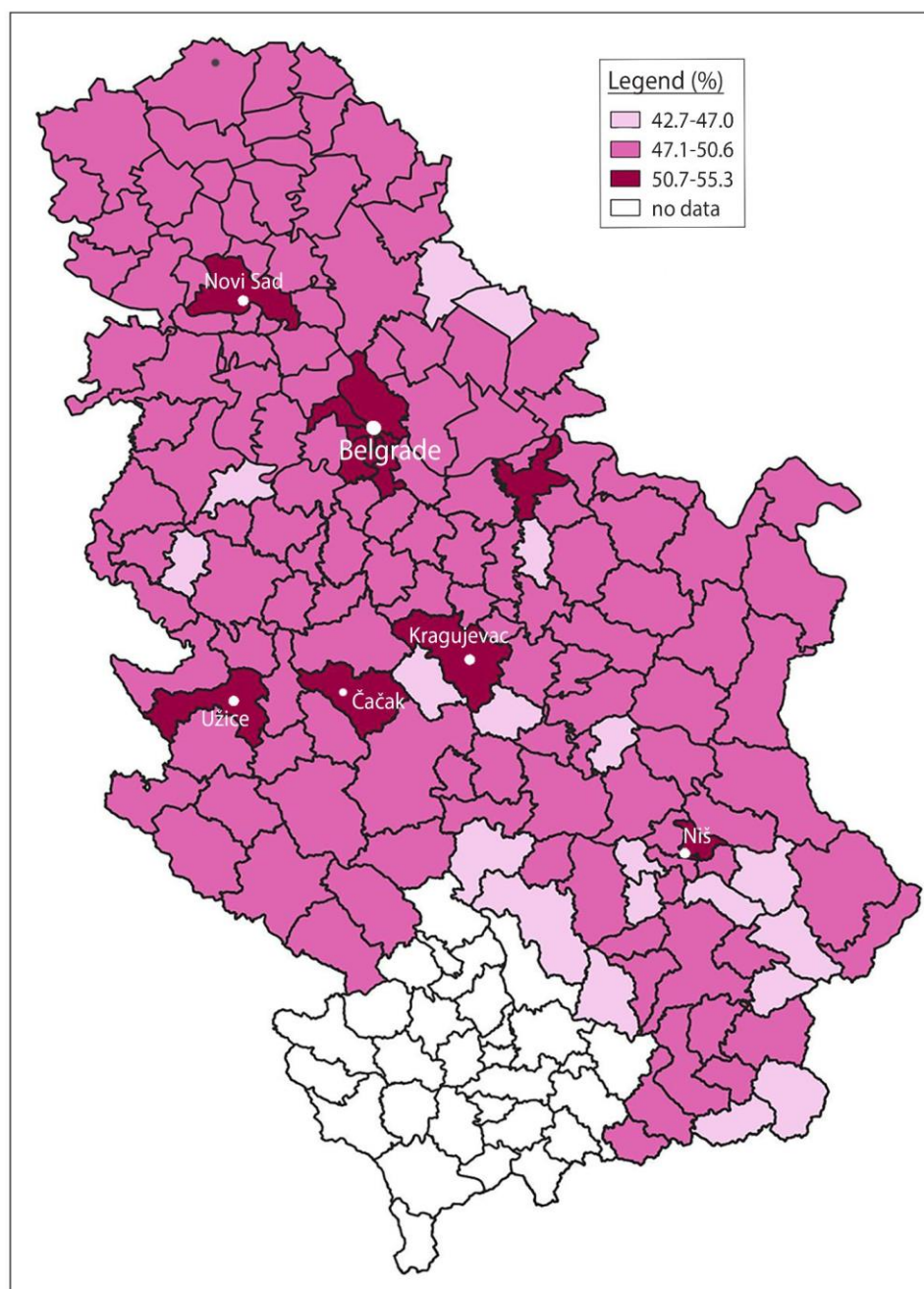


Fig 1. Share of women in labor force contingent, 2019. Source: own elaboration

There is still record of a gender difference in terms of economic parameters, in favor of the male population. The participation of women in the employed contingent is 45.9%, while men were 54.1% in 2019 (SORS, 2020b) and this difference is more pronounced among young people. The activity rate for women increases with age, which is related to their length of education. The highest activity rate is recorded among highly educated women, while low-qualified are less active. Women are concentrated in a smaller number of occupations, mostly the service sector (white-collar), agriculture, experts, artists, and the group engineers and technicians, associated with the growing informal sector of employment (Pantović, Bradaš, & Petovar, 2017; NES, 2019).

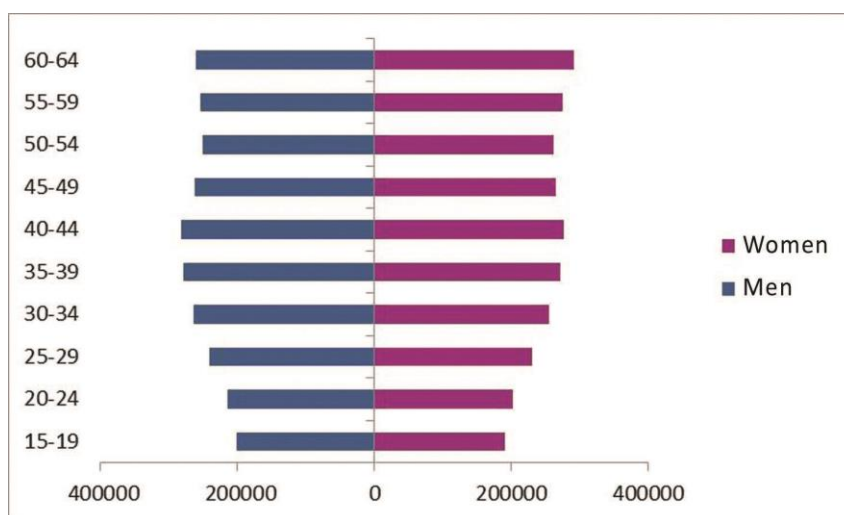


Fig 2. Age pyramid of the labor force by gender, 2019. Source: SORS, 2020b

In terms of unemployment, the gender imbalance is evident (Figure 3). It was recorded that the lower WUNR in the older cohorts was due to opting for inactive status and engagement in household work, as well as in the youngest cohorts, which is caused by education attention (NES, 2019).

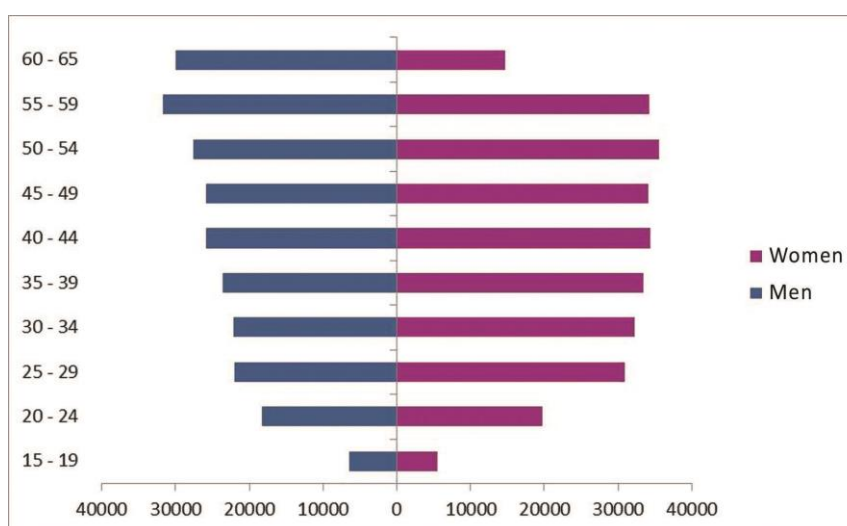


Fig 3. Age pyramid of the unemployed by gender, 2019. Source: NES, 2019

According to educational attainment, the structure of the unemployed women is unfavorable. Approximately 18% of unemployed women are highly educated and 50% have finished high school, which indicates a low utilization of women's labor force (NES, 2019). Better-qualified women tend not to be employed more easily (Figure 4), which implies the significance of other factors for their position in the labor market. Analysis of the education profile and unemployment of women indicates that the highest rates are in the textile industry, health sector, and social protection, as well as education (NES, 2019).

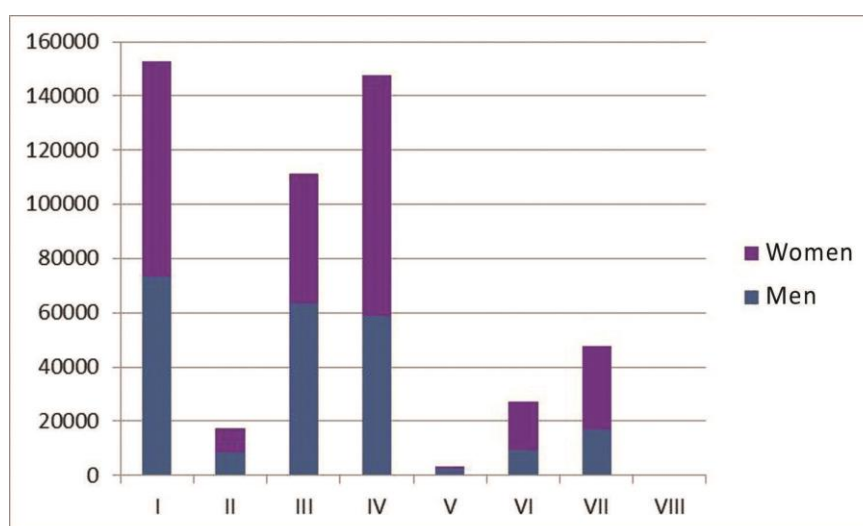


Fig 4. Unemployed population by level of education and gender. Source: NES, 2019

3.2 Typology of municipality beyond women's role in labor market

To provide a differentiation between urban and rural areas beyond the women's role in labor and the utilization degree of the women's labor force, the typology at the municipality level has been conducted. Five clusters are identified:

Cluster 1 – The most favorable cluster in terms of the position of women in the labor market and their characteristics, encompasses 17 municipalities (Figure 5). This cluster includes mainly municipalities recognized as urban, as well as those in their surroundings. Generally, they are characterized by high FLFP, as well as the highest WUNR, due to a large labor supply that the labor market has not yet absorbed. However, in this type, the lowest WINA is recorded, which implies that in these municipalities, the awareness of women's participation in economic and social life is significantly high compared to other clusters. These municipalities recorded a higher share of women who immigrated to urban areas. However, in some municipalities within the cluster, it has been noticed a significant participation of inactive women, but they are well-qualified (34.3% with high education).

The age structure of unemployed women in the observed cluster is also favorable. The unemployment rate of young women (6.98%) and older women (6.90%) is very low. Regarding the categorization of women according to the unemployment duration, high values of both observed parameters are noticeable (Table 2). Municipalities in this cluster have the most significant number of the NRUNW (22.3%), which is justified considering that cluster 1 encompasses municipalities that represent large work centers with a significant influx of population. Also, there are 60.3% women who are unemployed for a long time, which could be considered as very high. One of the crucial reasons could be seen in the fictitious unemployment (gray economy zone), which is particularly visible in large centers.

Cluster 2 – The municipalities in this cluster could be categorized as conditionally favorable. It consists of 25 cities and municipalities (Figure 5), of which 10 are regional centers or municipalities with a developed economy and positive development impulses. This cluster has the highest share of women in the labor force (Table 2). According to the unemployment rate, it could be considered that women are in a subordinate position compared to men in the labor force (53.7%). The most developed cities and municipalities record the highest share of unemployed women. The WINA is less pronounced. However, demographically weakened and less developed municipalities within this cluster have a smaller contingent of unemployed women, however, at the same time, a larger contingent of inactive women (32.65%).

The characteristics of unemployed women are conditionally favorable. Some municipalities have a more pronounced problem with the employment of young people (15.70%) as well as older women (11.53%), as a consequence of the inflexibility of the labor market and the failure of the economy to respond to the needs of the newly entered labor force nor to absorb the surplus of the existing one that has been

present on the labor market for a long time (65.78%). This group of municipalities is characterized by favorable qualifications of unemployed women that represent a significant potential for local development (Table 2). In general, municipalities of this cluster could be characterized as highly urbanized.

Tab 2. Features of identified clusters (average value of variables). Source: own elaboration

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
FWAC	51.71	49.23	48.29	48.57	47.04
WUNR	58.74	53.72	54.15	53.2	49.6
The fertility rate, 2019	1.47	1.42	1.37	1.49	1.66
YWUNR (up to 34)	6.98	15.7	10.6	13.31	22.86
OWUNR (55–64)	6.9	11.53	6.33	10.22	19.34
HEUNW	34.3	19.25	12.1	10.1	8.8
LTUNW	60.3	65.78	62.42	66.28	70.06
NRUNW	22.32	11.78	18.8	14.19	7.96
WINA	23.28	32.65	47.31	45.09	45.28

Cluster 3 – This cluster encompasses 23 municipalities of which some are small by population size, large mining areas, and some tourist destinations (Figure 5). These municipalities are characterized by significant FLFP, the dominance of women in the unemployed contingent, and the most inactive women among the identified clusters (Table 2). The municipalities with the most developed economies have the highest share of women in the labor force within this cluster. Regarding the WUNR, three groups of municipalities can be observed: 1) municipalities with mono-structurally oriented economy, with high women's unemployment and moderate to high inactivity of women; 2) demographically small municipalities with agriculture predominance, characterized by high women's unemployment and the pronounced WINA (over 50%); 3) diversified centers with moderate unemployment rate and the lower WINA.

In this cluster, the problems that hinder the greater involvement of women in the labor market are clearly visible. There are weak chances for employment due to the inherent economy's structure and the high determination of the female population for inactive status, which makes them an extremely vulnerable category. However, such a situation is opposite to the unemployment rate of young and older women (Table 2). The LTUNW is high, 62.42%. However, the share of the NRUNW in the labor market is somewhat higher, which indicates that this problem, in the longer term, could be of great importance for the development of the municipalities in this cluster. Regarding the qualifications of unemployed women, a certain variability is noticed within the group. Some of them recorded a pronounced share of the HEUNW (over 20%). At the same time, the weakest educational structure is registered in municipalities small by population size, with a dominant economic orientation towards agriculture or mining. Accordingly, this cluster encompasses municipalities with a mixture of urban and rural features.

Cluster 4 encompasses the largest number of municipalities (79), which are very diverse in terms of demographic composition, economic structure, and level of development (Figure 5). Generally, according to the participation in the local labor force, the male gender is dominant (Table 2). Women represent the majority of the unemployed contingent with a high share of unemployed women (53.20%). This leads to the conclusion that women are a very sensitive category in the labor market in these municipalities. Certain varieties have been identified among this cluster and the municipalities could be divided into:

- 1) developed economic centers with mainly mono functionally oriented inflexible economies, and municipalities that gravitate towards them, which are characterized by higher WUNR, the highest

share of the LTUNW, and a high unemployment rate of young women, but significantly higher qualified women registered on the labor market;

- 2) small by population size, less economically developed and rural-type municipalities in which, due to reduced opportunities for employment, the lower women unemployment rate is registered, but significantly higher inactivity, i.e., non-participation in the work process, with moderate to low values of the unemployment rate of older women, but a significant contingent of newly registered persons, with prevailing poor qualifications;
- 3) municipalities with moderately high values of unemployed women in more populated municipalities and more diversified economies, which are characterized by moderately high values of young people, as well as the LTUNW with a more favorable educational structure.

Accordingly, this cluster embedded the diverse municipalities with predominantly rural character.

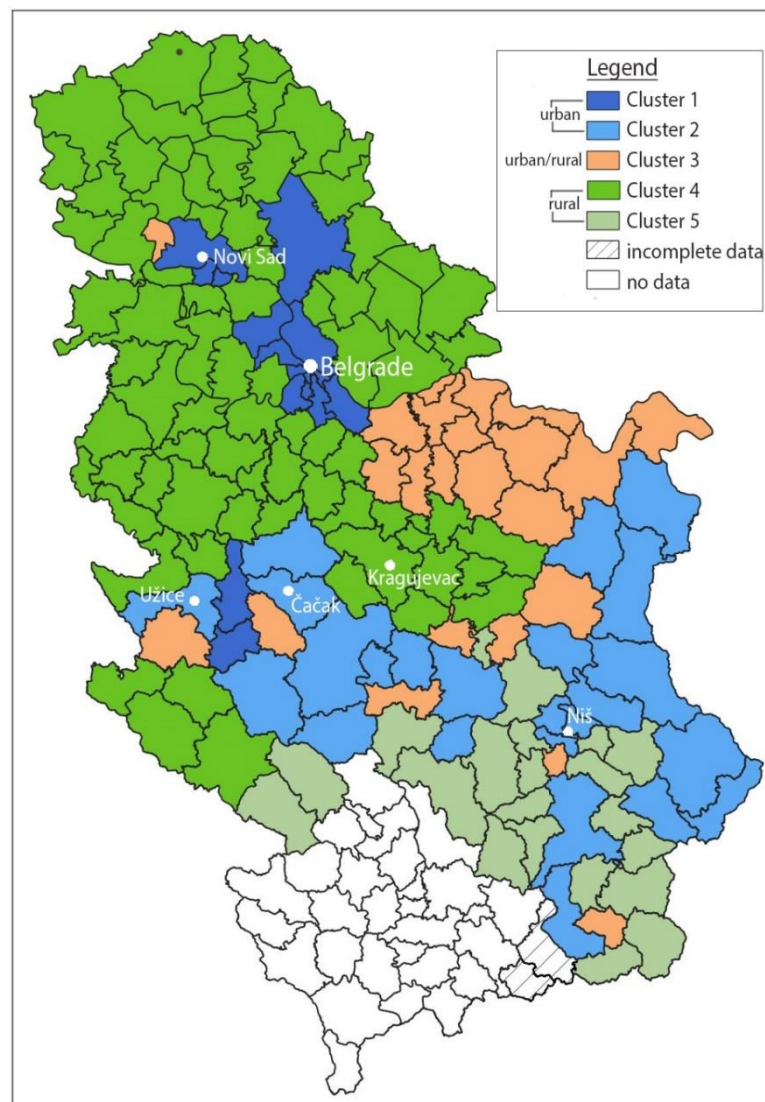


Fig 5. Typology of municipalities based on women's role in the labor market. Source: own elaboration

Cluster 5 encompasses 21 municipalities in Serbia (Figure 5), which were identified in previous studies and policies as demographically endangered or traditionally underdeveloped (Đorđević & Panić, 2007; Drobñaković et al., 2016; Panić et al., 2022). In this cluster, the lowest FLFP is recognized (47.04%), which is a consequence of continuous and intensive emigration and the disturbed population structure. These population changes reflect on the WUNR, which is the lowest in this cluster (49.60%) and strongly pronounced WINA (45.28%). In certain municipalities, the inactivity and weak involvement of women

in the labor market are a consequence of traditional cultural norms, religious beliefs, and social patterns that marginalize women. This phenomenon has been noticed in some municipalities, with a predominantly Islamic population, or in small underdeveloped municipalities, as well as in municipalities where those factors are intertwined.

This cluster has the highest unemployment rate of young (22.86%) and older women (19.34%), which indicates the structural problems that burden the development of these municipalities. In terms of the NRUNW in the labor market, small oscillations are observed, considering the unfavorable demographic tendencies. A similar situation is with the LTUNW since the existing economic system is not a suitable framework for absorbing the existing surplus on the labor market. This cluster has a very unfavorable educational structure for unemployed women (Table 2). Taking into consideration the cluster's features, the municipalities of this group could be characterized as passive rural.

4. Discussion

Previous research has emphasized that disparities between rural and urban areas are driven by differences in labor market characteristics, as well as the socio-demographic characteristics of the labor force in these two types of areas (Ananian & Dellaferrera, 2024). Combinations of (un)employment and labor incomes could explain the relative disadvantage faced by people living in rural areas, however, it should be supplemented with certain social factors that provide deeper insight into urban-rural gaps.

In light of achieving Sustainable Development Goal 8, which is promoting "sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" (United Nations, 2015), women's participation in the development process has received increasing attention. Various research provides considerable empirical evidence across countries indicating that gender equality, especially in education and employment, contributes to economic growth (Seguino, 2000; Majid & Siegmann, 2021; Klasen et al., 2020; González & Viridis, 2021) since the strengthening of countries on the global market and inclusion in modern development processes, rests on a highly educated and well-trained labor force (Jokić, Dželebdžić & Petovar, 2015; Lechman & Kaur, 2015; Lari et al., 2022; ILO, 2023). Empowering women economically could result in the mitigation of poverty not only for individual households but also for local communities (Mulugeta & Tajani, 2021).

In OECD countries, people with higher educational attainment are more likely to have a job (Ananian & Dellaferrera, 2024). However, the developmental impact on gender equality varies depending on the socioeconomic context and the specific features of the women's labor force (Kabeer, 1996; González & Viridis, 2021; Lari et al., 2022). Different societal models determine the extent and nature of women's position in the labor market and dictate employment opportunities (Fortin, 2005). Modern capitalist countries treat women as the most powerful drivers of economic growth (Savić & Mihajlović Mihić, 2010; Mulugeta, & Tajani, 2021), while in traditionalist societies, women who are not actively working could be considered as labor force reserves (Leschke & Jepsen, 2009). The premise of the conducted research is in line with the aforementioned arguments and strives to establish the urban-rural distinction based on women's role in the local labor market beyond the existing gender stereotypes.

The existing spatial inequalities in the territory of Serbia arose from intensive polarization and administrative centralization as the main causes, manifested through the economic imbalances and devastation, social exclusion and poverty, limited infrastructure accessibility and peripheralization, public-social marginalization, etc. (Drobnjaković, Panić & Đorđević, 2016; Drobnjaković & Panić, 2024). Serbia is an example of an urban-centric development with completely marginalized rural areas and continuously increasing gaps in living conditions, development prospects, and perspectives between urban and rural areas (Perišić, 1985; Petovar, 2003; Đorđević & Panić, 2007; Panić et al., 2022). In previous decades, attention has been focused on urban areas, while turbulent structural changes, interventions, and control of the development of rural areas have been neglected (Drobnjaković & Panić, 2024). Rural areas in Serbia are still struggling with various depressing preconditions for sustainable and effective development and have been drawn into a vicious circle of underdevelopment with limited capacities for change. Pressures on rural areas and rural communities have become increasingly pronounced over time, as well as

excessive expectations related to competitiveness in the labor market, and respect for the principles of building sustainable rural communities (Kokotović Kanazir, Panić & Drobnjaković, 2024a). Such effects were visible during the 80s of the XX century, manifested through demographic exodus, economic devastation, socio-cultural deprivation, and intensive changes in the labor market (Drobnjaković, 2019).

The gender equality index in Serbia is significantly below the EU average with the largest gap in the domain of the labor market and wages (Babović, 2016; Beker, Janjić & Čović, 2023). In Serbia, the traditional understanding of the role of women in society and the labor market is particularly related to the rural areas and implies several fundamental problems (Marenković & Palić, 2014; Nikolić & Petovar, 2015; Kadić Abaz & Hadžić, 2020) like (i) property insecurity, dependence, and subordination; (ii) weak prospects for employment outside the (agricultural) household due to low economic diversification in rural areas; (iii) cultural norms and societal prejudice against working women mediate the motivation and acceptability of their economic activity; (iv) weak institutional support; (v) poor quality of life. It is noticeable that rural women are completely marginalized as members of rural agricultural households with limited access to income, property, and decision-making (Božić, 2011; Pantović, Bradaš & Petovar, 2017; Bradaš, Petovar & Savić, 2018).

However, within the economic characteristics of the labor force in Serbia, a generally positive trend can be observed through the continuously decreasing unemployment and inactivity rates. A more significant reduction occurred in 2020 (9.5%), which is a consequence of the methodological nature and the impact of the pandemic, where a certain percentage of the unemployed was classified as inactive residents, 32.3% of which were registered (SORS, 2021). The inactivity rate is higher for the female labor force and distinct disbalance regarding employment in the non-agricultural sector and low engagement in rural entrepreneurship (Cvejić et al., 2010) with significant changes in the structure of female entrepreneurship toward the decline of the so-far dominant trade and catering, and increase in the sector of professional, scientific, innovation and technical activities (Beker, Janjić & Čović, 2023). However, the unemployment rates in rural areas are favorable compared to urban ones, which could be explained by the high rate of self-employment and engagement of the rural labor force on family farms, as well as due to liquidation of the dominant local industry that caused high unemployment (Cvejić et al., 2010; Jelić & Jovanović, 2015; Bradaš, Petovar & Savić, 2018; Beker, Janjić & Čović, 2023). The female labor force in rural Serbia is marginalized and rural women have been considered as one of the most vulnerable population groups regarding access to the labor market (Babović, 2010). Some important issues that explain this attitude are related to insufficient informal support, unadaptable operating rules of the local offices for employment to the capabilities of their rural users, underdeveloped non-agricultural sector and informal employment (Božić, 2011; Jelić, Jovanović, & Dragičević, 2020; Pudar Draško, Čeriman, & Resanović, 2016; Beker, Janjić & Čović, 2023).

The main finding of the conducted research pointed out the urban-rural discrepancies through the lens of features of the women's labor force. The five clusters were determined which led to the distinction of 42 urban (cluster 1 and cluster 2), 100 rural (cluster 4 and cluster 5), and 23 municipalities of mixed structure (cluster 3).

Municipalities recognized as urban are characterized by the high FLFP. There is a lower unemployment rate in general, and a specific one related to age structure (young and old unemployed women), but highly educated. Also, lower values are detected for women's inactivity. Previous research emphasized that women with better education experience decreased in routine housework and moved to paid work instead (Godlin, 1995; Ferrant & Thim, 2019; Ananian & Dellaferrera, 2024). Low unemployment rates confirm that developed and diversified national and local economies, particularly in the service sector, offer more employment possibilities to women (Lechman & Kaur, 2015), especially those with required education (Lari et al., 2022).

Municipalities recognized as rural are characterized by weak FLFP and lower unemployment rates. The reasons could be recognized in reduced opportunities for employment outside agriculture and low economic diversification in rural areas (Nikolić & Petovar, 2015; Žarković-Rakić & Vladislavljević, 2016; Bradaš, Petovar & Savić, 2018; Drobnjaković, 2019). Generally, traditional family roles are associated with lower female economic activity since shaping an environment in which women tend to reduce paid work

due to family responsibilities and household work (Arandarenko, Žarković-Rakić, & Vladislavljević, 2012; Kadić Abaz & Hadžić, 2020). Numerous studies, both foreign and Serbian, indicate that FLFP is highly determined by family responsibilities and particular number of children, limited availability of public services (health care, education, social care, preschool protection of children, specialized protection of particularly sensitive social groups, specialized activities such as free legal aid, etc.) (Baranowska-Rataj & Matysiak, 2016; Bradaš, Petovar & Savić, 2018; Anić, 2019; Beker, Janjić & Čović, 2023). Also, this situation usually causes permanent migration of young women from rural areas (Bradaš, Petovar & Savić, 2018). The majority of unemployed women are low-qualified, which is generally explained as a consequence of low economic development and limited access to education (Lechman & Kaur, 2015; Lari et al., 2022). Women's inactivity in rural municipalities is pronounced and related to informal employment, which was induced by job quality deficits in the rural labor market (Ananian & Dellaferrera, 2024). Like in other countries, it could be assumed that many inactive women stay invisible to national labor statistics (Dixon, 1982). Also, inactivity is related to specific cultural norms and religious beliefs, recognized in several municipalities within cluster 5, which foster restrictive gender roles and discourage joining the labor force (Psacharopoulos & Tzannatos, 1989; Clark et al., 1991; Besamusca et al., 2015; Karshenas and Moghadam, 2021; Drobnjaković et al., 2022; Kokotović Kanazir, Panić & Drobnjaković, 2024a). In that context, as Spierings et al. (2010) stated, women are primarily recognized as caregivers and not as potential employees.

Municipalities with mixed rural and urban features are characterized by moderate values of the observed indicators. These municipalities express high unemployment rates and inactivity of the women. It could be explained by the inflexibility of the labor market, which could not absorb the traditional profile workers who stayed unemployed after the collapse of mono-structurally oriented economies in the previous period (Drobnjaković et al., 2022; Kokotović Kanazir, Panić & Drobnjaković, 2024a).

5. Conclusion

This research sheds light on some social and functional patterns, recognized in different types of areas and indicates the necessity of a multilayered in-depth analysis of the existing differentiation between rural and urban municipalities in Serbia. Through the literature and various studies, this complex research question required different views and perspectives which spawned different approaches and methodologies. Accordingly, it was important to imply the place-based approach and conduct a comprehensive analysis, which allowed a deeper understanding of the urban-rural distinction. In this study, the research approach is based on the FLFP in Serbia. Women's role in the labor market, associated with different cultural norms and social factors, confirmed the attitudes towards heterogeneity and complexity of urban-rural spatial patterns, which could not be differentiated uniformly.

To objectively observe the determinants of the FLFP and understand how it reflects the urban-rural differentiation in Serbia, the main limitation is related to data availability and the impossibility of applying thorough longitudinal research. However, it is necessary to highlight that the provided data reflects the consequences of historical and traditional societal processes and cultural norms, which patterns show continuous spatial and temporal modification, especially in highly urban areas.

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