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Gender Research in Transport: Key Issues, Tools and Policy Relevance in Serbia¹

Abstract

Although transport may appear as a gender-neutral sector, women's and men's experiences with transport systems and services differ, particularly with respect to accessibility, affordability, safety and personal security. The topic of this paper is introducing key issues related to gender research in transport, such as economic development, health, safety, personal security, sustainable mobility, and the impact of mobility on women's professional and personal lives. The paper gives an overview of innovative tools developed for gender research in this sector and presents the best practices in engendering transport systems based on implementing findings of the policy-oriented research. The paper points out that there is a danger to interpret differences in travel patterns of women and men by over-simplifications, that often result in stereotypes. Therefore, the approaches to gender research in transport should include concepts of intersectionality, vulnerability, and social inclusion. The paper suggests implementing interdisciplinary, transdisciplinary, participatory, evidence-based and community-based research in order to address the complex challenges of transportation.

The gender consideration is still absent in the transport policy of the Republic of Serbia. The lack of gender approach to transportation design, planning and management aggravates women's access to employment opportunities, health care, childcare, maternal care, social services and community participation, contributing to their social exclusion. The paper identifies a need to conduct and support gender research in this sector, as a first step in mainstreaming gender, enhancing economic development, and improving

¹ This work was supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia. The project no. 179023 is implemented by the Institute of Social Sciences, Belgrade.

quality of everyday life of women and men in both urban and rural areas. The aim of the paper is to contribute developing gender transformative public policies in the Serbian transport sector in order to ensure that it offers services that incorporate the needs of both women and men into the design and delivery of transport operations and investments.

Key words: gender research, gender mobility patterns, gender mainstreaming, transport, Republic of Serbia

Introduction

Although researchers in many countries are concerned on gender issues in transport for decades ago, gender research in this sector gained the attention of the United Nations at the beginning of 2000s. The findings have indicated that transportation policies in the countries of both the North and the South have neglected women's mobility patterns and needs, and that women are excluded from participation in decision making in this sector due to their marginalized position (Peters, 2001; Hamilton, 2001).

The UN Economic Commission for Europe (UNECE) has particularly underlined its importance. The UNECE urges governments, relevant agencies and research institutions conducting improved transport surveys and applying gender sensitive interviewing and other gender sensitive methodologies; analysing daily realities of female transport users, women's latent demands and their willingness to pay for better transport; documenting transport sharing models at local levels; and providing gender sensitive stakeholder consultation (UNECE, 2008: 5). Besides, the UNECE demands providing statistics on gender differentiated mobility, including data differentiated by length of trip rather than number of trips; by reasons to travel; car drivers vs. passengers; accounting for journeys on foot which are women's; accounting for typical times of travel (rush hours, i.e. men's travel, vs. non-rush hours, i.e. school run); providing figures on health issues, e.g. transport poverty (being marooned in rural areas links with increased use of anti-depressants). Governments are also urged to research changes in transport infrastructure with a gender perspective. The research on women's strategies to cope with transport needs should also be supported.

The priority in the EU research policy is the integration of the gender dimension into project funded and co-funded under the European Commission`s Research and Innovation Framework Programme (European Commission, 2014: 5). The Horizon 2020 underlines the need of innovative solutions in transport, to meet challenges such as reducing greenhouse emissions. Gender research in transport is, therefore, important in developing the knowledge base to support the development of a sustainable transport system responsive to the needs and constraints of a society.

The European Commission (2014: 5) has underlined that studies are needed to explore methods of translating the research findings into policy. Namely, while many of the issues related to gender mobility and travel patterns have been extensively researched, they have received limited attention in developing gender-specific policies and programmes. Therefore, the European Commission considers gender impact assessment of transport policies should be carried out regularly to monitor their contribution to gender-neutral transport system.

The topic of this paper is introducing key issues and tools related to gender research in transport, and to point out to its policy relevance for the Republic of Serbia. The first section of the paper will summarize arguments of the UN and the EU regarding promoting gender mainstreaming in transport as a policy objective. The following sections introduce key issues related to gender research in transport, innovative gender research tools in this sector, and good practices in the EU. The analysis of the gender issues in the transport sector in the Republic of Serbia is presented in the fifth section of the paper. In the conclusion the attention has been drawn to the need to addressing the complex challenges of transportation by conducting and supporting interdisciplinary, transdisciplinary, participatory, evidence-based and community-based research at both country and local community level.

The aim of the paper is to contribute developing gender transformative public policies in the Serbian transport sector in order to ensure that it offers services that incorporate the needs of both women and men into the design and delivery of transport operations and investments.

Gender Mainstreaming in Transport as a Policy Objective at International and the EU Level

The UN pointed out this issue as a priority to be addressed in the preparatory process for the World Summit on Sustainable Development 2002. Governments have been reminded on their obligation to implement the Convention on the Elimination of All Forms of Discrimination against Women² and the Beijing Platform for Action³ with due diligence in all sectoral policies, including transport. Gender mainstreaming as a concept was endorsed by the Fourth World Women's Conference in Beijing in 1995 and became a formal legally binding commitment for EU states with the entry into force of the Amsterdam Treaty on 1st May 1999.

The International Conference *Gender Perspectives for Earth Summit 2002 – Energy, Transport, Information for Decision Making* summarized recommendations to governments, donor agencies and International Financial Institutions (IFIs) aimed at mainstreaming gender in this sector (Gender Perspectives for Earth Summit, 2002). The Conference conclusions stressed that the gender perspective “need to be fully integrated into all transport related policy-making in all departments at all levels on a regular and pro-active basis” (Gender Perspectives for Earth Summit, 2002: 6). Therefore, States should implement different measures in order to reduce transport burdens and expenditures of women and men, while creating equitable access to transport systems and infrastructure, and ensuring women's increased participation in decision-making. Governments have been recommended to introduce participatory transport planning methodologies in order to be able to incorporate the gender divide of transport and travel needs.

Up to date, gender sensitive transportation policy has been adopted and integrated in the policies and programmes of the World Bank (2010), the Asian Development Bank (2013), the Organization for Economic Cooperation and Development (2011) and

² U.N. Doc. A/34/46

³ Beijing Declaration and Platform for Action, Fourth World Conference on Women, 15 September 1995, A/CONF.177/20(1995) and A/CONF.177/20/Add.1(1995)

the European Bank for Reconstruction and Development (2011). Moreover, these international institutions have developed gender toolkits for integrating gender perspective in transportation and making it working for both women and men (World Bank, 2010; World Bank, 2013; Asian Development Bank, 2013; OECD, 2011; European Bank for Reconstruction and Development, 2011).

The UNECE has issued a thematic report that pointed out key gender issues in the infrastructure and transport sectors identified by the National Development Plan 2000-2006 of the Government of Ireland (UNECE, 2008: 2-3). The UNECE underlined that „measures are necessary which reduce transport burdens and transport expenditures of women and men while creating equitable access and ensuring women’s increased opportunities and participation“ (2008: 4-5).

The study on women and transport commissioned by the European Parliament’s Committee on Transport and Tourism (2006) has showed that the European transport policy has had deep and structural gender problems. This study, the first ever recognising the issue of women and transport across the EU, showed that “normal” transport research and policies emerge to be androcentric (2006: iii). The European Economic and Social Committee (2015) has concluded that there was a need for integrating gender perspective into the transportation sector, as all its dimensions (air, sea, road, rail, inland navigation, space, logistics) are traditionally male-dominated. This is a result of the following: transport policy is male-oriented, devised by men and centred around their lifestyle; employment in the sector is primarily male and is geared to male workers; the values embedded in the industry show little support for females in the sector and lack gender-sensitivity; gender consideration is absent from EU transport policy.

Taking in account this Opinion of the European Economic and Social Committee, the European Parliament has brought the gender issue in the transport as an important policy issue. In its *Resolution of 9 September 2015 on the implementation of the 2011 White Paper on Transport*, the European Parliament has stressed that “measures are also necessary to boost women’s participation in the transport labour market, remove possible existing barriers, and ensure equal treatment of men and women by addressing existing remuneration and advancement gaps“ (para. 42).

In late 2017, the European Economic and Social Committee launched the *Women in Transport - EU Platform for Change* and adopted the *Declaration on Equal Opportunities for Women and Men in the Transport Sector*. The aim was to strengthen women's employment and equal opportunities for women and men in the transport system⁴. In line with this commitment, many EU member countries, as well as the EU institutions, have conducted gender research in transport and on the transport related issues. The European Commission has identified mobility, safety, security, employment and sustainability as the key issues at stake to achieve gender-neutral transport (European Commission, 2014: 5).

Key Issues Related to Gender Research in Transport

Women's and gender issues in transport has been in the focus of scholars and researchers from 1970s. The research has been enhanced by a series of international conferences on women's issues in transportation. These events were aimed at exchanging information and research findings on emerging issues affecting women's access to mobility, safety, personal security, and travel needs and patterns. The four of these international events were held in the USA in 1978 (Washington, DC), 1996 (Baltimore), 2004 (Chicago) and 2009 (Irvine). The first one has analysed women's travel behaviour and conditions. The second conference broadened the scope from primarily research to include policy-making, planning and engineering processes (European Commission, 2014: 3). The 2009 Conference focused on personal safety and security, and the impact of extreme events, and expanded the scope to focus to gender-neutral transport rather than to focus solely on women's issues. The latest Conference was held in 2014 in Paris⁵ and was focused on

⁴ Up to date, the Declaration has more than 170 signatories, including the EU bodies, governments, companies, agencies and employers associations. The Declaration has been signed by the Coordination Body of Gender Equality of the Government of Serbia.

⁵ The 6th International Conference on Women's Issues in Transportation is scheduled to be held on September 10-13, 2019. The Conference will provide update on the progress and challenges regarding women's mobility and will explore how gender equality practices in transportation

“bridging the gap” in an effort to identify and address issues specific to women’s use and involvement in the transportation system, as well as on bridging research findings and policies (Women’s Issues in Transportation, 2014). An important outcome of the Conference was the identification of research needs for future study.

The research in this field may be grouped in four key areas: (1) transportation policies and mobility, (2) health, safety and personal security, (3) sustainable mobility, and (4) the impact of mobility on women’s professional and personal lives. In this section of the paper, gender issues at stake in the each of the above listed areas will be presented, as well as the research needs for future study, as identified by the researchers (Women’s Issues in Transportation, 2014: 17-23).

1. Transportation Policies and Mobility

The studies on gender differences in transport (European Commission, 2014; European Institute of Gender Equality, 2017; European Institute of Gender Equality; Hamilton, 2001; Peters, 2001; European Parliament Committee on Transport and Tourism, 2006) set out the nature of travel differences between women and men as transport users and consumers, as well as the implications this has for planning and operations of the transport system. Transport policies have been planned and managed on the basis of men’s travel patterns considering them as “common”. However, data have shown that the asymmetry in assignment of family and care responsibilities for between women and men results in asymmetry in travelling “by different means, at different time, to different locations over different distances, and with different pressure to produce spatial-temporal-social integration” (European Parliament Committee on Transport and Tourism, 2006: v).

The EU survey in 2006 (European Parliament Committee on Transport and Tourism) highlighted that women spend less time on

are increasing business and economic development. It will also exchange ideas on how public agencies can incorporate good gender equality policies and practices with approaches to oversee efforts and measure performance. Source: <http://www.trb.org/Calendar/Blurbs/175975.aspx>, accessed on 20 June 2019.

travel, travel less by car, and travel by slower modes than men. Women spend more time travelling bus and on foot across the EU. Men by contrast spend more time travelling by car, bicycle and by train. Although there were the variations between the member states due to the lack of the harmonised data and the different level of economic activities, the figures indicate the importance of domestic related or caring economy travel to women across the EU, and this burden falls disproportionately on women. Employed women escort children to and from childcare and escort other vulnerable family members, that increase the amount of time travelling.

The further identified research needs are, amongst others, related to document the differential impact (or not) of information communication technologies and online social networks on trip making behaviour between women and men for social trips; evaluate if women's lower use of automobiles and higher use of public transport and walking leads to unequal mobility outcomes; develop rail industry standards that afford comfortable, convenient, efficient travel perceived as safe by women; identify the relationship between mode choice and human interaction, e.g., are the social aspects of travel gender-based, age-based, or income based? (Women's Issues in Transportation, 2014: 18).

2. Health, Safety and Personal Security

Transport contributes to developing quality of life enabling access to health care facilities. Well-developed transport infrastructure, and accessible and affordable public transport have been proved to be beneficial for the health of the population. In contrary, underdeveloped transportation and infrastructure, e.g. in remote and rural areas, produce constraints to the population to exercise their right to health care. Evidence suggests that in rural areas, particularly in developing countries, women's access to health care, maternal health and child care services is limited due to the mobility constraints (Women's Issues in Transportation, 2014).

Gender differences exists regarding travellers' safety, too. The research of the background and causes of road accidents indicate that women's road risks are different than comparable males,

as both pedestrians and drivers (Women's Issues in Transportation, 2014: 313-424). The EU statistics show a divergent trend in road accidents between women and men with fewer women than men involved in fatalities, though the gender gap closes with increasing age. This divergence is explained by differences in attitudes to risk taking, with biological differences such as high testosterone level in young men, accounting for the higher percentage involved in fatal car accidents (European Commission: 2014: 11). The research findings assist to develop and implement effective preventive measures aimed at increasing travellers' safety in transportation. The research have also indicated that differences in body structure and biology between women and men are a key issue with regard to vulnerability in car crashes. Up to recently, differences in ergonomics between gender have not been taken into account in design of vehicles, infrastructure and transport equipment (European Commission, 2014: 11-12; DeSantis Klinich et al. 2005; Dellinger, 2005; Beck, Shults and Colley Gilbert, 2005).

Women's perception of personal security in transport differs from men's perception. They are far more often than men exposed to harassment and sexual harassment in the transport means, on streets, bus stops, train stations, etc. By a rule, female passengers in the public transport are concerned about travelling alone at night, travelling alone with small children, or travelling through urban areas with high crime rates. They also feel unsafe in underground stations, in a multi-storey car park at night, and in crowded transport services where harassment may occur (European Commission: 2014: 15-17). The study has shown that the EU transport sector has a high incidence of all forms of violence, many of them go unreported (European Economic and Social Committee, 2015: 6).

Further research needs regarding health, safety and personal security in transportation include the mobility needs associated with lifestyle changes due to aging and other factors, identifying research methods that can be utilized to solve the puzzle of combining mobility management, traffic safety and equity, assessing the economic consequences of improving safety, security, mobility and health of female transportation users (Women's Issues in Transportation, 2014: 19).

3. Sustainable Mobility

Sustainable transport embraces three key dimensions: environmental sustainability (focusing on cutting emissions), economic sustainability (green growth, decarbonisation, introduction of electric cars and high speed trains, “intelligent transport systems”) and social equity (ensuring mobility for all, including the elderly, the disabled, rural population etc.) (European Commission, 2014: 18-19). Research found that men tend to think about the impact of gasoline on pollution, but women are more likely to act. Women are more concerned about automobile safety and environmental impacts than men, but both women and men consider the vehicle’s ability to protect the occupants in a crash. Women have less budget to purchase a vehicle (Women’s Issues in Transportation, 2014: 19).

The research needs in this area include detecting the necessary conditions for women to consider plug-in electric vehicles to encourage greater use by women, especially to mature women (Women’s Issues in Transportation, 2014: 19).

4. Impact of Mobility on Women’s Professional and Personal Lives

Access to transportation and mobility is very closely linked with employment. Research has shown that there are gender inequalities in access to a job market and limitations to women’s employment opportunities. Faced with the heavier burden of family responsibilities, women, particularly those with small children, tend to take jobs closer to home and within shorter commuting distances (European Commission, 2014: 21-22). Their household role has a severe impact on their mobility and mobility patterns. They tend to use public transportation on shorter distances and for multiple purposes within one journey (e.g. escorting small children to school on route to their workplace and stopping at the market) or taking “trip chaining”, outside peak hours. Their daily mobility patterns are more complex than men, combining domestic and care giving tasks with paid employment and social obligations; as a result, women often experience “time poverty” (Asian Development Bank, 2013: 2). They may turn down employment opportunities if the transport system does not enable them to harmonise their family obligations

with work responsibilities. They also tend to accept a lower-paid or informal job closer to or at home. Besides, as women in general have lower income than men, they may face financial constraint to possess a car or another type of a vehicle, or to afford public transport services. Gender sensitive transportation planning and management may contribute to increasing employment opportunities to women.

The further research needs with this regard include examining the gender impact of transportation technologies, the gender dimension in mobility planning, assessing the relationship of women's involvement in the transportation decision making to policy and planning outcomes (Women's Issues in Transportation, 2014: 20).

Official statistics should allow for the measurement of differences between women and men on various economic and social grounds, so that differences and inequalities in the situation of women and men in a transport sector would be reflected. Governments, relevant agencies and research institutions have been recommended to provide statistics on gender differentiated mobility, including data differentiated by length of trip rather than number of trips; by reasons to travel; car drivers vs. passengers; accounting for journeys on foot; accounting for typical times of travel (rush hours, i.e. men's travel, vs. non-rush hours, i.e. women's travel accompanying children to school) (Gender Perspectives for Earth Summit, 2002: 7).

Innovative Tools for Gender Research in Transport

The Swedish geographer Torsten Hägerstrand (1970) has developed a "time-geography" approach that provides an analysis of the interactions between temporal and spatial constraints and experiences of individuals during their daily activities. This approach enables identification of the accessible space for an individual's activities at a given period of time, which contributes to observe daily travel behaviour differences between women and men.

The cross-analysis of specificities in women's and men's mobility helps to understand how the city moves. With this

respect, it is important to mention the “Urban Pulse” tool that has offered new perspectives for the use of travel survey data. This innovative tool has been developed by the Centre d’Étude Technique de l’Équipement (CETE) of Lyon, France in 2010. As Hurez and Richer (2014: 59-69) explain, this approach differentiates daily behaviour in terms of time and space, resulting in a gender time-geography. The research observes the pace of life of urban women and men by exploring: are some areas more feminine/masculine than others? who does what? does the area become more feminized due to the arrival of more women or due to the exodus of men? The deeper insight into the spatial-temporal dynamics of the daily mobility of women and men through the “Urban Pulse” tool in the Rhône-Alpes region provided findings that should policy makers bear in mind in planning and operating transportation, facilities and services. The daily schedule of active women is shorter than that of active men, with more time-related constraints and is therefore differently paced. Travel distances are shorter and less dependent on the car while destinations tend to be closer to the city centre than for men, due to the type of jobs and other facilities. The “Urban Pulse” tool may be also useful in providing insight into the gender time-geography in observing daily mobility of particular groups such as retirees, couples with small children, single parent families, single employees, etc.

Research focused on specific vulnerable groups of women may also be helpful in adapting the transportation system and facilities to their needs. For example, the research on the travel behaviour of working mothers with small children in Tokyo metropolitan areas has shown that child-caring mothers’ burdens remain heavy, although the women’s employment rate in Japan has improved (Ishigami *et al.* 2014). The research findings with this respect are same in the other countries, such as France (Motte-Baumvol, Bonin and Belton-Chevallier, 2014) and the Netherlands (Jorritsma and Schaap, 2014). The research methodology is based on the division of the parents’ responsibility of dropping off/picking up children among themselves, and how they combine this with their work-related mobility.

Gender budget analyses are particularly important tool to provide “information about how much women- and men-power, institutional and financial resources and research funding goes into furthering women’s vs. men’s interests regarding transport” (Gender Perspectives for Earth Summit, 2002: 6).

Knoll (2014: 133-139) warns of the importance of developing specific gender sensitive travel survey methods. He underlines that “the gender analysis shows that not only the interpretations of the data, but also the questionnaires reveal bias and simplifications, which veil crucial aspects in the behaviour concerning mobility, particularly the behaviour of caregivers in their everyday lives”.

By a rule, research indicate on differences in travel patterns of women and men interpreted that they have different values and needs. Levin and Haith-Ell (2014: 215-223) underline that these over-simplifications often result in stereotypes. Therefore, they propose using the methodology based on methods and quality requirements similar to those existing in the fields of environmental impact assessment and social impact assessment. That is: the method should be appropriate, effective, knowledge-based and open to participation and criticism. These authors prefer to take an intersectional approach in addressing gendered issues in transportation, and to include the concepts of accessibility and social inclusion. Access to transportation widens (or limits) the opportunities for all to reach employment, services, education, health care, financial independence, so besides place and space dimension, power is as crucial to planning and managing transportation.

A number of researchers argue to move from interdisciplinary approach to transdisciplinary approach. Black and Black (2009) propose transdisciplinary approach to tackle the impacts of urban development and transport on public health in Australia. Similarly, Issarayangyun *et al.* (2005) developed the transdisciplinary framework for transport research in the fuller understanding of the community and environmental health impacts of aircraft noise. Although these cited research papers lack a gender perspective, its inclusion by the gender researchers would have a value-added impact.

Good Practices

In line with the commitment to gender equality, there is a trend of increasing number of the EU countries (the United Kingdom, France, Sweden, Germany, Ireland, Austria, Italy) that support comprehensive gender research in transportation and adapt transportation services and infrastructure to the identified gendered differences (Co-ordination for Gender Studies, 2007). The Swedish Government included gender mainstreaming in the public transport among the main transport development objectives in 2002 (EIGE). In France, the National Plan for Preventing Sexual Harassment in the Public Transport has been adopted in 2015.

In 2000, the British Department for Transport adopted and published its first Guidance and Checklist for Gender Auditing on Public Transport intended to support providers in carrying out a gender audit in their companies and of their services (EIGE). In 2004, the Transport for London (TfL), the integrated body responsible for the Capital's transport system, published a Women's Action Plan that detailed how it would improve services for women (Transport for London, 2010). In 2007, the TfL adopted the Gender Equality Scheme setting specific goals and activities for achieving gender equality and eliminating sexual harassment. the TfL conducted a comprehensive research to understand women's travel patterns and barriers to travel. The additional research has been conducted to understand the issues affecting the travel habits of women in all equality groups (older women, disabled, women in both full- and part-time employment) and to analyse trip chaining. The research findings have been used to improve accessibility, affordability, safety and security of the London public transport system, customer information, and position of women in the transport industry.

The practice of London inspired a number of other European cities such as Berlin, Vienna, Munich, Bolzano and Malmö. Berlin (Droste, 2011; Bagge and Runge) and Vienna (City of Vienna - Urban Development Municipal Department, 2013; Kail, 2011) have taken numerous measures in adapting the public transport to the needs and travel patterns of women and men, combining them with the engendered urban planning. Swedish town Malmö increased physical security in the public transport thankful to

integrating gender perspective in the transport policy from 2011 (Levin and Faith-Ell, 2011). In Bolzano, the municipality has adopted a plan of harmonising family and work responsibilities, that included measures for adapting the public transport according employed women's needs as caregivers (Comune di Bolzano, 2005).

Gender Issues in the Transport Sector in Serbia

Gender mainstreaming in all policies and all levels is promoted as one of the strategic goals of the National Strategy on Gender Equality in the period 2016-2020 ("Official Gazette of the RS", no. 4/2016). However, this strategic goal has not been translated in the strategies related to transportation, namely in the Strategy on Traffic Safety in the Roads in the period 2015-2020 ("Official Gazette of the RS", no. 64/2015) and the Strategy of the Development of the Waterborne Transport in the period of 2015-2025 ("Official Gazette of the RS", no. 3/2014)⁶. Up to date, gender issues in the Serbian transportation sector has not been explored in depth. There is a lack of a comprehensive gender study that would assess the state of play in the transport sector from gender perspective. Without it, it is not possible to mainstream gender in this sector.

Majority of the official data and statistics related to travellers, traffic, and usage of transportation means are not disaggregated by sex. The available data and surveys are scarce. The Time Use Survey in the Republic of Serbia in 2010 and 2015 has shown that, in average, employed men (30-64 yrs) spend almost double amount of time travelling to/from workplace than employed women (30-64 yrs), while employed women spend much more time travelling than unemployed women (Statistical Office of the Republic of Serbia, 2016: 117-122).

Official statistics show that out of 1,91 million of employees, majority (95%) commute to work. Employed women more often than employed men use city public transport (bus, train, trolley) (45%) or commute on foot (30%) to work, while men (47%) prefer

⁶ The Development Strategy of Railroad, Road, Air and Intermodal Transport in the Republic of Serbia for the period 2008-2015 has expired, and the new one has not been adopted yet.

using a car to commute to work (Statistical Office of the Republic of Serbia, 2011). Male employees also prevail in daily migrations performing an occupation within the same municipality or in another municipality (Statistical Office of the Republic of Serbia, 2011a). Research of Cikic and Stojsin (2017) also show that women are less commuting than men. The researchers argue that “there are differences in: (a) gendered daily commuting practices according to the settlement type, (b) daily commuting practices of active women and female pupils/students and (c) that there is an increase of female daily commuting practice in 2011 in comparison to the previous census in 2002” (Cikic and Stojsin, 2017: 236).

As the 4th SARTRE (Social Attitudes to Road Traffic Risk in Europe) survey in 2010 shown, the percentage of female drivers in Serbia (27,2 %) is much less than in average in all countries participating in the survey (45,0%); only 4 % motorcyclists in Serbia were women (European Commission, 2014: 5-6).

As men more frequently than women drive vehicles, they are more frequently than women victims in road accidents. In 2017, males account for 75% of fatalities and 63% of the injured persons in Serbia (Table 1). Out of a total of 525 road accidents in 2017, majority of cases (67%) was caused by drivers` undertaking thoughtless actions and incorrect performance of traffic actions. The statistics also indicate that there are more fatalities when it comes to young men in relation to young women (Road Traffic Safety Agency, 2018: 65). Majority of young men died while being drivers (66%), while majority of young women died as passengers (81%). By analysing the types of elder male fatalities of 65+ of age, half of them were killed as drivers, while only 5% of elder women were killed as drivers; majority of them (65%) died as pedestrians.

Table 1. Gender of the fatalities and the injured in road accidents, Republic of Serbia, 2017, in percentage

	Driver		Passenger		Pedestrian	
	Fatality	Injured	Fatality	Injured	Fatality	Injured
Male	94%	79%	45%	46%	61%	43%
Female	6%	21%	55%	54%	39%	57%

Road Traffic Safety Agency, 2018: 29-31.

There is a lack of gender analysis of transportation accessibility and affordability. As research have indicated gender pay and gender income gap (Statistical Office of the Republic of Serbia, 2017; Dokmanovic, 2017; Vladislavljevic et al., 2013), it may be concluded that women, particularly women belonging to vulnerable groups (unemployed, single mothers, rural women, women with disabilities, elderly, etc.) have faced difficulties to access and afford transportation, including the public transport, and that majority of them use a bicycle or go by foot.

There is also a lack of available data and gender analysis of differences in accessing to and using of transport in rural areas versus urban areas. However, the available statistics on the economic active population by mode of transport to work, by sex and by areas (Statistical Office of the Republic of Serbia, 2011), and the studies on the position of women in rural areas (Blagojevic, 2010; Bogdanov et al., 2011) indicate unfavourable position of rural women and men versus urban population regarding accessing employment opportunities, health care and other social services due to underdeveloped transportation system and infrastructure. Almost 95% of trips in public transport have been done in urban communities. The urban versus rural disparities regarding public transport are huge. More than a half of the total number of the public vehicles are in Belgrade; the capital also consumes majority of investments in the transport infrastructure, equipment and vehicles (Ministry of Construction, Transportation and Infrastructure, 2017). Indeed, the crowded urban communities need special attention regarding operating efficient transport system. However, if the rural areas are neglected, 25% of the total population of Serbia would have difficulties in accessing education, health care, maternal care, and social services, as they have been concentrated in the urban areas. Underdeveloped transport infrastructures, public transportation and high prices of gasoline contribute to social exclusion of rural population, particularly of vulnerable groups such as women, children, and persons with disabilities. In rural areas women mostly use bicycles or go by foot in commuting to markets, schools or clinics, as less rural women than urban women possess a driving license. In the

Belgrade municipality 37% of persons who have a driving license are female. In the less developed municipalities, such as Jablanica, Pirot and Toplica, there are three times more men than women which have a driving license (Statistical Office of the Republic of Serbia, 2017a).

Available research indicates that women are more often than men exposed to the risk of harassment, sexual harassment and other forms of sexual violence in the public transport and the public space. A survey done in Belgrade in 2007 (Tanaskovic and Raceta) shown that almost all female respondents have had the experience of sexual harassment in the public transport.

The gender assessment of women`s safety done in Nis in 2014 provided similar findings (Centre for Girls, 2014). It was the first research of this type done in collaboration with the City Assembly, local institutions, municipalities and civil society organizations. More than 35% of respondents were exposed to harassment, 33% to verbal abuse, 17% to theft, 9% to physical violence and almost 3% to sexual violence. The research showed the lack of recognition of sexual violence as violence, and the apparent presence of feelings of shame that is imposed because of the attitude of the community, which is the reason that sexual violence in the public transport and public space is still a taboo. Fearing for their safety, respondents are limited in their activities. Although there is a lack of survey on this issue in other towns in Serbia, the increasing number of headlines in the media about the cases of sexual violence and sexual harassment in the public transport and public space (Paradjanin, 2018) indicate the need of putting more efforts in prevention.

By a rule, women feel unsafe to travel late night, walk on dark streets, stay on desert bus stops or train stations, or use lightless public parking places. The risk of sexual harassment is also increasing in the overcrowded public transportation and stations. Good practices in other countries show that research are useful to indicate unsafe public transport and spaces as the first step to take adequate measures to prevent harassment and sexual harassment (CIVITAS, 2014).

Conclusion

The broad gender research in transport bring evidence that this sector is far from being a gender-neutral one. In contrary, gender differences are identified in all countries and all regions, regardless their level of economic development. Gender differences are related to mobility patterns, means of travel used, travel purposes, distance travelled, etc., indicating their linkage with the traditional gender roles, the gender segregation at the labour market and women's child-raising and caring responsibilities. The evidence suggests that considering and respecting women's issues in the transport policies would have multiple benefits, such as increasing women's opportunities to employment, reconciliation of family and work responsibilities, better access to health and child care, increasing personal security and safety, and increasing quality of everyday lives of both women and men. Supporting and conducting gender research in this sector is the first step in designing, planning, operating and managing adequate gender-transformative transport policy. However, the research in this field should include the concepts of intersectionality, vulnerability and social inclusion, in order to avoid over-simplifications resulting in stereotypes.

The research should also address the complex challenges of transportation issues and their interconnectedness with other sectors and issues, such as urban planning, employment, environmental protection, public health, education, rural development and gender-based violence. Therefore, innovative tools and new approaches are needed, such as transdisciplinary, participatory, evidence-based and community-based research. The economic, technical and technological development opens space for numerous new fields and perspectives to be examined in depth, such as assessing the economic consequences of improving safety, security, mobility and health of female transportation users, and the gender impact of new transportation technologies.

Although all these gender issues in transport are relevant in the Republic of Serbia as well as in other countries, its transport policy is still gender blind. Due to the lack of gender research, gender differences regarding usage of transport means, mobility, affordability, accessibility, safety and personal security still remain

unidentified. The lack of gender approach to transportation design, planning, management and investment aggravates women`s access to employment opportunities, health care, childcare, maternal care, social services and community participation, contributing to their social exclusion. In particularly difficult position are women in rural areas, women with disabilities, women with small children and other vulnerable groups of women. Conducting and supporting gender research in this sector by using transdisciplinary, participatory, evidence-based and community-based approach would provide a solid basis for designing and implementing gender-transformative policy in the Serbian transport system.

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**RODNA ISTRAŽIVANJA SEKTORA
SAOBRAĆAJA: KLJUČNA PITANJA,
METODI I RELEVANTNOST ZA JAVNE
POLITIKE U SRBIJI**

Sažetak

I pored prividne rodne neutralnosti sektora saobraćaja, iskustva žena i muškaraca se bitno razlikuju u korišćenju saobraćajnih sistema i usluga, naročito u pogledu njihove pristupačnosti, priuštljivosti, bezbednosti i lične sigurnosti. Zbog svoje androcentričnosti, istraživanja saobraćaja po pravilu ne detektuju rodne različitosti. Predmet ovog rada su rodna istraživanja saobraćaja i ključna pitanja koja otvara, kao što su ekonomski razvoj, zdravlje, bezbednost, lična sigurnost, održiva mobilnost i uticaj saobraćaja na profesionalni i lični život žena. Rad daje pregled inovativnih metoda rodnih istraživanja saobraćaja i dobrih praksi urodnjavanja ovog sektora na osnovu primene nalaza ovih istraživanja. Primećuje se da postoji opasnost da se rodne različitosti u pogledu obrazaca mobilnosti žena i muškaraca tumače preterano pojednostavljeno, što može da rezultira stereotipima. Stoga istraživanja u ovoj oblasti treba da uključe koncept interseksionalnosti, društvene ranjivosti i

socijalne isključenosti. S obzirom na složenost problematike saobraćajnog sektora, rad sugerise primenu interdisciplinarnih, transdisciplinarnih i participativnih istraživanja, uzorkovanje svakodnevnih iskustava i istraživanja na nivou lokalnih zajednica. U Republici Srbiji, rodna perspektiva još uvek nije uključena u politike saobraćaja. Nedostatak rodnog pristupa planiranju, koncipiranju i upravljanju u ovom sektoru ženama umanjuje mogućnosti zapošljavanja i otežava im pristup uslugama zdravstvene zaštite i brige o deci, što doprinosi njihovoj socijalnoj isključenosti. Rad identifikuje potrebu sprovođenja i podrške rodnim istraživanjima u ovom sektoru na svim nivoima, što je prvi korak ka urodnjavanju saobraćaja i javnog prevoza, podsticanju ekonomskog razvoja i poboljšanju svakodnevnog života žena i muškaraca i u urbanim i u ruralnim sredinama. Cilj ovog rada je da doprinese razvijanju rodno transformativnih politika u sektoru saobraćaja u Republici Srbiji, čime bi se obezbedilo da se usluge u ovom sektoru zasnivaju na identifikovanim potrebama i obrascima mobilnosti žena i muškaraca.

Ključne reči: rodna istraživanja, rodni obrasci mobilnosti, saobraćaj, urodnjavanje, Republika Srbija