

TRANSPORT DEVELOPMENT OPPORTUNITIES IN THE RURAL AREAS OF THE STARA ZAGORA URBAN AREA IN BULGARIA

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Abstract

The paper explores the possibility of transport development as a factor for the rural integration of a population of over 100,000 using the example of the city of Stara Zagora in Bulgaria. The analysis showed that improving the access of the rural population to the agglomeration areas can be done through the combination of inter-urban transport that connects the villages with the nearby city. The purpose of developing this process is to increase the access of the rural population to the cities and, accordingly, to bring out the problems that the people of the villages have in terms of urban transport. Based on a proposed methodology, we propose to highlight the main public transport problems of the rural population. On the other hand, to propose different views and models to achieve higher efficiency of urban transport and its implementation in rural areas. In this paper, quantitative and qualitative analysis is used and the results are also used to assess the impact of price fluctuations on vegetable marketing channels including vegetable processing enterprises. Data on vegetable prices were extracted from the tempo on line database and the analysis was also based on interviews with key stakeholders in the vegetable processing chain. The results reveal a high coefficient of variation at the farm gate stage, which is also transmitted to the distribution and commercialization stage. The analysis was also carried out at the processing level and the results also show a rather high coefficient of variation.

Key words: public transport, transport connectivity, suburban development, Stara Zagora municipality

INTRODUCTION

Nowadays, the linkages and interactions between urban and rural areas have become more intensive and an important component of livelihoods and production systems.

The areas around urban centres or along the roads out of such centres, which usually are named "a peri-urban interface, have the strongest connection with the cities, as the rural population depends on urban centres for access to work places, education units, hospitals, banks, and other services. Also, a part of the urban population prefer to live in the surroundings of the cities where life is closer to nature and far away from the stressing cities [14].

In the proximity of the cities, non-farm incomes represent "a large and growing proportion of rural households' incomes and people's mobility is very intensive [15, 12].

The Covid19 pandemic has proved that the rural localities surrounding the cities have been a good place for spending safe week-end short travels [11, 13].

Therefore, for a large range of reasons, roads and rail infrastructure and transport network have to be well developed to assure the shortest travel time between a city and the rural localities in its surroundings.

In this context, a good example is Stara Zahora city in Bulgaria, whose role in urban development and regional planning has become very important and has different territorial dimensions, based on the actual assessed potentials and functions performed as a city-center in the national urban model. Transportation needs are one of the most diverse aspects of human life. As planners know well, public transit cannot be treated as a one-size-fits-all endeavor. It's especially important to consider the different needs of urban and rural populations when planning

out an appropriate transit system [8]. The historically formed, preserved, and stimulated connections of the city of Stara Zagora with the surrounding settlements and territories are conditioned. Researched and proven (theoretically and practically verified), different in territorial scope and leading functions zones of influence of the city, formed by the degree of intensity and diversity of connections with adjacent territories. The manifestation of the organizing functions of the city. Stara Zagora in its adjacent zones, in terms of economic and transport connections, services, recreation and administrative management activities. In this regard, the strengths in the regional context of the city are the city-center of urban structures, of a high hierarchical level. In practice, Stara Zagora is the nucleus of a large agglomeration area, which makes it a supporting center in the national settlement network, and at the areal level - a city with zoning functions, especially in the service of the areal. The economic potential and the degree of development of the social functions and the related social infrastructure of the town are also important in the city. Stara Zagora gives a positive reflection on the main parameters of the socio-economic complex not only of the Stara Zagora district but also of the South-Eastern planning region [4].

The region provides sufficient opportunities for the realization of the functions necessary for the city, which is facilitated by the well-structured and developed connections between the region and the city, the available opportunities for the construction of at least two common economic zones, the opportunities for the development of new economic clusters. The completion and maintenance of the motorways and high-speed roads, together with the modernization of the railway lines along the identified routes, will ensure a more rational spatial organization of the national transport network, providing connections between different European countries, across the territory of the country, Bulgaria's connections with neighboring countries and connections between the main urbanization centers, within the country and

its neighbors [5]. The location of the municipality and of the settlements in Stara Zagora also determine the opportunities for improving transport accessibility by taking targeted measures to develop and improve the public transport service. The provision of a more accessible suburban environment will form a service to develop the socio-economic potential of the suburban areas and improve economic and transport connectivity across the territory.

MATERIALS AND METHODS

For the study of the transport provision of the extra-urban areas within the city of Stara Zagora it is necessary to apply territorial and network approaches due to the complexity of the research field. The research object combines the development of suburban areas in Stara Zagora with the improvement of transport connectivity, as well as the development of public transport in the city. The research field determines the main objective of the authors: to analyze and evaluate the possibilities of improving transport connectivity in Stara Zagora through the development of urban transport. Within the framework of this defined objective, the authors use geographical, demographic, statistical and sociological research methods. The main part of the research is the development and implementation of a sociological survey. Its main objective is to assess the satisfaction and attitudes of the inhabitants of the settlements (villages) within the municipality of Stara Zagora regarding the services offered by the municipal public transport. In the period from 27 June to 06 July 2022. 41 mayors and deputy mayors of the settlements in the municipality were surveyed. In practice, the survey covered the majority of the settlements, i.e. 41 out of 51 settlements in the municipality. The sociological survey was carried out through the telephone interview method, after which the results were summarized. Software products such as MS Excel and SPSS were used to summarize and systematize the collected data. Statistical methods such as

univariate distributions, correlation analysis, regression analysis, and multivariate analyses were also applied in processing the data and drawing the main trends and conclusions [1].

RESULTS AND DISCUSSIONS

Spatial Development and Assessment of the Territory of Stara Zagora Municipality

Stara Zagora Municipality is in Southern Bulgaria, part of the South-Eastern Planning Region. It is one of the 11 municipalities of the same name. Its area represents 0.96% of the territory of Bulgaria, 5.4% of the territory of the Southeast Region and 20.7% of the territory of Stara Zagora District. The municipality is located mainly on three altitudinal belts - lowland (below 200 m), hilly (between 200 and 600 m) and mountainous (above 600 m). There is one town in the municipality - Stara Zagora. Stara Zagora Airport is located 2 km from the town of Stara Zagora and 8 km from the Trakia Motorway.

Stara Zagora Municipality is distant from Plovdiv (80 km.), Burgas (152 km.), Sofia (192 km.), Haskovo (62 km.), Sliven (63 km.), Kazanlak (29 km.) and Istanbul (308 km.), respectively. This shows that the city of Stara Zagora is in a good spatial location in our national space. In addition, the municipality has 51 villages besides the town of Stara Zagora, which occupy a significant part of its territory. These settlements are grouped according to the population indicator. Thus, according to the population data, the villages are grouped as very small (up to 200 inhabitants) - 19, small (between 200 and 1,000 inhabitants) - 28, and large (over 1,000 inhabitants) - 4. From the spatial point of view, it is necessary to emphasize that the settlements in Stara Zagora municipality cover a total area of 68.9 km², which makes up 6.3% of the municipality's territory. Considering the transport availability, it is evident that 47 of the villages are very small, which implies that public transport to them is unlikely to be cost-effective. On the other hand, in terms of local self-government, only 28 villages have mayors, the remaining

villages have deputy mayors. Five of the town halls are close to the demographic minimum (250 inhabitants), but in practice are in danger of losing their status as self-governing communities.

The economic outlook of the villages is agricultural. Only 8 of all 51 villages have functioning schools, and 29 villages have no medical practices. A positive feature of the commune is the complete electrification and water supply to the villages. In terms of accessibility and inter-village connections, the villages can be divided into three main groups. In the first group are the villages with strong gravitational potential with the town of Stara Zagora, which are located close to the first-class road network. The second group includes villages located in the southern periphery, which in practice have some difficulties using the first-class road network. The third group of villages are in the north-western periphery of the municipality. In this part they have access to the lower quality municipal road network [6]. On the positive side for the settlements of Stara Zagora municipality is the high degree of accessibility to the central part within a maximum 30 minutes by car (for 16 villages - 10 minutes; for 14 villages - 11 to 15 minutes; for 12 villages - 16 to 20 minutes and for only 8 peripheral villages - 21 to 30 minutes).

Untapped resources and significant potential have the city of Stara Zagora as a center of national importance for the territory of the Southeast planning region and Southern Bulgaria, which provides daily, periodic, and episodic service to a significant contingent of the population of the places (municipalities) falling within its urban gravitational field and in its zone of influence. This is primarily due to the city's good geostrategic location and the presence of two transport corridors, which are seen as a major city-forming factor. This also determines the existence of good accessibility, and in addition - the city is rich in natural and anthropogenic resources [2].

Stara Zagora transport connectivity analysis

There are 52 settlements in Stara Zagora municipality, including one town and 51

villages. To the south of the Sarnen, Sredna Gora is the wide and flat Stara Zagora field, with an altitude of 150-170 m, which covers the eastern, south-eastern, and southern parts of the municipality. Its lowest point - 136 m above sea level - is located south of the village of Kozarevets, on the border with Dimitrovgrad municipality. If the whole territory of Stara Zagora municipality has its spatial planning and management, it should be perceived as a territorial spatial system. Thus, in spatial terms, the spatial transport development of the territory must be perceived as a system of measures, acts and actions of a factual and legal nature, which aim at creating balance and order in society and the use of the environment - natural or artificial, for the normal existence of man and his life cycle. This is not a one-off act, but a process that is continuous. According to the modern understanding, it is a purposeful impact on the natural environment, which aims to encompass lands and territories within the borders of a country. In this direction, there is a need to build a homogeneous transport environment that meets the needs of the population of all settlements with urban transport.

Shaping the image and structure of villages suggests bringing to the fore the following factors that can model the need for public transport. These more important factors are:

- Cultural assets of the settlement, shaped by the residential environment, and industries in the broad range from arts to sports.
- Human infrastructure, defined by the conditions for mobility, to those for start-up development, healthcare, finance, etc.
- Network markets, which define the strength of a locality in the community network.
- Architecture and planning of the settlement space and its land.
- Building technical infrastructure (road, bridges, rail, water, internet, education, social and health);
- Formation of socio-economic infrastructure (enterprises, agriculture, narco-op, etc.).
- Cultural exchange: travel and tourism, food, and hospitality.
- Mobility, cars, cycling and transport.

The existing municipal road network, the route schemes developed, the frequency of inter-village transport routes and the time required to travel the various distances between the respective settlements form the individual characteristics of transport accessibility for citizens living outside the municipal center.

Depending on the degree of proximity (distance) to the municipal center, the travel time from a locality to the town of Stara Zagora varies from 10 to 30 minutes per direction. This circumstance determines the travel time of buses on individual routes from the villages to the municipality. As far as the inter-rural lines are concerned, there is not much delay as far as the journey to the city itself is concerned. Delays are accumulated on the journey into the city. It should also be made clear that delays accumulate during peak hours - morning and evening - when people are going to and returning from work.

The average transport accessibility parameters to the municipal center for a settlement are:

- distance - 18.5 km on average.
- one-way travel time - average 14.8 minutes by car.

The degree of development of the municipal transport network determines the mobility possibilities of the population and the level of access to services.

Because there are different distances of the settlements to the municipality of Stara Zagora and considering at which part of the day (peak or off-peak hours) we have different duration of each trip. It is normal for long-distance trips to be longer, and they can be as long as 40-50 minutes. Urban routes are shorter, but they are more runs within working hours, which can compensate for the total mileage. In general, they are shorter, and the duration is less, but it depends on whether it is a peak or off-peak hour of the day. In general, durations average between 20 and 37 minutes in off-peak and peak hours of the day. The extended commute time zone begins at 7:00 am and continues until about 10:00 am. In the evenings, the time zone with the greatest concentration of commuters moving from the workplace to home is 6:00-6:45 PM.

The extended commute-to-home time zone starts at 4:30 p.m. and ends around 8:30 p.m. Respondents cited traffic congestion, travel time, transfers, irregular public transport, and lack of parking spaces as the main problems in getting to and from work in both directions. Respondents felt that getting home takes longer than getting to work. Travelling by car, public transport and taxi are the biggest causes of stress - around 70% of those travelling by the listed means of transport feel stressed to some extent by the journey. The existing municipal road network, the route schemes developed, the frequency of inter-municipal transport and the time taken to travel the various distances between the respective settlements, form the individual characteristics of transport accessibility for citizens living outside the municipal center [10].

Table 1. Territorial access indicators

Up to 10 minutes travel time 14 villages	11 – 15 minutes travel time 13 villages	16 – 20 minutes travel time 12 villages	21 – 30 minutes travel time 10 villages
0 – 12 km distance	13 – 19 km distance	20 – 25 km Distance	26 – 35 km Distance
Bogomilovo	Borilovo	Arnautito	Benkovski
Elenino	Future	Brothes Kunchevi	Vodenicharovo
Zmeiovo	Gorno Botevo	Elhovo	Kazanka
Kalitinovo	Dalboki	Lovetz	Kozarevetz
Kaloqnovetz	Kolena	Lozen	Pshenichno
Kirilovo	Lulqk	Orqhovitza	Pastrovo
Majerito	Lqskovo	Ostra Mogila	Samuilovo
Small Vereq	Novo Selo	Ploska Mogila	Sladak Kladenetz
Small Kadievo	Sulitza	Podslon	Mihailovo
Mogila	Pamukchin	Borovo	Rumang
Preslaven	Peytrovo	Streletz	
Rakitnitza	Priporetz	Han Asparuhovo	
Hristiqnovo	Starozagorski Bani		
Hrishteni			

Source: Stara Zagora municipality.

The accessibility from small settlements to the city of Stara Zagora, as a combination of distance and frequency indicators, is shown in Table 1.

The average values of transport accessibility to the municipal center for a settlement are:

- distance - 18.5 km.
- one-way travel time - 14.8 min.
- daily round trips - 6 pcs.

The degree of development of the municipal transport network determines the mobility

possibilities of the population and the level of access to services.

As a physical structure, the settlement network is well developed, balanced over the entire territory of the municipality. The imbalance is mainly due to the demographic and functional characteristics of the settlements. The differences between the municipal center and the other urbanized areas are very pronounced [17].

Table 2. Personal vehicles access to city center

Up to 10 minutes travel time 16 villages	11 – 15 minutes travel time 14 villages	16 – 20 minutes travel time 12 villages	21 – 30 minutes travel time 8 villages
Bogomilovo	Arnautito	Borovo	Benkovski
Future	Borilovo	Brothes Kunchevi	Vodenicharovo
Zmeiovo	Gorno Botevo	Elhovo	Kazanka
Kalitinovo	Dalboki	Lovetz	Kozarevetz
Kaloqnovetz	Kolena	Lozen	Pshenichno
Kirilovo	Lulqk	Mihailovo	Pastrovo
Majerito	Lqskovo	Ostra Mogila	Samuilovo
Small Vereq	Novo Selo	Ploska Mogila	Sladak Kladenetz
Small Kadievo	Orqhovitza	Podslon	
Mogila	Pamukchin	Rumang	
Preslaven	Peytrovo	Streletz	
Rakitnitza	Priporetz	Han Asparuhovo	
Hristiqnovo	Starozagorski Bani		
Hrishteni	Sulitza		

Source: Stara Zagora municipality.

Keeping the road network in good condition is a prerequisite for its more efficient use. Improving the quality and performance of a range of infrastructure facilities will increase throughput, with urgency for rail infrastructure. Continuous and consistent transport networks with uniform performance characteristics need to be built to ensure the rapid and safe transport of people and goods. Increasing accessibility is essential to strengthen the regional economy. Efforts should focus on completing priority rail and road routes and on promoting multimodal transport by improving intermodal links [9].

There is also a need to ensure transport efficiency and safety, while minimizing negative environmental impacts. Untapped resources and development potential also exist along the TENT network. Transport policy is important for territorial connectivity, for access to important centers in the European and national polycentric urban network, for mobility and free movement. Transport

infrastructure is an important factor in attracting investment, in reducing inter- and intra-regional disparities and in ensuring equitable access to services. Its construction and maintenance depend on the characteristics of the territory, on the possibilities of linking up with Europe's transport networks and on the potential for interaction between different modes of transport [9].

Modern transport terminals require ever larger areas to function properly and safely, combining a variety of communication, service, commercial, recreational, and social functions. The objectives and priorities of national transport policy are determined by the strategic objectives and priorities of EU transport policy, as set out in several key documents. The 2011 White Paper "Roadmap towards a Single European Transport Area - Towards a competitive and resource efficient transport system" is the main European strategic document outlining the guidelines for transport development [9]. Regulation (EU) No 1303/2013 sets out the generally applicable provisions for the "European Structural and Investment Funds" (ESIF) [11]. Eleven thematic objectives are defined for the ESF and an EU Common Strategic Framework (CSF). The Connecting Europe Facility 2 (CEF2) is expected to be a major contributor to this objective, with a target of 60% of its budget to be spent on actions contributing to climate objectives.

Spatial transport development of the territory must be perceived as a system of measures, acts, and actions of a factual and legal nature, which aim at creating balance and order in society and using the environment - natural or artificial, for the normal existence of man and his life cycle. This is not a one-off act, but a process that is continuous. According to the modern understanding, it is a targeted impact on the natural environment, which aims to encompass lands and territories within the borders of a country. In this direction, there is a need to build a homogeneous transport environment that meets the needs of the population of all settlements with urban transport [11].

Assessment of the satisfaction and attitudes of the inhabitants of the settlements (villages) in the municipality of Stara Zagora

For the municipality of Stara Zagora, it is important to have optimal transport accessibility for the citizens according to the specific of the city territory and disparities. It is important for the municipality to function normally, as a system in which there is a relative balance between its different constituent elements, in this case the city and the settlements. In this direction, it is important to bring out the management vision on the role and importance of public transport for the development of the transport system within the municipality of Stara Zagora.

In such studies it has been noticed that men often do not fill in the questionnaires correctly, unlike women who show more diligence. In the case of Stara Zagora municipality, we have a balance of the sample of respondents, which is evenly distributed between the two sexes, with a minimal predominance of men, who are 22 people (Figure 1), and 19 women respondents.

In fact, the distribution of the sample is in line with the demographic picture in the municipality and nationally. Another important aspect of participation in public management is the age structure of the management staff. Both the ageing of the population and legislative changes in setting age limits for retirement have an impact on the population of working age and over [7].

The preponderance of managers shown in Chart 1 and 2 in terms of their gender and age structure suggests that we will have a more conservative view in terms of change in the development of public transport in Stara Zagora municipality.

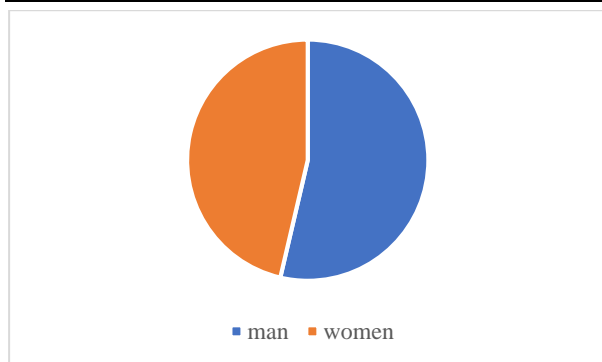


Fig. 1. Point your gender
Source: Own results.

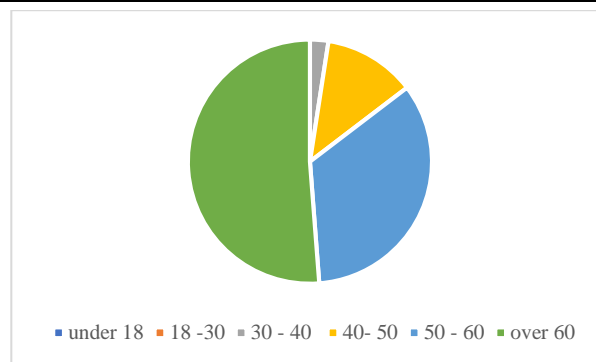


Fig. 2. Point your age
Source: Own results.

Especially the age structure, which can be seen in Figure 2, brings to the fore management staff practically around retirement age. If we look carefully at the reproduction of the working age population in the municipality of Stara Zagora, we see that it is characterized by the demographic replacement rate, which shows the ratio between the number of people entering the working age (15-19 years) and the number of people leaving the working age (60-64 years). By 2022 in Stara Zagora this ratio is 68.5. For comparison, in 2001, 100 people leaving working age were replaced by 117 young people.

The demographic profile of the respondents shows that more than half of all respondents are over 60 years old (51%), 34% are in the age group 50-60, 12% of respondents are between 40-50 years old and only 3% of respondents are in the age group 30-40. This suggests that the main trends are related to other types of problems, mostly with the labor market, rather than with the search for solutions related to the level of labor efficiency and creativity.

The ageing trend of the population is also leading to changes in its basic age structure - below, at and above working age. Both the ageing of the population and legislative changes in the setting of retirement age limits have an impact on the working-age and over-age population [5]. This process is changing the philosophy and perceptions in society on how to address groups of issues and pulling public opinion in a different direction.

Another essential element in determining the priorities of the settlements in the municipality of Stara Zagora is the model of perceived transport accessibility. Accessibility is defined as the ability to get from one place to another. In this context, accessibility refers to the ease of reaching different destinations. People who are in places that are more accessible will be able to reach activities and destinations faster than those in inaccessible places. The latter will not be able to reach the same number of locations in each period. Mobility is the ability to move or be moved freely and easily. Mobility can be seen as the ability to move through different levels in society or employment, for example. While mobility focuses on moving people and goods to and from different places, accessibility is an approach or input that can be obtained or achieved. Thus, the two forms -mobility and accessibility rely on each other in some way, depending on the scenario, but remain separate entities [16].

A great example of improving accessibility rather than mobility is the case of a rural transport scenario, in which road means and modes are pragmatically chosen to move the population by rail and bus.

Within the municipality of Stara Zagora, apart from bus transport, private transport is an alternative, but it is not a good solution for people under 18 and those over 65. This has also brought to the fore the need to analyze travel options within the settlements of Stara Zagora municipality. This is because accessibility in terms of geography is an important element in the mobility of people,

goods, or information. Mobility is determined by people and affects infrastructure, transport policies and regional development.

The question posed to the representatives of the local authorities, what do the inhabitants of the villages in the municipality of Stara Zagora use to get around, produced an interesting result.

It can be seen from Figure 3 that the respondents are almost equally distributed, with own and public transport, with 40% of respondents stating that residents use public mass transport to reach Stara Zagora.

Stara Zagora, while another 33% stated that they usually travel by their own car to the municipal center. A small percentage of those who say they travel to the town of Stara Zagora. Stara Zagora by company car or other means.

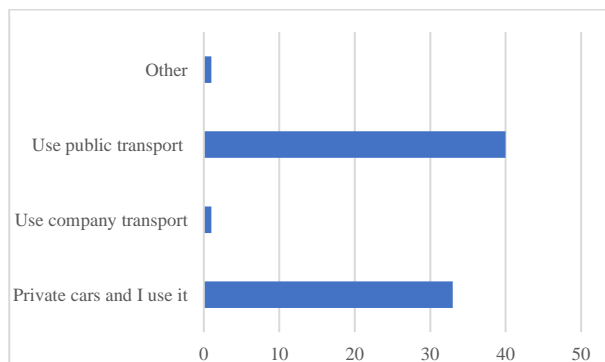


Fig. 3. What do the residents from your locality use to get to Stara Zagora usually?
 Source: Own research.

In Figure 4 we can see the intensity of trips from the villages to the city Stara Zagora. 33 of all respondents indicated in their answer that they travel daily to Stara Zagora. Stara Zagora. 7 of the respondents travel to the municipal center several times a week during weekdays.

The intensity of trips is directly related to the purpose and destination of the trip from the villages to the city of Stara Zagora (Figure 5). 31% indicated the workplace as their destination. In fact, these villagers commute daily, and it is important to establish what proportion of them use inter-village transport in the municipality. Due to the lack of public transport accessibility to the industrial area of the city, we could conclude that most of the

people who commute use their own cars. 15% of the respondents commute to school. In fact, it is normal for students to use public transport, given the fact that they are provided with discounted travel passes. 16% of all travel to health facilities. For the most part, these commuters are rural residents of working age. This also means that they do not commute daily to the city. And 7% travel to the community center for leisure and shopping, suggesting that they also rather use their own transport.

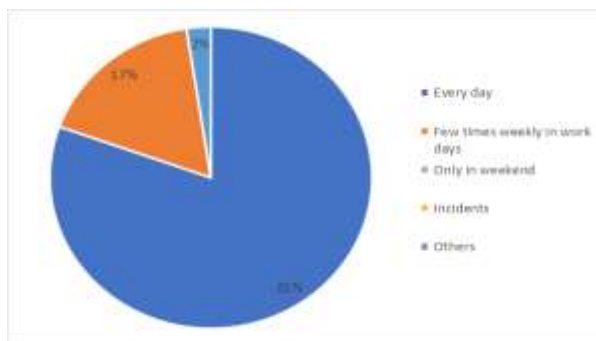


Fig. 4. How often the village citizens travel to the big city during week time?
 Source: Own research.

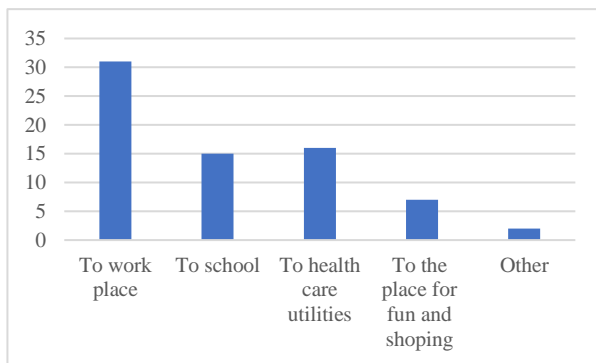


Fig. 5. Where are you travelling to?
 Source: Own results.

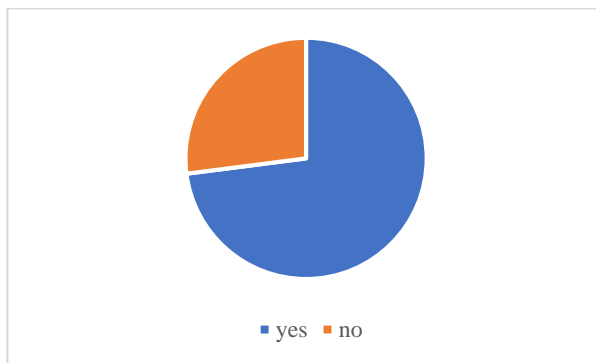


Fig. 6. Are you satisfied with the present timetables of the bus lines?
 Source: Own research.

The following Figure 6 provides information on the proposed changes to the timetables of the inter-suburban public transport lines in Stara Zagora.

Responses to this question indicate that people are generally happy with the timetable and minimal changes should be made to maximize their satisfaction.

Figure 7 shows the circumstances that would affect a shift from the use of private cars to public transport for the daily journeys of residents of your locality to the town Stara Zagora.

Unfortunately, 13% of respondents indicated that they could not be motivated in any way to leave the car to use public transport.

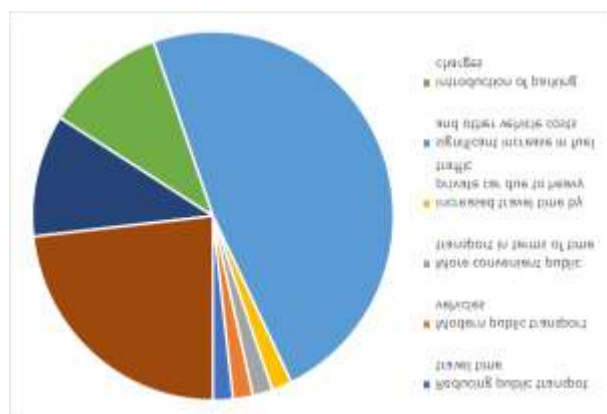


Fig. 7. Please mark these circumstances which may influence changing the way of travel - from personal vehicle to public transport.
 Source: Own research.

According to 6 % in the town the introduction of some serious restrictions may motivate commuters from the villages to the city to leave the private car and start using public transport. Such measures are - limited number of parking spaces and introduction of parking fees. 27% are ready to use public transport due to objective reasons such as an increase in fuel prices and all other costs. In today's high inflation environment, a large proportion of rural commuters (27%) are likely to switch from private cars to public transport buses. However, to this end, people in rural areas should be offered flexible timetables. A minimal number of respondents would switch from car to bus if private car travel increased disproportionately, public transport accessibility related to timetable and timing

improved substantially, the public transport fleet was upgraded, and public transport travel times were reduced [3].

The issue of what matters most to rural residents is extremely important. 8% say that the ability to travel for free is paramount for them. Another 19% indicate that the most important thing related to public transport is the affordability of fares (i.e., a change in tickets and season tickets is needed). 17% indicate that the quality and comfort of the bus ride is most important. 15% said that the most important thing for them is the shortness of the journey. 19% of all respondents say that the most important thing for them is the intensity and frequency of public transport. And as many as 24% say that the most important thing for them is the improvement of the transport service (punctuality, journey, etc.).

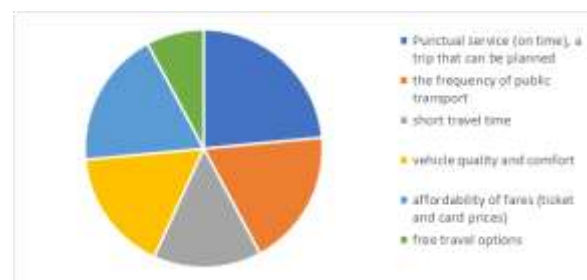


Fig. 8. What is the most important thing for you and the residents when using public transport? Please choose the three most important!
 Source: Own Research.

In connection with the optimization of the transport scheme and the possible commissioning of the two regional bus stations in the eastern and western part of the station, we asked the mayors of the villages in the municipality of Stara Zagora whether they agree to use these stations. Figure 9 also shows the respondents' answers regarding changes to public transport timetables and routes. The responses are almost equally distributed in the dichotomy of agreement and disagreement for changes in public transport. 13 (32%) of respondents agreed that changes should be made to public transport timetables and routes. Conversely, 28 (68%) of respondents disagreed that any changes to public transport were necessary, citing a variety of reasons. As many as 16 (39%) of

those who disagreed felt that it suited and suited them at present.

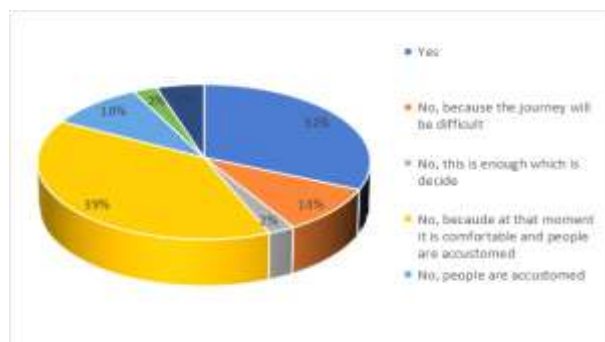


Fig. 9. Do you agree that a change should be made to the bus route(s) to start stopping at the existing east and west bus stations and that the public transport bus lines in Stara Zagora should start from there?

Source. Own Research.

According to 2% (1 person) of the respondents, they believe that enough has been done and they are not comfortable with changes. Another 10% (4 people) said they disagreed because it would be difficult to travel, and they are also used to the current timetables and transport scheme. And 5% (2 people) say that more time will be wasted travelling and are therefore reluctant to agree to the proposed changes.

CONCLUSIONS

The main objective of this study is to describe, analyze and, as far as possible, present a quantitative overview of the need for improvement of public transport within the municipality of Stara Zagora, affecting mainly the settlements within the municipality. Based on a sound methodological approach, empirical evidence and the results of a questionnaire survey, the following results were derived, which include intermodally diverse environmental innovations. They cover both freight and passenger transport. Based on the findings of this survey, recommendations and advice are given to policy makers for the optimization and development of public transport in the municipality of Stara Zagora, which would create conditions for connectivity and development of peri-urban areas. The analysis carried out shows that the density of the

transport network and the choice of public transport routes and lines is influenced by many factors, both specific and general. The latter include the number of inhabitants.

The assessment and analysis of rural mayors is an important argument for the definition of transport policies and the implementation of initiatives related to the management and development of urban transport. The aim of the study is to gain a better understanding of the role and importance of public transport for the regional development of municipalities. This predetermines the arrangement of the problems in the development of the urban transport system on the principle of innovation. Thus, first, the methodologies for defining, grouping, and ranking innovative cities and related territorial formations such as municipalities, which are subject to targeted transport policy, are characterized.

Trends show that there is a tendency towards higher density in medium-sized cities such as Stara Zagora, but an increase in population is also visible in the municipality's villages.

On the other hand, the reforms that have taken place since 1990 have sought optimization, cost reduction, etc., which, however, largely lead to impaired daily mobility, as well as congestion at peak times.

In terms of accessibility and inter-village connections, groups of 'privileged' and 'neglected' villages are emerging.

Those located along the first-class road network are unproblematic, while connections between villages south of Kaloyanovets and those in the north-eastern region are severely hampered by the poor condition of the roads.

Within the municipality of Stara Zagora, the establishment of a functioning transport system passes through the creation of several transport schemes and plans of varying degrees, as legal and sub-legal acts, through which assumptions, forecasts, and future actions to modify the existing environment and management are legally anchored.

These activities are an important instrument of public works, especially for municipalities of the rank of Stara Zagora, and at the same time they are an important instrument of spatial planning and policy.

Through them, the goals, intentions, and actions for building the physical living environment of people and the possibilities for public connectivity within the municipality of Stara Zagora are defined.

The schemes, plans and transport lines connecting the villages and the city of Stara Zagora are important in several ways - they implement the principles of territorial connectivity, create conditions for continuity in the development of the different territories, in addition to creating a favorable living environment within the agglomeration area. Finally, the effect of coordination of common transport policies between the competent public authorities and the public is sought in the development of a specific territory.

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