DOI 10.26411/83-1734-2015-1-45-5-20

# The Influence of Public Transport Acts in 2019 in Poland on Conflicts Concerning the Shape of the Public Transport Network

Duszan Augustyn Jagiellonian University in Cracow, Poland

In 2019, the Polish Government introduced a new legislation on public transport. The main objective of these laws is to determine a new division of responsibilities within the public administration system for the planning, implementation and financing of public transport. These new regulations may significantly affect the scope of responsibilities and competencies of transport organizers, in particular regarding the creation of transport plans and funding mechanisms. As a result of maintaining an under-financed, unsustainable transport system based solely on commercial public transport for more than two decades, Poland has experienced a collapse of the public transport system in remote areas. The absence of complex policies in the field of public transport has caused millions of people to suffer from transport exclusion, especially in settlements located outside the main transport routes. This is resulting in disputes over the structure of the regional transport network. The aim of the research paper is to identify potential axes of conflicts between transport organizers, government and local governments subsidizing co-financed transport services, passengers and companies providing public and commercial passenger transport.

**Keywords:** Poland, public transport policies, remote areas, conflicts in public transport

### 1. INTRODUCTION

The goal of the research paper is to diagnose the essence of changes in public transport policies in Poland and its impact on the public transport stakeholders, and to track the consequences of this process in context of evolution of legal and social environment. To find out how different the shape of the public transport system in Poland may look like, the current challenges and foreseen results of the new policies will be analysed. Additionally, the role of the stakeholders and impact on their situation will be anticipated.

The geography of Poland is seemingly one of the most favourable for the public transport services [29], with a relatively dense population distribution of 122 people per square km<sup>1</sup>, 60,1% of urban population<sup>2</sup> 29,6% of

<sup>&</sup>lt;sup>1</sup> Central Statistical Office, Population. Condition and structure as well as natural movement in the territorial profile in 2018.

Central Statistical Office, Concise Statistical Yearbook of Poland. Population. Religious Beliefs. Table 6 (66) Population in cities, Warsaw 2019, p. 102.

forestation<sup>3</sup> and only 3,2% of mountainous terrain (areas above 500m elevation)<sup>4</sup>. In spite of favourable geographical landscape, Polish public transport system does not fully utilize its potential due to the disintegration of transport network, low frequency and quality of services, seasonal dependency on the subsidies, and the lack of cohesion with the bus network, rail network and urban infrastructure.

# 2. THE ANALYSIS OF CURRENT CHALLENGES OF PUBLIC TRANSPORT SYSTEM IN POLAND

One of the major causes of social problems in Poland is social exclusion related to limited access to public transport services, impacting mainly rural areas situated far from the main transport routes and agglomerations[32]. The absence of permanent accessibility to public transport triggers chronic lack of mobility, impacting especially rural communities<sup>5</sup>. Transport-related social exclusion has negative, long-term effects on lives of individuals and communities<sup>6</sup>[22]. Inhabitants of excluded areas who are willing to stay mobile have no other possibility than to purchase and maintain an individual means of transport[28]. Furthermore, people who are unable to access transport easily, have limited access to employment[19], education, health, services[18], opportunities, social network. Hence, work and leisure are limited which is becoming a trigger for long-term negative social effects[49][31][24], including:

- structural unemployment and migration[49]
- social deprivation[6]
- waste of opportunities[48]
- weakening or braking of social bonds[32][35]
- socioeconomic decay[25][26][36]
- increasing level of motorization[54]<sup>7</sup>
- negative impact on environment[13][57][30]
- peripheralization[37][18][2]

Numerous social groups suffer from the consequences of transport-related social exclusion[51][5][47], especially:

- disabled people. Disability is often tied with lack or limited possibility to drive a car, which equals to increased dependency on relatives, acquaintances or social services. Disability is often linked with specific needs related with mobility. Lack or limited accessibility to transport may thus result in lack of chances in employment in working places prepared with requirements for disabled people. In cases of mobility impairment, transport exclusion may have negative psychological effects related to feeling of being imprisoned at home[52].
- elderly people. Because of the advanced age, many people may not be able to use a car[35]. Furthermore, a lot of Polish senior citizens cannot purchase and maintain a car because of their low pensions[17]. For many elderly people, especially those who have no support from families, access to public transport is the only way to meet their basic needs. Many of them are dependent on frequent specialist doctor visits, access to shops including pharmacies and services, which together with decreasing physical performance creates

<sup>&</sup>lt;sup>3</sup> Central Statistical Office, Concise Statistical Yearbook of Poland. *Agriculture, hunting and forestry. Fishing*, Warsaw 2019, p.286.

Central Statistical Office, Concise Statistical Yearbook of Poland. Natural conditions and environmental protection, Warsaw 2019, p. 19.

<sup>&</sup>lt;sup>5</sup> Local Data Bank of the Central Statistical Office, 2016.

<sup>&</sup>lt;sup>6</sup> European Communities, *A new partnership for cohesion. Convergence, competitiveness, cooperation. The third report on economic and social cohesion.* Luxembourg, COM (2004) 107, pp. 33-34.

<sup>&</sup>lt;sup>7</sup> Local Data Bank of the Central Statistical Office, 2016.

- a barrier in everyday life activities8, especially during the winter[35].
- teenagers[54]. The young commuting to school on daily basis have limited education opportunities due to bus timetables which do not always give them chances to participate in the activities after regular classes. Teenagers depend on possibly rare bus connections or family, which must deliver and pick them up from school or extracurricular activities. An additional problem that young people face is significantly lower access to social relations with peers, which may affect the teenagers in less developed social network or from rural areas.
- the poor. Many people with low income are not able to afford private mean of transport and have limited access to employment, education and services, which is one of the reasons for pushing them into structural unemployment and social deprivation[32]. Among them there is a group of the working poor, employed in companies which requires a long-distance travel by private car. Often the costs of maintaining an individual mean of transport are so high that they are consuming a significant chunk of the salary, in some cases the costs of access to work may become higher or resemble salary. Uneven allocation of economic and social activity[23] causes a paradox where in regions with high unemployment rates, the aggregated working costs are higher than in the regions with low unemployment.
- senior/disabled people care assistants. The dysfunctional system of social services in Poland forces the descendants of seniors and disabled people to dedicate their life to helping dependent members of their families. Most of the care assistants are unpaid members of their families, who struggle with regular visits in the houses of elderly or disabled people. Because of lack of support from the government they are usually unable to afford buying and maintaining a car. On the other hand, their duties make it impossible to start another job, which pushes them further into transport exclusion[4].

For many social groups dealing with low income, the only way to purchase a car is to buy a used one, which often requires regular checks and repairs. Using an old car entails a lot of additional work and skills related to car mechanics, necessary to stay mobile. In addition, it is highly possible that the car may experience a critical malfunction and will not be able to be used for a long period of time or would require expensive elements to be replaced. All of that generates costs that some car-users may not be able to cover. Dependency on a car, together with struggling with its maintenance may cause a constant feeling of instability and uncertainty.

# 3. THE IMPACT OF TRANSPORT-RELATED SOCIAL EXCLUSION ON COMPETITIVENESS OF PUBLIC TRANSPORT PROVIDERS

The key reason for changes in public transport policies in Poland is the rapidly increasing level of transport-related social exclusion. Changes in demand, together with changes in the economic and social structure of society impacts the market dynamics of Polish public transport and competitiveness of its providers. To understand and measure the negative impact of the demand on public transport services it is necessary to diagnose the causes of transport-related social exclusion in Poland and factors causing it, such as:

- the lack of connections to settlements. Many settlements, especially the small ones, and situated outside of the main transport routes, are not connected to the public transport network at all, or are connected only during the school year. This problem mostly impacts sparsely populated areas, in which the bus stop network is not well-developed, and passengers face the so called "last-mile problem" [53]9.
- limited frequency of connections. In the villages which are not on the main transport routes, the bus connections are maintained mainly during the schooldays in hours allowing pupils to go to and back from school.

<sup>&</sup>lt;sup>8</sup> Rosenbloom S., *Transportation in an Aging Society: a Decade of Experience*, [in:] *Technical papers and reports from a conference*, *November 7-9*, 1999, Bethesda 2004, pp. 17-19.

<sup>&</sup>lt;sup>9</sup> National Aging and Disability Transportation Center, 2016 Transportation Trends: A Look at the Year's Top Mobility Challenges & Opportunities, Washington DC 2017, pp. 20-25.

- School children's preference results in limited mobility opportunities for adults. In many settlements, the number of connections is not enough to satisfy the various needs of society and job market[12], allowing passengers only few trip options per day. One of the consequences of timetables limited only to profitable connections is limited accessibility to work and services, and it forces long waiting times for passengers.
- disintegration of the transport network. Public transport market in Poland is based on the free competition of passenger transport companies which are in their majority private entities[48]. One of the key systemic problems of Polish public transport is the lack of integration in schedules of buses, bus stops, passenger information, monthly tickets, tariff systems, route coverage etc.[14] Low level of integration equals hardships for interchanges, route planning, higher tickets costs, and in general, lower quality of services. As an effect of outflow of passengers, the public transport companies reduce the level of services and sizes of network which directly impacts the public transport competitiveness as a sector. Public transport companies often use aggressive methods of competition, even if seemingly cooperation may bring better profit for both companies and passengers. Lack of integration of transport services causes a lack of regional cohesion and competitiveness of the regions, affecting the inhabitants at the macro scale[2][8][21].
- the lack of integration of local transport with the rail transport. The lack of institutional and political will to create a common public transport strategy involving bus and rail transport creates a situation in which transport companies competes on the same routes instead of complementing each other. This results in inefficient split of passengers in between different means of transport[30], while both bus and rail transport are subsidized by state[10][50]. Often, private bus companies treat rail system as a threat and are not willing to cooperate with the rail companies. On the other hand, Polish law has a lot of obstacles in constituting an integrated ticket in between rail transport and local transport operated by local authorities[15].
- the lack of integration of local transport with the urban transport and urban infrastructure. Public transport in Polish cities and town is often based on patchwork solutions connecting post-communist city infrastructure, publicly organized hermetic public transport and market-driven private companies oriented on low-cost services and fee avoidance. In a lot of cities and towns there are few bus terminals which are often not in the vicinity of other terminals or rail stations. Public transport network is often not integrated with bus terminals, hubs of public transport and schedules. There is a lack of integrated tariffs and proper passenger information allowing intuitive interchanges[7]. Apart from that, cities miss locations where buses from outside of the city could easily reach the main public transport hubs or popular passenger destinations within the vital areas of the city[54][11].
- dysfunctional law regulating the public transport system. The law functioning before the 2019 reforms was passive in order to give local authorities the power to shape public transport reality. On the other hand, subsidies were given only to the passengers using reduced tickets (students, the disabled)[56]. A negative effect of subsidies triggered bus companies to focus mainly on the subsidized passenger groups, who were able to pay reduced tickets even after prices increase. The consequence of it is the reduction in attractiveness of the public transport for working people, and the escalation of passenger losses. Another law negatively impacting frequency was the implementation of separate school buses for primary school kids, closed for other passengers. Doubling buses significantly reduced the group of passengers of regular bus lines and the source of profit for bus companies. Hence, One of the effects of this reform was that on many routes two half-empty buses were operating parallelly at the same hours[56].

The above mentioned issues may have an even stronger impact on the society due to urbanization 10 and depopulation 11 processes and its influence on negative trends in demographics, impacting both economy and

<sup>&</sup>lt;sup>10</sup> United Nations Department of Economic and Social Affairs/Population Division, *World Urbanization Prospects: The 2018 Revision*, New York 2018.

United Nations Department of Economic and Social Affairs Population Division, *World Population Prospects: The* 2017 Revision, New York 2017, p. 26.

society[42][3]. Reduction in the passenger base is followed by changes in consumer behaviour [1][43] of the inhabitants of remote regions leaning towards individual transport[1][43][20].

# 4. CHARACTERISTICS OF CHANGES IN POLISH PUBLIC TRANSPORT LAW IN 2019 AND THEIR IMPACT ON THE PUBLIC TRANSPORT SYSTEM

In order to track the opportunities of successful implementation of transport policies dealing with problem of transport-related social exclusion and forecasting the impact of the bargain power of public transport stakeholders, there is a need of analysing some new policies.

In 2019, two new laws were implemented:

- 1. Reform of the Law on Public Transport<sup>12</sup>
- 2. Law on a Bus Transport Development Fund<sup>13</sup>

The direct reason of forcing the reform of the public transport law was the adjustment to the regulation No 1370/2007 of European Parliament on public passenger transport services by rail and by road<sup>14</sup>. Furthermore, the reform intends:

- to limit the reduction of local bus transport network,
- to recreate missing bus connections to the peripheral communes and counties,
- to give more power to local governments in order to re-shape the public transport network.

The Bus Transport Development Fund goals are to:

- provide financial means to public transport organizers and public transport companies who are providing bus services in areas, in which it can be difficult to meet the so called "reasonable profit",
- connect remote areas with local administrative centres.

In 2019, the total amount of money for subsidies was set to PLN 300,000,000, in 2020 the plan is to spend PLN 800,000,000. The money from the Fund covers not only subsidies, but also the administration costs of the subsidies' system. Each kilometre will be thus subsidized in amount of PLN 1 per km in 2019, and PLN 0.80 in 2020.

Different actors and groups have various expectations or concerns about the new legislation.

It is possible to distinguish several of them:

- government,
- passengers,
- self-governance (voivodeships, counties and communes),
- passenger transport companies.

And others, with a limited impact such as:

- rail operators,
- bus manufacturing companies.

#### 5. THE EXPECTED CHANGES OF BARGAINING POWER OF STAKEHOLDERS AFTER

Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/70.

#### THE IMPLEMENTATION OF NEW POLICIES

Before the implementation of new law in 2019, the model of public transport was based on market and free competition of bus companies[27]. National government provided limited regulations and was not executing the existing law conscientiously. The main axis of conflict was a competition among bus companies[9]. The specificity of the bus transport system is that only the routes connecting local centres are profitable, but the feeder lines connecting small settlements with the transport hubs often require subsidizing[55]. The model of competition based on covering the profitable lines and reducing the coverage of unprofitable feeder lines due to high operation costs[54] is leading to the reduction of overall profitability of the whole system due to the lack of passengers from feeder lines able to use the main lines[44][16]<sup>15</sup>. This situation causes a vicious circle of transport exclusion by reduction of number of routes, their frequency, number of interchanges, lowering the quality of service which affects lower public transport competitiveness[54][33][48] and may lead to bankruptcy of some bus companies.

Regarding market competition of private entities on the passenger transport market in the past, it was possible to remark conflicts in between passengers and public transport companies on the routes and schedules. Passengers were demanding connections and schedules suitable for their work, education, social-related needs, which transport companies were not always eager to satisfy because of the high operation costs or logistic issues. As the demand for passenger transport is substitutional[34], conflicts usually ended in the moment when passengers who were able to switch to individual transport did so[45][15]. The others, fully dependent on public transport, were too insignificant group to generate sufficient profit, and from the perspective of the market-based approach to public transport, or were not in a position to advocate for their demands to private bus enterprises or local authorities.

The new law is reshaping the mode of interactions in between actors regarding the public transport market. First of all, the government is a new actor who is creating new rules by subsidizing local-governments and companies. Secondly, local-governments together with passengers are gaining more subjectivity, due to the shift of balance in responsibility over public transport from bus companies and their market success towards passengers needs and needs of the society[41]. It is remarkable that the role of bus companies is changing: on one hand, companies may profit from the subsidies, but on the other hand, the shuffle on the market may wipe some of them out from the profitable routes or reduce their position in local or regional transport. The possibility of having a better organized and regulated network is, on one hand, triggering tensions among companies, but on the other hand in a long-term perspective, it may stabilize the market and reduce the violent and destructive competition which manifest itself in schedules set to pick the passengers from each other by arriving just few minutes before the competitors, acts of vandalism by destroying the passenger information of competitors or spreading depreciative campaigns on other companies.

# 6. CHANGES IN AXES OF CONFLICTS AFTER IMPLEMENTATION OF NEW POLICIES

The new laws are bringing on stage new axes of conflicts, where new actors are starting to shape the public transport network. Interference in power-balance on the passenger transport market may cause the empowerment of some actors, and at the same time the reduction in importance of others. The new regulations may

Najwyższa Izba Kontroli, *Informacja o wynikach kontroli dofinansowania ulgowych przejazdów osób korzystających z autobusowego transportu zbiorowego*, Kielce 2010, pp . 5-10.

influence the general competitiveness of the public transport, and benefit or slow down the decline of regional public transport in Poland.

# Axis Government – Self-governments (financing)

The distribution of subsidies for local public transport is designed based on equation<sup>16</sup> dividing the funds among voivodeships. The method of selection of the criteria for the assessment of the indicators of transport exclusion granting entitlement for receiving subsidies is based on presupposed arbitrary assumptions which may be subject of disagreement. Funds distribution method may cause tensions on the level of voivodeships within the ruling party (a voivod is a government agent in the region) and in between government and self-governments where the government would like to support regions controlled by marshals related to the ruling party.

### Axis Voivods – Self-governments (money distribution)

Other tensions may be caused by criteria of awarding the funds. The role of a voivod is to make the decision about how the funds will be distributed, based on:

- 1) the size of the area where the subsidy is requested,
- 2) the number of inhabitants,
- 3) the amount of lines operating as public transport lines, per public transport organizer,
- 4) the length of the lines operating as public transport lines,
- 5) the amount of stops on the bus stop as a part of public transport services,
- 6) the possibility to satisfy the needs of the disabled people or people with limited mobility,
- 7) the tax income indicator per one inhabitant<sup>17</sup>.

The criteria listed above are not always quantitatively comparable, which results in space for interpretation, which voivodes may promote regions tied to the ruling party or particular interest groups.

## Axis Government – Bus companies (regulation)

The position of the bus companies who have settled on the market may be endangered by the reforms causing changes in the market *status quo*. One of the reasons why bus companies may oppose the new law is a possibility given to local authorities to influence the network of bus connections, including schedules, routes and coverage of the network. New regulations may also cause new commitments for the companies, especially small entities which may have problems to reset their *modus operandi* into the new legislation. It is very likely that the changes in the law will redesign the way in which companies compete. New, more efficient business models may emerge and the level of adaptability of the companies may be crucial in their outlast and success on the market. A series of bankruptcy in dozens of regional bus companies until 2019 proved that the model known before the implementation of the new regulations was non-sustainable in the long-term run. The public transport system reform may serve in some particular interests of the companies, but for other actors it may be more a threat than a chance.

Regulation of the Council of Ministers of July 26, 2019 on the detailed method of allocating funds from the Public Utility Bus Development Fund for co-financing the implementation of organizers' own tasks in the field of public utility bus transport in individual voivodeships.

Act of 13 November 2003 on the income of local government units (Journal of Laws of 2018, items 1530, 2161, 2193 and 2245 and of 2019), item 525.

Axis Self-governments – Bus companies (money distribution)

The lack of proper information about the specific regulations on the law was discouraging the activity of the bus companies to take an initiative and apply for the money on their own[38]. Support from the local government was crucial in guiding the companies in a new legal situation. This non-transparent legal situation may cause accusations on unfair treatment of companies related to self-governments or the ruling party.

Axis Subsidized bus companies – other bus and rail companies

Money for the Fund will be taken partly from the National Rail Fund (Krajowy Fundusz Kolejowy), which will not be balanced with the enforced integration of the bus and rail system. This situation is putting rail companies, as well as rail users, in a victimized position.

### Axis (potential) Self-government – passengers

The change in narrative on public transport and mobility may lead to the empowerment of passengers in relation to self-governments. Transport accessibility may work as one of the main elements of the election campaigns and in the examination of how effectively self-governments were dealing with the local transport issues. This tendency was visible in the elections to the EU Parliament, local elections and parliamentary elections in 2019. After three decades of progressing, a switch towards a mobility model based on individual car, strengthened by aggressive advertising, the lifestyle-related to freedom and individualism is slowly losing its pace. At the same time, attitudes linked to alternative usage of time spent during the trip (work, leisure, social interaction), as well as concerns on ecology and natural environment, are gaining popularity. At the same time, the voice of transport-excluded social groups is becoming more vocal, and transport-exclusion is slowly stopping to be considered as an effect of shiftlessness or a consequence of free-market economy, and is starting to be perceived as a social problem which is supposed to be fixed by authorities.

#### Passengers – Bus companies

Passengers who feel empowered by the fact that transport companies are becoming financed from their tax-money may demonstrate an active role in opposing low quality and unreliable services provided by companies. Before the reforms, complaints which were received directly by the companies had limited impact on the quality of services, the same applied to the official grievances to the Voivodeship Marshal Office[40].

### 7. CONCLUSION

The new legislation on public transport in Poland is triggering a lot of changes in the structure of the passenger public transport market. The increasing role of government and self-government in shaping the public transport network is likely to strongly influence the companies, and it may be used as a tool for improvements in level of competitiveness of public transport services. On the other hand, during the time of transition, the unstable market equilibrium will be distorted which may end up with disadvantages and opportunities for certain groups of influence, causing disagreements and conflicts at different levels than before. An interesting tendency is emerging due to the changes in the discourse on public transport and social exclusion in politics and media coverage. It is thus possible that the empowerment of passengers from excluded areas will be in a way similar to the public transport passengers in cities, where the responsibility for the accessibility and quality of services is conveyed to the city presidents or mayors. Although the reforms are not able to solve the majority of problems that public transport in Poland face, nor to bring back the transport accessibility for millions of people, it is possible that a shift in passenger transport planning towards public administration will trigger more popular involvement in public transport network planning activities.

#### REFERENCES

- [1] Andrusz G. D., *Housing and Urban Development in USSR*, Macmillan & Centre For Russian and East European Studies University of Birmingham, London 1984.
- [2] Bąkowski W., *Procesy integracyjne w systemie transportowym a generowanie wartości dodanej*, [in:] Michałowska M. (ed.), *Procesy integracyjne wybranych systemów transportowych*, Wydawnictwo Akademii Ekonomicznej,, Katowice 2007, pp. 35-42.
- [3] Beim M., Radzimski A., *Wybrane aspekty wpływu zmian demograficznych na transport publiczny*, "Transport Miejski i Regionalny", 6 (2009)/2, pp. 2-8.
- [4] Błędowski P., Pędich W., Opiekunowie rodzinni jako podstawowe źródło opieki domowej nad niepełnosprawnymi osobami starszymi, [in:] Błędowski P. (ed.), Między transformacją a integracją. Polityka społeczna wobec problemów współczesności, Szkoła Główna Handlowa, Warszawa 2004.
- [5] Cresswell T., On the move: Mobility in the modern western world, Routledge, New York-London 2006.
- [6] Cresswell T., Citizenship in worlds of mobility, [in:] Söderstrom O., Randeria S., D'Amato G., Panese F. (edd.) Critical mobilities, EPFL Press, Lausanne 2013, pp. 105-124.
- [7] Dyderski B., Rozwiązanie parkingów «parkuj i jedź» w systemach kolejowo-drogowych, "Transport Kolejowy: Przeszłość–Teraźniejszość–Przyszłość", (2017).
- [8] Dydkowski G., Regulacyjne i ekonomiczne czynniki integracji miejskiego i regionalnego transportu zbiorowego, [in:] Procesy integracyjne wybranych systemów transportowych, ed. by Michałowska M., Wydawnictwo Akademii Ekonomicznej, Katowice 2007, p. 165.
- [9] Dyr T., Kapitał intelektualny jako czynnik integracji rynku regionalnych przewozów pasażerskich, [in:] Procesy integracyjne wybranych systemów transportowych, ed. by Michałowska M., Wydawnictwo Akademii Ekonomicznej, Katowice 2007.
- [10] Dyr T., (2013) Integracja transportu miejskiego i regionalnego jako czynnik rozwoju rynku publicznych przewozów pasażerskich, [in:] Współczesne uwarunkowania rozwoju transportu w regionie, ed. by Michałowska M., Wydawnictwo Uniwersytetu Ekonomicznego, Katowice 2013, pp. 143-147.
- [11] Faron A., Rudnicki A., *Idea i narzędzia unijnego projektu MAX mającego na celu podniesienie świadomości potrzeby zarządzania mobilnością*, "Transport Miejski i Regionalny", (2010)/1, pp. 19-26.
- [12] Gagnepain P., Ivaldi M., Vibes C., *The industrial organization of competition in local bus services*, Edward Elgar Publishing, Chentelham 2011.
- [13] Górka K., Poskrobko B., Radecki W., *Ochrona środowiska. Problemy społeczne, ekonomiczne i prawne*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2001.
- [14] Górny J., Samorząd wojewódzki jako organizator kolejowych regionalnych przewozów pasażerskich, "Prace Komisji Geografii Komunikacji PTG", 19 (2016)/4, pp. 72-81.
- [15] Grzelec K., Wyszomirski O., *Regionalizacja zbiorowego transportu pasażerskiego w Polsce*, "Autobusy: technika, eksploatacja, systemy transportowe", 18 (2017)/4, pp. 22-27.
- [16] Hadi Almasi M., Mirzapour Mounes S., Koting S., Rehan Karim M., *Analysis of Feeder Bus Network Design and Scheduling Problems*, "The Scientific World Journal", (2014)/2-4, pp. 1-10.
- [17] Hebel K., *Zachowania transportowe jako rodzaj zachowań podmiotów rynkowych*, "Ekonomika transportu lądowego", 41 (2011), pp. 167-179.
- [18] Heffner K., Regiony międzymetropolitalne a efekty polityki spójności w Polsce,"Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu", 95 (2010), pp. 163-184.
- [19] Heffner K., Klemens B., *Potencjały i strefy problemowe w zakresie świadczenia usług publicznych na obszarach wiejskich w skali regionalnej*, "Studia Obszarów Wiejskich", 42 (2016), pp. 23-35.
- [20] Heine W.-D., Verkehrsmittelwahlverhalten aus umweltpsychologischer Sicht, "Internationales Verkehrswesen", 47 (1995).

- [21] Janecki R., Kształtowanie systemów obsługi pasażerskiej poprzez samorządy szczebla powiatowego i wojewódzkiego, [in:] Aktualne problemy regionalnego transportu pasażerskiego w Polsce. Materiały ogólnopolskiej konferencji naukowo-technicznej, Zakopane-Kościelisko, 29-31 marca 2004 r., Stowarzyszenie Inżynierów i Techników Komunikacji, Zakopane-Kraków 2004, pp. 113-129.
- [22] Janecki R., *Problemy integracji w polityce transportowej regionów*, [in:] Michałowska M. (ed.), *Procesy integracyjne wybranych systemów transportowych*, Wydawnictwo Akademii Ekonomicznej, Katowice 2007.
- [23] Janecki R., Krawiec S., *Problemy dostępności przestrzennej we współczesnej polityce transportowej*, "Transport Miejski i Regionalny", (2009)/2, pp. 2-11.
- [24] Kamruzzaman M., Yigitcanlar T., Yang J., Mohamed Mohd A., *Measures of transport-related social exclusion: A critical review of the literature*, "Sustainability", 8 (2016)/7, pp. 3-8.
- [25] Klasik A., Strategia konkurencyjna regionu, [in:] Klasik A., Kuźnik F. (edd.) Zarządzanie strategiczne rozwojem lokalnym i regionalnym, Wydawnictwo Akademii Ekonomicznej, Katowice 2001, pp. 31-32.
- [26] Klasik A., *Strategie regionalne. Formułowanie i wprowadzanie w życie*, Wydawnictwo Akademii Ekonomicznej, Katowice 2002.
- [27] Klatka J., Organizowanie publicznego transportu zbiorowego na szczeblu metropolitalnym oraz na styku dwóch powiatów, "Komunikacja Publiczna", 58 (2015)/1, pp. 27-32.
- [28] Komornicki T., *Przemiany mobilności codziennej Polaków na tle rozwoju motoryzacji*, Wydawnictwo Polskiej Akademii Nauk, Warszawa 2011.
- [29] Koźlak A., Kierunki zmian w planowaniu rozwoju transportu w miastach jako efekt dążenia do zrównoważonego rozwoju, "Transport Miejski i Regionalny", (2009)/7-8, pp. 39-43.
- [30] Lijewski T., Geografia transportu Polski, Państwowe Wydawnictwo Ekonomiczne, Warszawa 1977.
- [31] Lucas K., Transport and social exclusion: Where are we now?, "Transport Policy", 20 (2012), pp. 105-113.
- [32] Mężyk A., *Elastyczne formy transportu publicznego w obsłudze komunikacyjnej regionu*, "Studia Ekonomiczne Uniwersytetu Ekonomicznego w Katowicach", 143 (2013), pp. 262-270.
- [33] Mrozik M., Gostowska-Dźwig S., *Istotne czynniki wpływające na jakość usług w przedsiębiorstwie transportowym w ocenie klientów*, "Zeszyty Naukowe Uniwersytetu Szczecińskiego. Finanse, Rynki Finansowe, Ubezpieczenia", 686 (2011)/47, pp. 145-154.
- [34] Piskozub A., Gospodarowanie w transporcie, Wydawnictwa Komunikacji i Łączności, Warszawa 1982.
- [35] Porter G., Tewodoros A., Gorman M., Mobility, Transport and Older People's Well-Being in Subsaharian Africa: Review and Prospect, [in:] Curl A., Musselwhite C. (edd.), Geographies of transport and ageing, Palgrave Macmillan, London 2018, pp. 75-100.
- [36] Porter M. E., On Competition, Harvard Business School, Boston 1998.
- [37] Przygodzka R., *Usługi publiczne a jakość życia w regionach peryferyjnych*, [in:] Noworól A. (ed.), *Jakość życia a procesy zarządzania rozwojem i funkcjonowaniem organizacji publicznych*, Monografie i Studia Instytutu Spraw Publicznych Uniwersytetu Jagiellońskiego, Kraków 2010, pp. 219-220.
- [38] Rolbiecki R., *Wpływ otoczenia prawno-instytucjonalnego na warunki rozwoju przedsiębiorstw transportowych w Polsce*, "Zeszyty Naukowe Uniwersytetu Gdańskiego. Ekonomika Transportu Lądowego", 41 (2010)/9-10, pp. 7-20.
- [39] Rudnicki L., Zachowanie konsumentów na rynku, Polskie Wydawnictwo Ekonomiczne, Warszawa 2000.
- [40] Rymarz J., Stokłosa J., Niewczas A., Wybrane problemy efektywności funkcjonowanie transportu zbiorowego, "Logistyka", (2014)/3, pp. 5542-5548.
- [41] Rześny-Cieplińska J., Kształtowanie atrybutów organizatorów zintegrowanego systemu transportowego, "Logistyka", (2014)/3, pp. 315-322.
- [42] Schwanen T., *The Mobility of Older People An Introduction*, "Journal of Transport Geography", 18 (2010)/5, pp. 591-595.

- [43] Siegelbaum L. H., Cars, cars, and more cars: the Faustian bargain of the Brezhnev era. In: Borders of Socialism: Private Spheres of Soviet Russia, Palgrave Mackmillan, New York 2006.
- [44] Szczerbaciuk Z., *Publiczny transport drogowy uwarunkowania i prognozy funkcjonowania*, "Autobusy: technika, eksploatacja, systemy transportowe", 15 (2014)/4), pp. 16-22.
- [45] Szołtysek J., *Logistyczne aspekty zarządzania przepływami osób i ładunków w miastach*, Wydawnictwo Akademii Ekonomicznej, Katowice 2008.
- [46] Szostak E., *Czy w Polsce występuje paradosk innowacji?*, "Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu", 95 (2010), pp. 152-162.
- [47] Taylor Z., Przestrzenna dostępność miejsc zatrudnienia, kształcenia i usług a codzienna ruchliwość ludności wiejskiej, Wydawnictwo Continuo, Wrocław 1999.
- [48] Taylor Z., Ciechański A., Deregulacja i przekształcenia własnościowe przedsiębiorstw transportu lądowego w Polsce na tle polityki spójności UE, Wydawnictwo Polskiej Akademii Nauk, Warszawa 2017.
- [49] Tackling Social Exclusion The Role of Public Transport. A UITP position paper, UITP International Association of Public Transport, Brussels 2007.
- [50] Urbanyi-Popiołek I., *Ekonomiczne i organizacyjne aspekty transportu*, Wydawnictwo Uczelniane Wyższej Szkoły Gospodarki w Bydgoszczy, Bydgoszcz 2013.
- [51] Urry J., Sociology beyond Societies: Mobilities for the twenty-first century, Routledge, London–New York 2000.
- [52] Velho R., (2019) *Transport accessibility for wheelchair users: A qualitative analysis of inclusion and health*, "International Journal of Transportation Science and Technology", 8 (2019)/2, pp. 103-115.
- [53] Wang H., Odoni A., *Approximating the Performance of a "Last Mile" Transportation system*, "Transportation Science", 50 (2016)/2, pp. 659-675.
- [54] hite P., Public transport: Its Planning, Management and Operation, Routledge, London-New York 2009.
- [55] Wolański M. et al., Publiczny transport zbiorowy poza miejskimi obszarami funkcjonalnymi. Diagnoza, analiza zróżnicowania, oddziaływanie społeczne, rekomendacje, Oficyna Wydawnicza Szkoły Głownej Handowej, Warszawa 2016.
- [56] [55] Wolański M., Mrozowski W., Pieróg M., *Transport zbiorowy poza miastami regres, reformy, rekomendacje,* "Zarządzanie Publiczne", 38 (2016)/4, pp. 62-77.
- [57] Wronka J., Internalizacja kosztów zewnętrznych transportu w Polsce, [in:] Kongres transport 2000, Kraków, Zakopane 14-16 września 2000 r., Stowarzyszenie Inżynierów i Techników Komunikacji, Zakopane–Kraków 2000.

Duszan Augustyn Jagiellonian University in Cracow, Poland duszan.augustyn@gmail.com