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SPATIAL AND SOCIAL DIMENSIONS OF ROMA SEGREGATION AND INTEGRATION (A CASE STUDY OF THE CITY OF KYUSTENDIL, BULGARIA)

Abstract: The paper presents the results of an empirical sociological study conducted in the Roma ghettoized urban structure of Kyustendil, Bulgaria. Based on the results of in-depth interviews with representatives of local authorities, educational mediators, informal Roma leaders and representatives of the Roma community living in the neighbourhood, the main socio-economic integration problems were established. Additionally, an analysis of the internal structure of the Roma neighbourhood has been performed, with the use of data obtained from aerial photography (UAV data). Since a significant part of the housing stock in Roma neighbourhoods is illegal, in most cases it is not correctly depicted on cadastral maps. Detailed maps of the current state of the Roma neighbourhood have been created, thus compensating for the lack of precise official data on the current state of the housing stock. GIS have been used to measure, analyze and visualize the spatial relationships, patterns and trends in the changes of the internal structure of the Roma neighbourhood in Kyustendil.

Keywords: Roma neighbourhood; survey; segregation; integration; UAV data.

Introduction

The EU policies on territorial cohesion place an emphasis on building more homogeneous cities in social-demographic terms. The European Commission Report “The future of cities...”¹ supports the view that European cities should

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¹ **European Commission.** *The Future of Cities: Opportunities, Challenges, and the Way Forward*, 2019, ISBN 978-92-76-03847-4, ISSN 1831-9424 [online] [Accessed: 31 September 2023]. <https://doi.org/10.2760/375209>

become places of social progress, which develop towards “social cohesion, balance and integration... in order to reduce differences between neighbourhoods and achieve a low degree of spatial segregation and social marginalization.” One of the main challenges modern cities face is the increasing polarization of urban space. In recent years, there has been an increase of the Roma population in Bulgaria, whose number can be estimated at around 750 thousand² despite the official census data. More than half of all Roma in Bulgaria live in urban settlements (cities/towns), exhibiting a trend of continuous increase in number, accompanied by negative growth rates of the ethnic Bulgarian population, thus resulting in an increase not only in the number, but also in the relative share of Roma in Bulgarian urban settlements. Against the background of intensifying processes of urban shrinkage, unregulated expansion is observed in Roma neighbourhoods, which leads to growing socio-spatial inequalities. Duncan and Lieberman³ demonstrated the inverse relationship between spatial segregation and integration of ethnic groups based on their spatial location in urban areas. Many scholars⁴⁻⁵ maintain the opinion that patterns of spatial segregation are indicative of integration processes, and the concentration of a population of low social status reduces their chances of upward social mobility. Haussermann⁶ defines segregation as “the projection of a social structure onto space,” while according to Francini⁷, the formation of “ethnic enclaves” can hinder the social, cultural, and spatial integrity of the city.

² **Ilieva, N., and Kazakov, B.** Projection of the Roma Population in Bulgaria (2020–2050). – In: *Proceedings of 5th Jubilee International Scientific Conference “GEOBALCANICA 2019,”* 13–14 June 2019, Sofia, Bulgaria, ISSN: 1857-7636, pp. 271–280. [online] [Accessed: 12 October 2023]. Available at <http://dx.doi.org/10.18509/GBP.2019.35>

³ **Duncan, O., and Lieberman, S.** Ethnic Segregation, and Assimilation. *American Journal of Sociology*, vol. 64, 1959, pp. 364–374.

⁴ **Peach, C.** *Urban Social Segregation*. London: Longman, 1975, 444 pp.

⁵ **Massey, S., and Denton, N.** The Dimensions of Residential Segregation. *Social Forces*, vol. 67(3), 1988, pp. 281–315.

⁶ **Haussermann, H.** The End of the European City? *European Review*, vol. 13(2), 2005, pp. 237–249.

⁷ **Francini, Ch.** *Segregation Policies in Sweden & Italy* (Master’s Thesis), 2013, 40 pp. [online] [Accessed: 21 October 2023]. Available at <https://www.diva-portal.org/smash/get/diva2:832901/FULLTEXT01.pdf>

In the countries of Central and Eastern Europe, the concept of *ghetto* is often explicitly associated with the Roma population. Mionel and Negut⁸ associate the term *ghetto* with the spatial concentration and ethnic homogeneity of the Roma population in a given territory. Residents of such areas are somehow forced to live there mainly due to a lack of income and a low level of education and professional qualification. In Romania, for example, these areas are most often associated with the so-called “pockets of poverty” (slums) and with social exclusion in the urban space, often referred to as ghettos or slums. In the academic discourse in Czechia, on the other hand, the term *socially excluded locality* is used to refer to segregated areas where marginalized groups of the population live. This term is quite vague and can refer to a different spatial scope – a home, a street, a neighbourhood in a given urban or even rural area with varying degrees of spatial segregation⁹. According to Mionel and Negut¹⁰ the process of *ghettoization* is related to the formation of a closed physical, social and marginal space in an urban area, featured by a concentration of ethnic, racial, or other minorities, as a result of poverty or other social constraints.

In this study, the term *ghettoized urban structure* (GUS) is used, introduced by Asenov¹¹ and described as a separate ghetto-like urban area, most often with fixed boundaries, characterized by: a) poor, missing or unregulated street, housing, electric, social, etc. infrastructure; b) a population primarily characterized by ethnic, racial, social, cultural, or other characteristics. Wherever they exist, GUSs are an integral part of the urban space and play an essential role in the overall functioning of the city. Their distinctive feature are the accumulated interrelated problems of an economic, social, town planning, and ecological nature.

⁸ Mionel, V., and Negut, S. The Socio-Spatial Dimension of the Bucharest Ghettos. *Transylvanian Review of Administrative Sciences*, vol. 33, 2011, pp. 197–217.

⁹ Toušek, L. *Purification of Space: Spatial Segregation of the Roma in the Czech Republic*, 2011. [online] [Accessed: 7 October 2023]. Available at <https://www.academia.edu/428790/>

¹⁰ Mionel, V., and Negut, S. The Socio-Spatial Dimension of the Bucharest Ghettos. *Transylvanian Review of Administrative Sciences*, vol. 33, 2011, pp. 197–217.

¹¹ Асенов, К. *Антропология на „гетото“ – пространство и култура*. Пловдив: Студио 18, 2018, 346 с.

When delineating GUSs, various in nature criteria are adopted, such as ethno-cultural, socio-economic, infrastructural, etc. Very often, these urban structures are located near industrial sites/zones and/or in urban areas exhibiting long-term negative trends in their socio-economic development, with an increased degree of environmental risks, etc. The territorial scope of a GUS varies widely and may cover several neighbourhoods, one neighbourhood, part of it, or just a group of residential buildings. Over the last two decades, there has been a significant expansion of the existing GUSs, along with the emergence of new ones.

GUSs, with their inherent characteristics, have an impact on the development of the city. This impact can be explained by the territorial scope of the area in which they are located, by its strategic and functional importance, or by how it develops over time. The characteristics of GUSs in cities vary widely in terms of location in the spatial structure of the city, form of land ownership, level of social and ethnic homogeneity, level and nature of housing problems. The location of the ghettoized neighbourhood determines the degree of segregation, often not only physically but also socially. Ghettoized urban structures form a homogeneous area with a certain stereotype of behaviour of its inhabitants. Moreover, the residents of these structures are largely alike in terms of their social status and financial potential.

GUSs can be located: 1) outside the main urban structure (outside the building boundaries of the city) – these are the most isolated GUSs, almost completely excluded from the “life” of the city; 2) in the inner (central) part of the city; or 3) in the periphery of the city. In some cases, GUSs occupy a significant part of the urban space, thus representing a functional barrier in the cities’ development, exhibiting multifaceted and interrelated problems. GUSs initially emerged because of the need of their inhabitants to occupy a given space (although a GUS may have initially been formed as a result of a certain resolution by local authorities, and not of the natural desire of the community, the GUS may develop as an independent urban spatial unit).

In terms of *urban planning characteristics*, GUSs are characterized by dense construction, poor housing stock quality, overcrowdedness, lack of sufficient living space, high share of illegal housing, limited or no sewerage, deteriorated living conditions, etc. From the point of view of urban development and planning, GUSs are areas of urban design deficiencies, such as a lack of nearby recreational areas, cultural and other infrastructure.

In terms of *socio-demographic characteristics*, the residents of a GUS are distinguished by better reproduction characteristics (natural increase rate, age structure, etc.) compared to the surrounding ethnic majority, higher levels of infant mortality, unemployment, poverty, morbidity, disability, crime, employment in the gray economy, higher share of school dropouts, low level of education and professional qualification, marginalization, and general social exclusion.

From an *ecological point of view*, GUSs are characterized by high levels of pollution as they are often located near industrial areas, while their residents generally have a lower hygiene culture. High building density implies a lack of green and open spaces, which also has a negative impact on the qualities of the living microenvironment.

Materials and Methods

Obtaining spatial information about GUSs and integrating it with other data is essential in terms of assessing their status, and designing measures for improvement of the overall conditions, implementation of greater control and prevention of their future chaotic growth. The growth of Roma GUSs very often remains “invisible” to the surrounding ethnic majority, considering that most of the buildings are illegal and built on both municipal and private properties. The availability of spatial and attributive data would facilitate the implementation of policies for a gradual spatial integration of the GUSs. The identification, mapping, and monitoring of slums in general can be divided into five approaches:

1. Approach based on *population census data* (demographic, infrastructural, socio-economic, etc.). One of the serious shortcomings of Bulgarian statistics is the lack of data on these processes at the lowest territorial levels. This significant drawback forces scientists who study the formation and development of Roma GUSs to resort to the search for alternative approaches, described below.

2. Approach to data collection, based on the application of two methods: *qualitative* (focus groups, in-depth interviews, expert interviews, etc.) and *quantitative* (surveys). For the purposes of this study, standardized interviews were conducted in April 2023 with representatives of local authorities, health and educational mediators, architects, residents, etc., based on questions related to the population number and dynamics, migration processes, religious affiliation of the residents, education, employment, migration, etc.

3. Mapping of the Roma GUS through the application of *remote sensing methods using unmanned aerial vehicles (UAV), high-resolution satellite photos, and orthophoto images*. In this study, the database available as online resources of the ArcGis 10.3 “World Imagery” have been used. When tracking the dynamics of the Roma GUS, data from Google Earth Pro have been used as well, which made it possible to follow the dynamics in the studied urban structure over the last 10–15 years using the provided ArcGis tools. Data from cadastral plans have also been used to fill in some attributive data, although the cadastral information is incomplete (a large portion of the housing stock in the Roma GUS is not depicted in cadastral plans). This study proposes a methodology for analysis of the internal structure of Roma GUSs by using different time data obtained from UAV aerial photography and the subsequent processing of the obtained images, thus compensating for the lack of information about the current state of the housing stock in such urban structures. Field photography was carried out from a height of 90–120 m with the use of precision instruments for capturing and registering images in the visible spectrum. Through subsequent processing of the data obtained from the UAV recordings, and via the application of appropriate methods, detailed maps of the

current state of the research objects were obtained – their outlines, height, density, area, etc.

4. Field-based mapping and visual interpretation of slums using satellite imagery. Visual interpretation has been used to extract information about the dynamics of Roma GUSs from VHR images. Informal urban structures are mostly recognized in the images as more compact areas, with little or no open spaces, a specific morphological structure exhibiting heterogeneity and a lack of clearly defined geometry of the main technical infrastructure, etc.

5. Remote sensing and machine learning classification based on satellite imagery (this approach is the subject of future research and publications).

Results

Population in the Roma GUS of Kyustendil

The process of depopulation, characteristic of Bulgaria, affects the Municipality of Kyustendil as well, but with much higher rates of decrease: during the period 2001–2021, the population of the city decreased by 27.3%, and as of 2021, it numbered 35,888 people. The ethnic structure of the population there shows that the predominant ethnic group is that of ethnic Bulgarians. In 2011, 5,179 residents of Kyustendil self-identified as Roma, and in 2021 – 3,888 people (which constitutes 7.9% of the population), out of 96.8% of the total population who voluntarily answered the census question regarding ethnicity. Although the official statistics show a decrease in the number of the Roma population, the conducted expert in-depth interviews indicate that the actual number of Roma people in Kyustendil has increased, and nowadays it is around 10–12 thousand people (or around 1/3 of the city's population) compared to some 5–6 thousand as of 2011 according to interviewees' statements. All representatives of this ethnic group reside in the Iztok neighbourhood, which is the so-called Roma neighbourhood (the Roma GUS).

Location, Range, and Expansion of the Roma GUS

The Roma GUS of Kyustendil is located in the northeastern part of the city, covering an area of 118.9 hectares or 7.2% of the urbanized territory of Kyustendil (Fig. 1).



Figure 1. *Location of the Roma GUS (Iztok Neighbourhood) in the Periphery of the City of Kyustendil*

Source: Google Earth Pro

The Roma GUS of Kyustendil has been growing in recent years beyond the ring road, in the direction of the water treatment plant and the Sofia–Gyueshevo railway track. The neighbourhood is separated from the main urban core by the northern and eastern industrial zones, which puts it in isolation, making it detached

from the life of the city and from the central urban area. The Roma GUS consists of two distinct parts: 1) the area between Sofia Street (where the main public buildings are located), Proгона Street, and the ring road, with a clearly defined orthogonal street network; and 2) the area to the south of Sofia Street and to the east of the ring road, where the housing and street structures gradually acquire a chaotic character, exhibiting a high intensity of construction, without clearly defined streets, and a deteriorated infrastructure (Fig. 2).

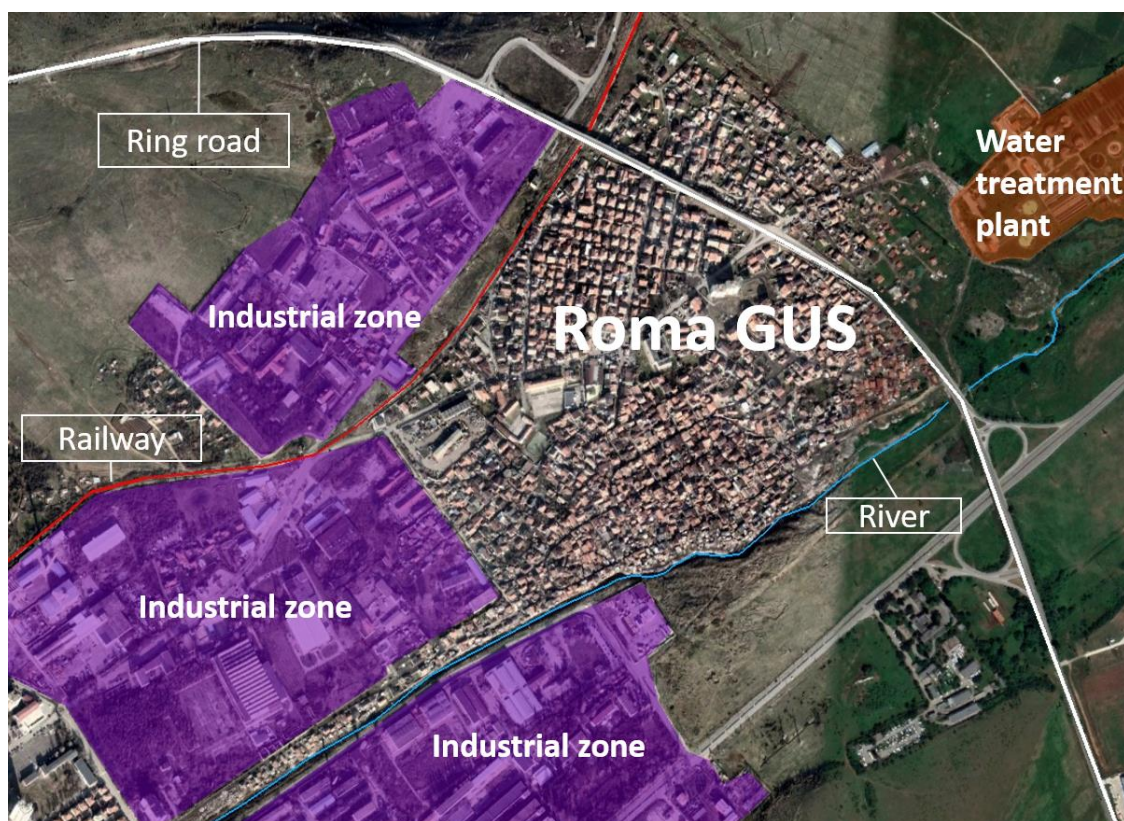


Figure 2. *Visible Structure and Surroundings of the Roma GUS in the City of Kyustendil*

Source: Google Earth Pro

Using the above-mentioned methodology, 1582 buildings have been outlined within the limits of the Roma GUS, of which 261 were built over the last ten years (representing 16.5% of the current housing stock). Between 2010 and 2021, a significant growth of the Roma neighbourhood was observed: there was an increase

in the number of residential buildings by 19.8%, thus taking over terrains mostly beyond the ring road (Fig. 3).

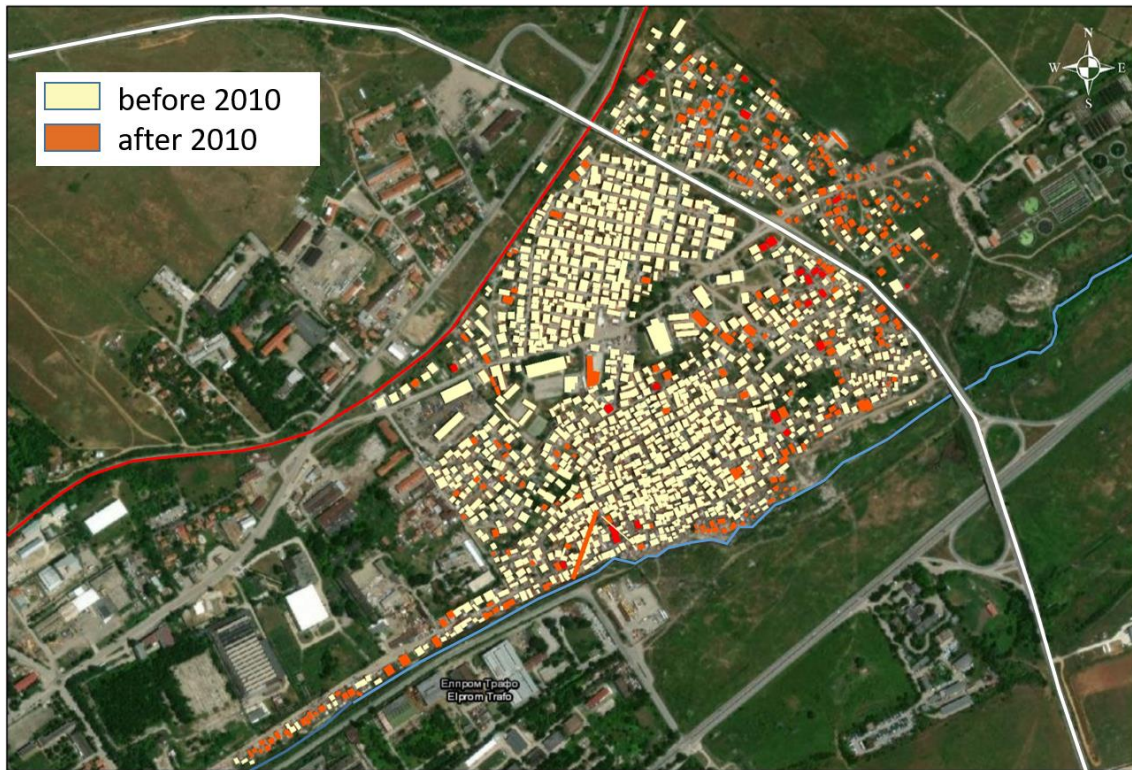


Figure 3. *Expansion of the Roma GUS:
Buildings Existing Before and After 2010*

Source: Authors

Housing Conditions and Infrastructural Issues

Over 70% of the buildings in the Roma GUS of Kyustendil have been illegally built, not meeting the standards and regulatory requirements. According to experts' statements, the new construction of homes beyond the ring road takes place on private terrains, unlike the old construction which was mainly carried out on municipal terrains. Legalization of buildings is a difficult and cumbersome process, and as a result, few Roma people have been able to legalize their homes. Since 1978, there has been an approved Detailed Site Development Plan (DSDP) of the neighbourhood, which cannot be implemented due to the illegally built massive, semi-massive, and shanty buildings throughout the entire territory of the

neighbourhood. Over 60% of the Roma households in the GUS state that they need more rooms, 67% have a toilet in the yard, while 80% do not have an indoor toilet. Some households do not have a toilet at all. This is most likely explained by the fact that between 10% and 15% of the households live in illegal buildings that lack any sanitary and technical infrastructure. Almost one in three households use water from a source outside the home, and over 70% do not have sewerage. Just 22% of the households have a kitchen that is only used for cooking, while in the rest, it is also used for living. 14% live in buildings without electricity, built outside of urban regulation or without the necessary construction documents. Around a quarter of the households state that they are in danger of being evicted at any moment. Nearly 60% are ready to apply for accommodation in the existing municipal social housing if such an opportunity arises. Obtaining a municipal home, however, is difficult – people apply and wait for approval, while some rely on acquaintances and connections to get a municipal home.

According to the documents provided by the Municipality of Kyustendil, the water supply and sewerage network in the Iztok neighbourhood is partially built in the northern part, and the existing part is in an extremely poor condition, depreciated, with frequent accidents. The approved DSDP of the neighbourhoods foresees water supply and sewage for 3,000 households within its forecast period. The increase in the number of residents in Iztok requires actions for the construction of new water and sewage facilities, and the replacement of the existing ones. Now, the water supply network provides service to only 1/3 of the inhabitants, whereas for the rest of the GUS's area, covering 24 ha, no water supply and sewage system have been provided.

According to an informal Roma leader from the neighbourhood in question, some streets there are too narrow, which creates a serious access problem – municipal vehicles (ambulances, fire engines, waste collection vehicles, etc.) cannot pass through. That is one of the reasons why the residents had to make a temporary dumping ground, from where garbage is collected and transported by municipal

garbage trucks for processing. According to the statements of the interviewed residents, no garbage bins are provided by the municipality, which additionally worsens the problem.

The Iztok neighbourhood is divided into two parts in terms of the legal status of the buildings – old and new. The old part includes illegal homes, while the new one is made up of legal houses. Some of the new houses, however, were built by residents who used to work abroad and have now returned. These houses are also illegal since the municipality has not provided a plan with vacant lots to be bought and homes to be legally built on them, as one of the interviewees (the educational mediator) claims. There is sewage in most of the neighbourhood, which was largely built by its residents themselves.

In terms of urban development and planning, Iztok has several problems related to urban design. For instance, there are no proximate recreation zones, no sports facilities, except in the schoolyard. The high building density entails the lack of green and open spaces, which also has a negative impact on the quality of the micro-environment.

Another significant problem is the lack of regular public transport connecting the Roma neighbourhood with the rest of the town – residents are served by the so-called “coop taxis” (more than 30 such taxis currently operate between the city centre and the neighbourhood).

Spatial Segregation and Integration Issues

Although Kyustendil’s local government is making considerable efforts to overcome existing stereotypes and prejudice towards the Roma community, a large part of the Roma population continues to be marginalized and socially excluded from the life of the city. The Iztok neighbourhood is separated and isolated from the rest of Kyustendil, and the interaction between the residents is based on potestal relations – a situation that is being increasingly reinforced, thereby further encapsulating the community. Several problems in the neighbourhood remain unresolved, regardless

of the municipality's efforts in this respect. The Roma neighbourhood is changing intensively in both a horizontal (spatial) and a vertical (height) aspect. Nevertheless, the changes to Iztok's internal structure remain hidden from the local authorities, thus making integration efforts more difficult. The results from the in-depth interviews with Roma leaders and educational mediators show that there is a strong social stratification in the neighbourhood – even though many Roma residents are willing to integrate, a significant part of the Roma community still does not want to integrate in the way it is expected to. As a result, the formation of a polarized attitude of the residents is exhibited, manifested by the desire of the richer Roma (who worked abroad and returned) to quickly integrate into the macrosociety by purchasing homes in Kyustendil. These Roma residents strive to integrate, while the opposite is observed among the poorer Roma – they prefer living in the neighbourhood and do not feel as part of the city; they stay in the neighbourhood and, in many cases, there is no communication between these residents and the rest of the city's population; they mostly live in shanty houses along the Banshtitsa River, representing the southern limit of the Roma GUS, and their homes form something which can be referred to as a “ghetto within the ghetto.”

Educational and Labour Market Integration Issues

The educational integration of the Roma population is crucial to the overall integration process. According to interviewees, however, there is no significant effect from European programmes – the Mayor of Kyustendil is trying to integrate Roma children by unification of schools (the school in the Roma neighbourhood was administratively merged with two other schools – Roma children are transferred to other schools in town, while others are transported to the nearby village of Nevestino due to a shortage of students there). In the beginning, there was dissatisfaction among Bulgarian parents that their children would study together with Roma children, but that problem was overcome. However, there has been a

trend of Roma children returning to segregated schools, as well as enrolling children in rural schools (thus, the latter can remain in existence).

Teachers make a lot of compromises and Roma students are generally allowed to pass in the next grade without having acquired the needed knowledge. Roma parents offer little to no help, as they do not want their children to attend the more elite schools in town because of the higher learning requirements there. They rarely attend parent–teacher meetings in the segregated school, as many of them do not see much sense in education. Some of them enroll their children in schools where class attendance is not strictly observed. Since the school in the Roma GUS cannot accommodate all the children due to an increase in number, Roma children go to other schools close to the neighbourhood. Those who have been living abroad for a long time (some 20% of the GUS’s residents) and are trying to integrate by purchasing houses outside the neighbourhood enroll their children in regular schools in town, etc. And yet, the attitude of the Bulgarian macrosociety towards such Roma is negative. Children of Roma parents who are more integrated tend to attend school more regularly, and regard education more seriously.

Another typical feature is the school dropout trend among Roma children. While the main reason for not attending school in previous years was the parents’ lack of motivation to make their children acquire some education, nowadays, the reasons are different. According to an educational mediator with whom we spoke, some Roma children stop going to school because they leave Bulgaria together with their parents, and when they return, their education is not recognized by the Bulgarian education system. These children are ashamed to go to school with younger ones who are, for instance, two grades lower. Another reason for the school dropout problem is poverty: some parents make their children work together with them in construction and they stop going to school in order to earn money for food. Some senior students (given that upon reaching the age of 16, children in Bulgaria have the right to stop attending school) even work in the capital of Sofia – a city located some 90 km from Kyustendil.

In other cases, family problems stand in the way. For example, the mother runs off with another man, and the father – as a single parent – finds it difficult to take care of the children.

The Municipality of Kyustendil and Roma NGOs are working on projects aimed at fighting early marriages – another main reason for dropping out of school.

Roma children attend extracurricular activities, such as taekwondo classes and football tournaments between schools. However, there is a need for more activities where Roma and Bulgarian children can meet. Unfortunately, violence has occurred at such meetings on separate occasions.

Roma people in general, and Roma students in particular do participate in the city's cultural events and festivals.

Interviewees from the Roma community claim that discrimination and prejudice towards the ethnic group in Kyustendil are evident at all levels. According to a young Roma woman, most of the Roma females in Kyustendil are employed in the shoe factory (Italian), and very few are unemployed and registered in the Labour Office. This contradicts the statement of another interviewee (of the municipal authorities), who claims that despite the existing jobs in hospitality, forestry, and logging, it is difficult for Roma people to engage in these sectors, and most of them rely on social benefits. According to an informal Roma leader, most Roma men work in construction, including in Sofia and abroad. As anywhere across the country, the Roma are also employed in public space cleaning and are those who keep the city clean.

Unfortunately, labour market discrimination still exists and is frequent: people who open new enterprises generally avoid hiring Roma people, except for some unattractive, low-paid jobs. Only when no Bulgarians have applied for a job, the employers hire Roma workers. According to interviewees from the Roma community, Bulgarian-owned businesses are not open to supporting Roma students with any aptitudes, while Roma integration is problematic due to the many problems in the Bulgarian macrosociety itself. Integration is only possible when it is desired

by the Roma themselves, and not because the Bulgarian macrosociety demands it from them.

According to an informal Roma leader, however, discrimination in general is not as widespread as before, especially in sports activities, where many Roma teenagers are involved and well-respected for their skills. Roma sportsmen are part of various sports clubs in the city of Kyustendil.

In addition, there has been significant improvement in healthcare integration – most Roma parents do vaccinate their children and have a general practitioner (GP), although healthcare insurance is still a problem, since many (an unknown share) of the Roma residents are not insured.

Discussion

The significant discrepancy between the official census number of the Roma population and the number cited by interviewees (local authorities, residents, etc.) is no surprise. This problem has been observed for more than three decades, representing a serious drawback in establishing the actual reality regarding the number and share of the Roma population nationwide, regionally, and locally. While the so-called expert assessment number of Roma generally exceeds the official census number twice, in the case of Kyustendil, the unofficial number is around three times higher than the official statistics. Both the detected physical expansion and the interviewees' statements show that the number of Roma people in Kyustendil has been increasing, whereas the census figures imply the opposite.

The applied methodology can be considered reliable in terms of establishing the changes of dynamic urban structures, such as Roma neighbourhoods, unlike official cadastral plans which generally fail to detect the expansion of such urban structures. The location of the neighbourhood determines the degree of segregation not only in the physical but also in the social aspect. The Iztok neighbourhood is situated in the outskirts of the city, which contributes to the formation of a homogenous area, the residents of which have a certain stereotypical behaviour.

In Kyustendil, as in other cases where ghettoized urban structures exist, the Roma population lives in quite unacceptable housing conditions. Although the ones in the Roma GUS of Kyustendil are generally poor, a mixture of shanty homes and luxurious ones is observed. This proves once again that a Roma GUS is not a homogenous urban structure in terms of housing quality itself. What is more, the residents of the Iztok neighbourhood differ significantly according to their well-being, social status, general attitude, and self-esteem. For the surrounding macrosociety of ethnic Bulgarians, however, most (if not all) Roma people are still regarded as a single socio-ethnic entity. This fact by itself represents a serious drawback of Roma integration, along with the parallel refusal or unwillingness of most of them to be integrated the way they are expected to. The poor housing conditions and the above-mentioned behavioural factors additionally aggravate the exclusion of the Roma community, reduce the possibility for improving its educational, socio-economic and health status, and leads to the marginalization of a considerable share of it.

Education seems to be the keystone of Roma integration. School attendance is a function of the families' integration level. Early marriages seem to affect female students the most, whereas boys tend to leave school because of starting work at an early age, including out of town and abroad. This brings up the role of ongoing poverty among a certain part of the Roma community. As it turns out, to ease the family's burden on income and make ends meet, some parents seek to get their daughters married at a very young age, while Roma boys start working at an early age to be able to get married. This is a cultural feature, which is deeply rooted in the Roma way of life, and which will keep affecting both school attendance and school dropout rates indirectly. That kind of marital behaviour (which is more or less opposite to that of the Bulgarian macrosociety) subsequently and indirectly (through hampering educational integration) affects the overall integration process.

Lack of education, on the other hand, leads to serious issues regarding labour market integration of the Roma: unqualified labour force tends to be offered low-

paid and unattractive jobs, which, along with the alleged discrimination on behalf of Bulgarian employers, makes matters more difficult. The key to solving that problem apparently lies in the hands of the Roma families, who need to better understand the importance of education for their children, so that the latter can have better chances in the labour market. Unfortunately, although no such practices have been reported, let alone proven, discrimination based on ethnicity might exist, regardless of the qualification of the job applicants. Therefore, a serious question arises (including among the Roma people themselves): Why should the Roma strive to acquire better education and professional qualification if they are going to have less chance of being employed anyway (because of their ethnicity)?

It can be said, however, that regardless of all the above-mentioned problems, Roma integration and the overall living conditions of that community in the city of Kyustendil have been improving slowly but visibly. This improvement does not apply to all Roma residents and is unlikely to encompass the entire community, but the more Roma people become more educated and employed in jobs which satisfy their needs and self-esteem, the better the integration of the community will be, although incomplete (in terms of share of people, and in terms of all aspects of integration).

Conclusion

This study used various methods to establish the spatial and population dynamics of a Roma ghettoized urban structure in a selected Bulgarian city. The results of the research prove the hypothesis that official census data and cadastral plans do not represent the actual reality accurately, which seriously hampers decision-making and the development of measures aimed at enhancing the socio-economic integration of the Roma population in Bulgaria. The combination of remote methods (UAV aerial photography, VHR imagery interpretation) and terrain methods (in-depth interviews) has proven to be an effective approach to establishing the main features of Roma neighbourhoods in terms of spatial changes, to establishing

the main problems and obstacles on the way to better integration of that specific ethnic group into the macrosociety, and to the efficient inclusion of such urban structures in the urban space. Cultural, legislative, and infrastructural deficiencies seem to represent the major drawbacks in the integration process, making it slow and inefficient, but still apparent. The inner diversity of the Roma community in Kyustendil, mostly based on the financial status of the households, represents a significant feature of the Roma community, which requires additional detailed research. It becomes more and more necessary to specify what Roma people are being discussed – those who exhibit a higher level of integration (because of better education, higher income, and a desire to be integrated), or those who still lag in most, or all, aspects of integration. The latter are seen by the Roma community itself as a lower stratum, and mixing those (generally speaking) two groups when studying the Roma community is inadequate and inefficient in terms of research results and implementation of integration measures.

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