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Riding without a ticket: geography of free fare public transport policy in Poland

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Abstract

A policy instrument promoting a free fare public transport policy (FFPT) has recently been put into practice in 66 municipalities across Poland. By contributing to the academic debate on the concept of FFPT (e.g. Kębłowski 2019), the main goal of this paper is to create a typology of the schemes where FFPT is in operation in Poland based on analyses of a geographical mapping of these projects. This study analyses how different municipalities are implementing the concept in order to define a typology of FFTP projects and to understand how the development landscape of the urban transport system is changing in the light of free fare transport policies, topics which are not fully covered in the academic literature. The findings confirm that there is a new dynamic in the development of urban transport systems and permit the identification of key characteristics of this trend. Besides the typology of implementation of FFPT, the study also presents an up-to-date inventory of FFPT projects with the key characteristic features of each system. Although the study does not provide specific recommendations regarding the introduction of a FFPT policy, it represents a good starting point for future and more detailed studies. Such studies are necessary in order to understand the role of FFPT not only in the context of the development of a given transport system, its impact on modal split, and travel behaviour, but also to uncover the different politics which lie behind them.

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Introduction

The fact that contemporary society is characterised by an increasing level of mobility and dependency on transport is generally accepted not only among scholars but also among urban policy makers, transport managers and municipal leaders. Such a state, as emphasised in the paradigm of sustainable mobility, is not sustainable for the future decades because of the growing number and intensity of negative impacts on our transport/car-oriented society (Banister 2008; Johansson et al. 2016). Traffic related problems like landscape fragmentation, greenhouse gas emissions, noise pollution, car accidents or traffic congestion are just a few of a multitude of problems which are present at different levels and intensities in almost every transport system, not only in metropolitan areas (which are the areas most exposed to this), but also in rural areas (Green & Wegner 1997; Banister & Marshall 2000; Banister & Hickman 2006; Pojani & Stead 2015). It is then no surprise that urban policy makers are implementing strategies which aim to limit the impact of the above-mentioned transportation related problems. Generally, there are three possible approaches to how to try to limit the impact of traffic related problems and develop more efficient transport systems (Green & Wegner 1997). A technological approach emphasises the role of innovation and new inventions which could contribute to reducing fossil fuel consumption or reducing its negative effects (e.g. electronic cars, hybrid engines etc.). A second approach represents measures and strategies which are used by municipalities to reduce the need for transport, for example, developing structures which are not primarily designed for car use (a systematic approach to the question of suburbanisation/urban sprawl). A third, and probably the most practical approach is found among the individual tools of urban planning and transportation strategies, whose aim is to make the transportation system more efficient by changing the current condition in a given area and setting a new path for their development. From restrictive measures such as zero emission zones, tolls and parking charges, through designating pedestrian/bike zones and separate lines for public transport, to incentive measures such park & ride systems, an integrated public transport system or abolishing fares. In other words, from limiting individual car use, to supporting other means of transport like walking, bicycles or public transport, which are essential elements in establishing a sustainable and resilient municipal transport system (Gehl 2010; Lehman 2015). In existing literature this is usually covered by the term 'New Mobility' (Goldman & Gorham 2006). At this point, it is also important to highlight that the development of a transportation system is a never ending broad-scale process and so has to be the conceptualisation of transport strategies. Transport and urban policy makers should not limit their strategies to only a few possible tools, but rather, in order to make an effective transport system and to increase the welfare of its users, use the synergistic effect of different tools of urban and transport planning.

Many municipalities promote a public transport service in order to limit car use and its externalities. There are many potential ways to do this, from upgrading the quality of the public transport fleet and making some routes priority routes to, for example, abolishing fares, which in the literature is covered by the term: a *free fare public transport* (FFPT) policy. The concept of a free fare public transport policy represents a possible option for not only changing the dynamic of current patterns of travel behaviour by encouraging potential passengers to use public transport, but also to improve the welfare and mobility of residents and the overall efficiency and economy of the public transport service (Tab. 1.). Even though the issue of FFPT has been present in academic literature from the late 60s due to the dramatic increase in car use, mainly in North America (Baum 1973; Scheiner & Starling 1974), the topic has started to gain momentum in recent decades. Not only in the light of changing mobility (Sheller & Urry 2006) and the sustainable mobility paradigm, but also due to the fact that many municipalities all around the world are implementing a system of FFPT, so there is now a growing literature which deals with the topic of free fare transport policy, its scope, geography, economy and the effects on modal split, changes in traffic behaviour and the ability to reach its goals or the politics behind it (Fuji & Ryuichi 2003; Storchmann 2003; De Witte et al. 2006; Goeverden et al. 2006; De Witte, Macharis & Mairesse 2008; Fearnley 2013; Cats, Reimal & Susilo 2014, 2017; Hess 2017; Tomanek 2017; Kębłowski et al. 2019; Kębłowski 2019; Štraub & Jaroš 2019).

It turns out that there is a strong body of municipalities in Poland which have to some extent adopted a policy to implement a scheme of free fare public transport, but there is a lack of strong evidence or research which would confirm the scale of FFPT development in Poland and identify its key characteristics. Thus, the aim of this paper is not only to contribute to the academic debate over the topic of FFPT (Kębłowski 2019) or the development of an environmentally friendly urban transport system, (Taczanowski et al. 2018), but mainly to create a typology of FFPT cases in Poland based on mapped and analysed examples. With the following questions, such as which municipalities have implemented an FFPT scheme and what kind of urban mobility approaches can be identified in the municipalities being studied, the study seeks to understand the scale of use of the concept, present an

TABLE 1
Main goals of FFPT
Source: own study based on N. Fearnley (2013), B.D. Hess (2017), W. Kębłowski (2019)

THEME	KEY CHARACTERISTICS
Environment	Reduce transportation related externalities – Traffic congestion – Air pollution – Car dependency – Noise pollution – Safe roads
Social	Improve welfare – Enhanced mobility – Improved quality of life – Socialisation
Economy and efficiency of public transport	– Increase ridership – Better efficiency in off-peak hours
Others	– Promotion of public transport – Education of the public about sustainable development – Marketing

inventory of identified cases, and understand the major similarities and discrepancies which lie behind the different reasons why FFPT policy has been emerging in Poland over recent decades.

Methodology

The purpose of this paper is to create a typology of FFPT schemes in Poland by exploring, describing and identifying the extent of this phenomenon. It was necessary to update the list of schemes that had already been identified (Tomanek 2017; Kębłowski 2019). In doing so, it was necessary first of all to conduct internet research to prepare a database of municipalities where a free fare public transport scheme was in operation. By using key words as such as free transportation, free city transportation and free public transportation, more than 60 cases of FFPT were identified. In the second step, an analysis was made of each free fare public transport system, and the fact that the policy in operation was verified from official documents of the municipal council with whose approval the FFPT scheme is put into operation in the transport system.

To reveal the motivation behind each municipality's decision to set up a FFPT scheme, it was crucial to analyse all the information available to the public and to ask the municipal council directly for a statement. A short questionnaire was sent to all the municipalities which were identified in the first step. The questionnaire includes 6 key questions such as: 1) Has your municipality ever implemented a free fare transport scheme?, 2) In which year was this scheme introduced?, 3) Why did the municipality decided to do so?, 4) Was the introduction of the free fare transport scheme associated with the implementation of a long-term strategy (municipal development strategy, sustainable development plan etc.)?, 5) Please provide us with the official number of the document or resolution under which the municipality authorised the implementation of a free fare scheme, and 6) If the scheme is no longer in operation, please specify why *and* in which year it stopped.

On the basis of the results of the questionnaires and official documents from each municipality, the cases examined were then divided according their main motivations for adopting the FFPT scheme. The study distinguishes 5 single categories in total, which are represented in Figure 1 under the term *Goals of FFPT*. Those divisions respect the main goals that each municipality is trying to reach (according to official statements and documents) and are as follows: *1. Mobility* – to enhance the mobility of residents, *2. Reduce car use* – to limit traffic flow and its negative externalities, *3. A combination* of goal 1 and 2, *4. Other reasons* – specific and unique reasons (explained in Section 3) and finally *5. Unidentified* – municipalities which did not specify the purpose of the scheme that they are implementing.

The final database includes 66 cases of FFPT, which were double-checked – firstly by the official document + media scan and secondly by the official correspondence (only 3 municipalities out of 66 did not respond to the questionnaire).

At this point it is important to make clear what this study understands by the term free fare public transport scheme. Each municipality around the globe (e.g. Fearnley 2013; Hess 2017; Kębłowski 2019; Štraub & Jaroš 2019) which is experimenting with an FFPT policy adjusts the design of their FFPT according to their given transport system. Naturally, the form of the FFPT scheme differs greatly. It is possible to distinguish at least 5 different modifications of the policy, as can be seen in Table 2. This paper is not focused on those schemes which have implemented free fare public transport for specific social groups (e. g. the elderly, children, students, the

TABLE 2
Modifications of the FFPT policy
Source: own study based on author's research and W. Kębłowski (2019)

FULL	LIMITED	
Public transport tickets are abolished over the entire public network; public transport is free for all users	Residents	The public transport service is only free for residents of a given area
	Specific social groups	Public transport is free for certain social groups like the elderly, children, students, the unemployed
	Spatial limited	Public transport is free on a given part of the network (specific routes)
	Time limited	Public transport is free at certain times (given time period)

unemployed) and on schemes which only operate during specific events (Christmas, Car Free Days etc.). The only limitation that this research takes into consideration is who could benefit from the abolition of fares in public transport. This is shown in Figure 1., under the *Limitation of FFPT*. *Unlimited* are those systems which are open (and free to use) for each potential user of public transport. *Limited* are the systems in which the fare is only free for the residents of each municipality.

The questionnaires, together with the official documents and statements of individual municipalities, were also the source, together with academic literature covering the issues of transportation, accessibility and suburbanisation, for creating a typology of FFPT schemes. The final typology contains 4 single categories: *Suburban/metropolitan areas*, *Tourist areas*, *Peripheral areas* and *Unspecified*. The classification is based, firstly, on the overall strategy that each municipality tends to follow by adopting the principles of FFPT. Secondly, it takes into account recent publications about settlement systems and transportation in Poland. In order to avoid making a subjective assessment, the official statement of the municipal authority was a key element in this process and was followed by an examination of the study area. In the end, there are a certain number of schemes which are not assigned to one of the typologies identified and are left as unspecified. Further explanation can be found in Section 3.1.

The geography of FFPT

As noted in the introduction to this paper, the main aim is to create a typology of FFPT schemes based on a geographical mapping of the schemes that were examined on a pan-Poland basis. The study identifies a total of 66 cases of municipalities which have implemented a FFPT policy. The whole dataset (see Fig. 1.) is composed of various municipalities assessed with regards to their population size, location (urban/rural), integration in the transport system and naturally also the goals the municipalities are trying to address.

Although the municipalities examined differ greatly among themselves in many characteristics, the study identified one common factor for the whole dataset, which is related to the population size. From the map in the Fig. 1 it can be seen that the experiments with free fare public transport policy are predominantly in small- to middle-sized municipalities (in terms of population). Such findings are similar to J. Taczanowski et al. (2018), whose study of the implementation of low-emission buses in Poland came to a similar conclusion – the pioneers are municipalities that are small- to medium-sized with regard to population. One of the possible explanations for such a dynamic is that in small-scale public transport systems it is more likely that the introduction of a FFPT scheme could result in extra financial savings while developing the concept is more straightforward than in bigger cities with more complex transport systems.

A distinctive feature of the dataset is the type of free-fare scheme, which is presented in Figure 1. Only two categories are prevalent in the cases examined. The first one, *unlimited*, represents cases where the public transport is free for all passengers. The second category, *limited*, on the other hand, presents municipalities where the free public transport is only for the residents of a given area. In this case the residents usually have to provide verification using a document which declares their permanent address. Although it is possible to find other limitations of the free-fare public transport scheme in the dataset, those two mentioned are the most common ones. Here it is necessary to understand, that almost all of the schemes studied represent public transport networks that are rather small- to medium-sized in which the limitation of applying only to a specific route or part of the network rarely exists and if it does, it is only due to the limited scale of the transport system and not due to the specific strategy of the transport policy or FFPT scheme. That is the reason why it would be a mistake to categorise them as a route specific FFPT system. When following the characteristics of a FFPT scheme restricted to a specific route, this could be identified in, for example,

Świeradów-Zdrój (shuttle bus in a tourist region), Kozienice (route in the town centre) and Nowy Tomyśl (route connecting the town with the train station). A time limited FFPT scheme was found in Augustów (June-August), Gniezno (weekends July-August) and Szczyrk (December-March), where this policy is used to provide free public transport during the main tourist period in an attempt to reduce car use and prevent problems from congestion, parking and to reduce the negative impact on the local environment.

The map given above (Fig. 1.) demonstrates the situation which was current at the end of March 2019. The schemes are distributed all around the country and the number of municipalities with an adopted policy differs greatly between individual voivodships. No schemes were identified in the Lublin and Subcarpathia voivodships. Most are in the voivodships of Lower Silesia, Greater Poland and Masovia. An increased density is especially significant around regional centres, such as Warszawa, Poznań or Lubin, where the operation of a FFPT scheme is more popular than in areas with only individual fare-free schemes.

Apart from the spatial distribution, the time of adoption of the policy also differs among the cases examined. The policy mainly started to become popular among selected municipalities in recent years, as can be seen in Figure 2. Most of the schemes (56) were introduced between the years 2014 and 2018 and the first experiment in which research was conducted has been in operation since 2007. Here it is important to underline that only 7 cases out of the whole dataset have abandoned the concept and started to use ordinary arrangements for public transport. Municipalities like Żagań, Grodzisk Mazowiecki and Legnickie Pole cancelled the policy after the test period, usually because the municipal authorities were not satisfied with the results. In Gniezno, and Mieroszów the policy was cancelled for economic reasons such as high costs (Otmuchów did not mention the reasons). It must be noted at this point that the number of municipalities which had implemented the FFPT system by 2019 is only up-dated to the end of March and it is likely some other municipalities will introduce the system later in 2019. FFPT policy is a topic that forms part of an ongoing debate, for example, in Bielsk Podlaski, Łomża, Beirutów, Suwałki, Czerwonak, Zawiercie and Grębocice.

The research conducted also reveals the main motivation which underpins the experiments with a free fare transport policy and whether the introduction of an FFPT scheme is an element in strategic documents on urban or regional development in a given area.

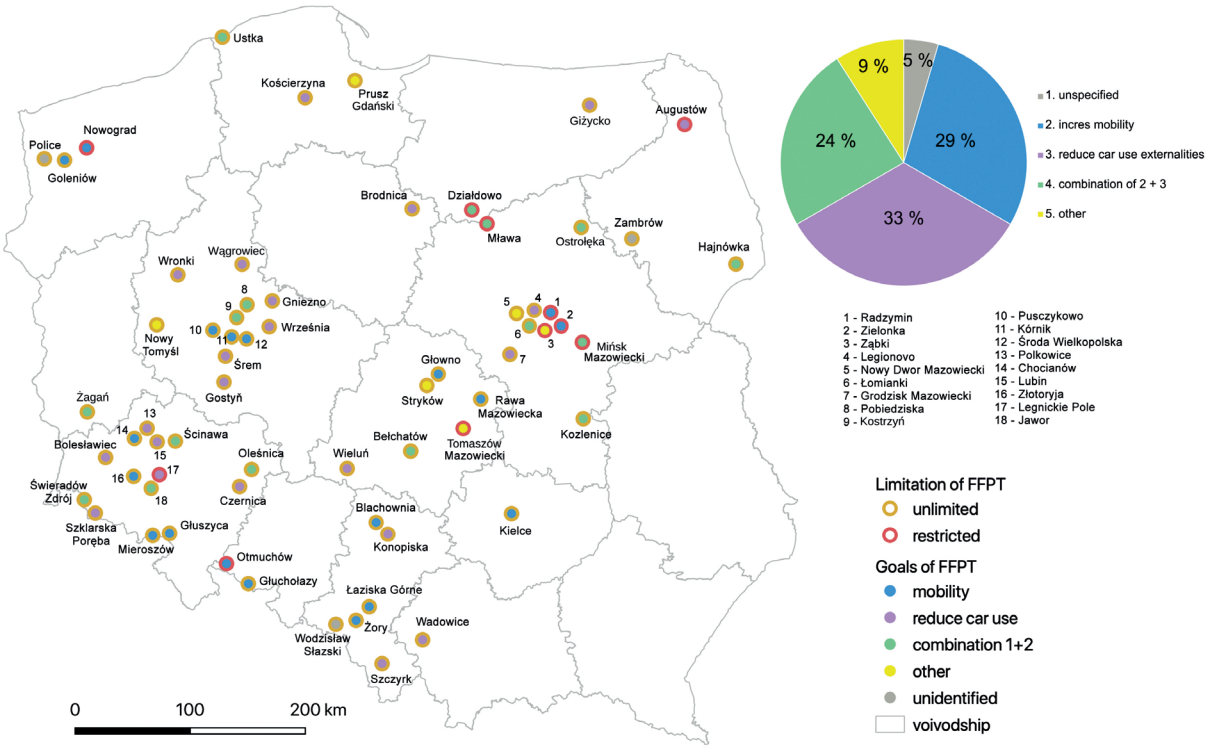

FIGURE 1
FFPT schemes, Poland 2019
Note: FFPT projects operating in 2019 correct as at end of March 2019
Source: own study, base map source – *Główny Urząd Geodezji i Kartografii*

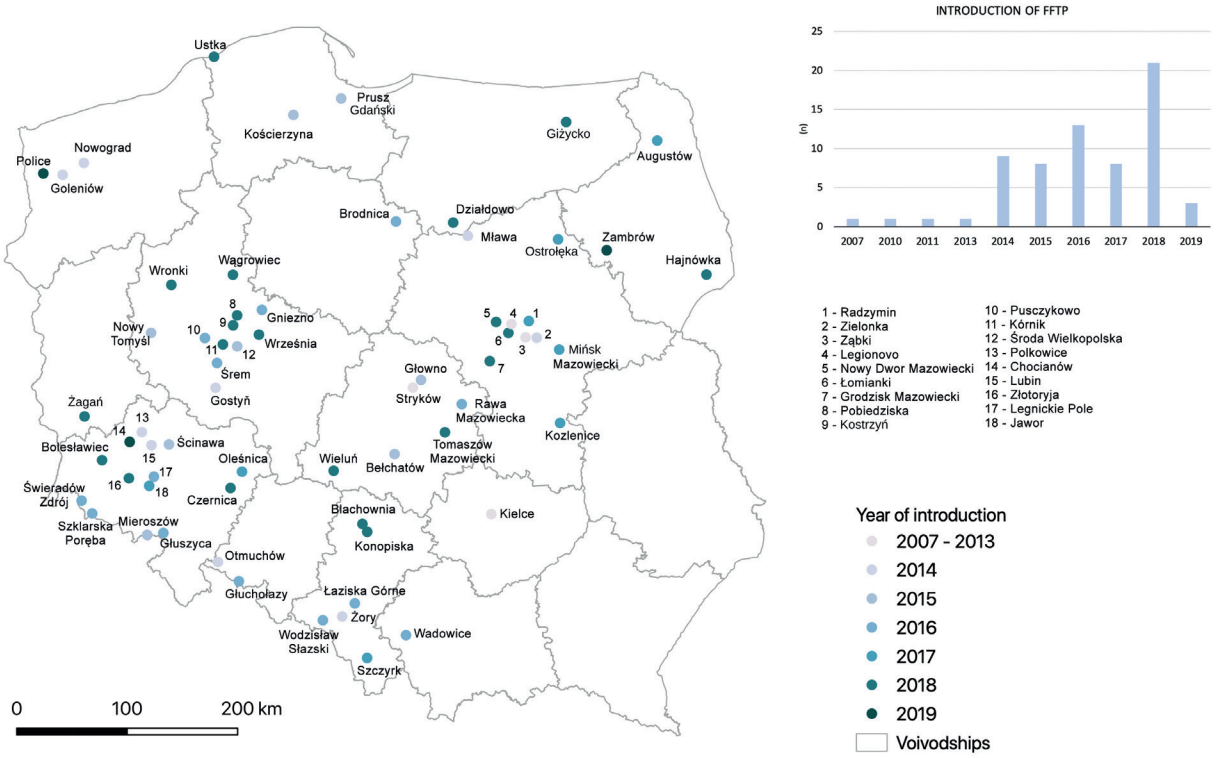

FIGURE 2
Year of introduction of the policy
Note: the number of FFPT projects operating in 2019 is up to date up to the end of March 2019
Source: own study, base map source – *Główny Urząd Geodezji i Kartografii*

Those motivations are divided into four main categories according to the scheme of goals of an FFPT policy presented in Table 1. and the overall results for the whole dataset are given in Figure 1. Municipalities are divided into schemes which try to reduce transport externalities, increase the mobility of its citizens or both, which is the most common use of the policy that prevails, not only in Poland, but worldwide (e.g. Fearnley 2013; Hess 2017; Kębłowski 2019). At this point it is important to mention that such distinctions between the aims of individual municipalities are sometimes very vague and are based on the official statement from municipal authorities. Municipal planning authorities and urban planners do not always implement the system with a clear vision and for example, in 8 cases the goals of the policy are not specified at all. The quality of the FFPT policy is seen to differ greatly when the dataset is examined. The research has found that, in some cases, the implementation of the FFPT policy is rather a temporary solution for current problems caused by, for example, the reconstruction of important infrastructure etc. on the one hand, and it is questionable if one can talk about a specific aim or vision of the free fare public transport policy in those cases (e.g. Wronki, Kielce). On the other hand there are also municipalities where the concept is under the umbrella of a very specific strategic plan and vision. Most of the study municipalities are primarily addressing the environmental problems resulting from the negative externalities of transportation. The reduction of the volume of traffic in order to reduce the level of air pollution is the main objective since, in Poland in particular, such problems are currently a topic of public discussion. Apart of the pro-ecological aspect, the policy is also used as a solution designed to increase the mobility and welfare of citizens, which in some cases is the result of poor accessibility due to a lack of connections provided by the private sector (e.g. Głuchołazy, Głuszyca, Mieroszów,). Such a utilisation of FFPT is, according to W. Kębłowski (2019), more common across Europe. It's important to bear in mind that even if the municipal planning authorities implemented the policy with a specific strategy, there are significant differences in the terms of its conceptualisation. The results show that, for example, the FFPT policy in a given location forms part of higher level strategic documents in only 15 municipalities. The absence of this doesn't mean the quality of the FFPT system is worse, because accepting the principles of the FFPT scheme could in some cases be a very rapid decision for which there is no prior obligation for it to be mentioned and reflected in broader strategic

documents. An interesting use of the FFPT policy can be seen in municipalities like Nowy Tomyśl, Pruszcz Gdański, Nowy Dwór Mazowiecki, Stryków, Tomaszów Mazowiecki and Ząbki which differ from the rest of the schemes studied. Tomaszów Mazowiecki, Zielonka and Ząbki are using the policy in order to increase local tax revenue, and the free use of public transport is only for local residents. Such a use of the concept could be seen in Tallinn (Estonia), which was at the time one of the most successful cases of FFPT, not only due to its scale, but also its outputs (see more in Cats et al. 2014, 2017; Hess 2017; Kebłowski et al. 2019). Pruscz Gdański saw the potential to make the town centre more attractive and easier to access for the locals by abolishing fares. The final examples use the policy in terms of improving the public transport service. Nowy Tomyśl aim is to increase patronage of public transport and a similar situation pertains in Nowy Dwór Mazowiecki, which wants to promote the public transport service, and Stryków, which sees it as a way to promote effective organisation of the public transport service and its integration with other modes of transport. Although those municipalities differ from the rest of the dataset, the way they use the FFPT scheme does not significantly differ from other examples from North America or Europe, where a focus on the issues of economy and efficiency prevails. Understandably, the different goals of the FFPT schemes represent major issues occurring in the current transport system, but in reality the scheme affects each of them at some level. The overall impact is then the result of the complementarity of the free fare public transport scheme with other transport and urban development measures.

It is noted that the FFPT is mainly in the hands of the municipal planning authorities responsible for development in particular areas. It is then unsurprising that in almost every case the FFPT is the result of a debate in the municipal council. This study also finds municipalities where the implementation of the FFPT is not the result of discussion among responsible stakeholders, but results from strong support for the concept among the residents. Examples of this include Gostyń, Kościerzyna and Kozienice.

Typology of FFPT cases

The previous section provides us with the overall geography of the FFPT policy in Poland. Although the dataset differs in various terms described above, the study finds some key similarities which are typical for specific cases, in particular, the reasons why a free fare public transport policy emerges in the municipalities identified. Table 3. below shows the similarities discovered, which allow us to create a specific typology. Such a typology divides up the municipalities from the dataset into four main groups, as displayed in Figure 3. Those categories cover all the schemes examined, but naturally there are municipalities which, even though they are similar to one another in terms of FFPT policy, do not have any other dominant characteristics and would be significant and sufficient enough to create another specific group. The overall map presenting the typologies is given in Figure 3. The key characteristics of each category of the typology are given in Table 3. The process for defining the typologies is given in the Methodology section above.

The *unspecified* set of municipalities is unsurprisingly the largest and contains the majority of examples. These municipalities do not state that they are responding to any major key considerations, but all of them define policy to address the development of their own urban transport without focusing on problems lying above the competence of the municipality. By comparing this group of municipalities with a study conducted by P. Śleszyński (2014), *Delimitation and typology of functional urban regions in Poland, based on commuting, 2006,* many of these settlements do not belong to the major metropolitan areas and are more likely to be autonomous units. For example, Wieluń, Bełchatów, Tomaszów Mazowiecki, Rawa Mazowiecka, Lubin, Brodnica, Mława, Działdowo, Żagań, Wągrowiec or Gostyń. Apart of these municipalities, there are also settlements which form part of metropolitan areas according to not only P. Śleszyński (2014), but also J. Gałka & A. Warych-Juras (2018). The reason why they are left in this category is that the introduction of the FFPT policy and how it is stated in the official documents and statements does not directly address issues caused by the increasing influence of the main regional centres like Warszawa, Gdańsk, Poznań, Wrocław, Katowice and Kraków. Even though it is more likely that the presence of the policy is at some point underpinned by the close proximity of the main economic centres and is a consequence of the process of suburbanisation, they are categorised as unspecified.

A more specific category is comprised of municipalities labelled as *peripheral areas*. The characteristic, and peripheral, feature of those settlements is the poor accessibility of their public transport (e.g. Stępniak, Rosik & Komornicki 2014; Rosik et al. 2017). The introduction of an FFPT policy in those municipalities is a consequence of their very poor accessibility by public and private carriers due to a lack of connections. Such connections are not sufficiently economic for private carriers to operate in a given area which suffers from poor public transport accessibility and residents are dependent on individual means of transport. To solve these issues, municipalities in this category are introducing a free-fare public

TABLE 3
Typology of FFPT schemes, Poland 2019
Source: own study

TYPOLOGY	KEY CHARACTERISTICS	NUMBER OF SCHEMES
Suburban/metropolitan areas	Municipalities in the hinterland of regional centres which, through the policy, are trying to better integrate with its centre; reaction to a growing population	15
Tourist area	The policy is directly addressed to tourists and the aim is to protect the natural environment in the designated area	8
Peripheral areas	The policy is addressed to ameliorating the poor accessibility of an existing public transport network (operation)	4
Unspecified	Municipalities with an FFPT policy which are not categorised	39

transport scheme in order to increase mobility and patronage on public transport and reduce car dependency by creating a more socially just and available transport system as well as to improve its overall qualities.

Another group of municipalities creating their own category in the typology presented is provided by those in *tourist areas*. This is a case of rather small-sized municipalities usually in the hinterland of natural heritage features. The distinctive element according to which each municipality was assigned to this category is the fact that the policy aims to protect the quality of natural heritage features. The aim, which underpins the FFPT policy, is to reduce the negative externalities caused by car use. Usually those systems are open for all potential passengers. In some cases, its operation is limited to the main tourist season, while the policy in such cases is focused on reducing the negative impact of the increased intensity of car use due to the main tourist season rather than on diminishing the transportation intensity of the permanent inhabitants in given locations.

The last category includes municipalities which lie in close proximity to the main regional centres. The reason why this category is called *suburban/metropolitan areas* is because not all of the municipalities lie in metropolitan areas, which are for the purpose of this study understood according to J. Gałka & A. Warych-Juras (2018), but rather close to centres of a sub-regional character (Śleszyński 2014). The major distinctive feature of settlements in this category is that the policy is addressing issues connected with the influence of their centres which results in an increasing need for daily commuting to its centre for various purposes. Usually the policy is adopted in conjunction with major improvements to the public transport system, for instance, better integration with other transport modes providing a connection to the regional centre (railway, regional bus lines). Apart from this, another significant feature of those municipalities is limited access to the free public transport service. As a result, payment of fares is only abolished for residents who are registered in the given municipality. The main reason for this step is the fact that these municipalities are close to the main centre and people prefer to live here and commute on a daily basis to the core. Such a situation is, in some cases, hardly sustainable on a long-term horizon, while it results in growing demands from residents for a quality transport system. In these schemes the FFPT system is used as a tool to encourage people to register as permanent residents in a given municipality. This should increase the income from local taxes in the municipality's budget and later the flow of investment to the transport system. In other words, it is a step in creating more resilient cities, whose development is affected by the consequences of the suburbanisation process. Such forms of FFPT are not unusual, even outside of Poland, for example they are found in Tallinn (Estonia) and Frydek-Mistek (Czech Republic). While the public transport service is in some cases (e.g. Radzymin) provided by the main carrier providing the service in the regional or sub-regional centre, the residents from the hinterland could, due to a specific arrangement with the public transport provider, use special discounts for the service to the centre.

As has already been noted in the previous part of this section, the FFPT cases are distributed almost all over Poland and it is hard to identify some significant spatial regularities. After looking closely at each municipality examined, the typology presented uncovers a valuable insight into the spatial distribution of FFPT. For example, many FFPT projects are adopted in the hinterland of regional and sub-regional centres. This new dynamic highlights newly emerging forms of cooperation between different stakeholders resulting in better coordination and integration of the public transport service.

In the beginning of this section it was said that there are municipalities, which lie in the hinterland of main regional or sub-regional centres and thus could be included in the suburban/metropolitan category, but due to lack

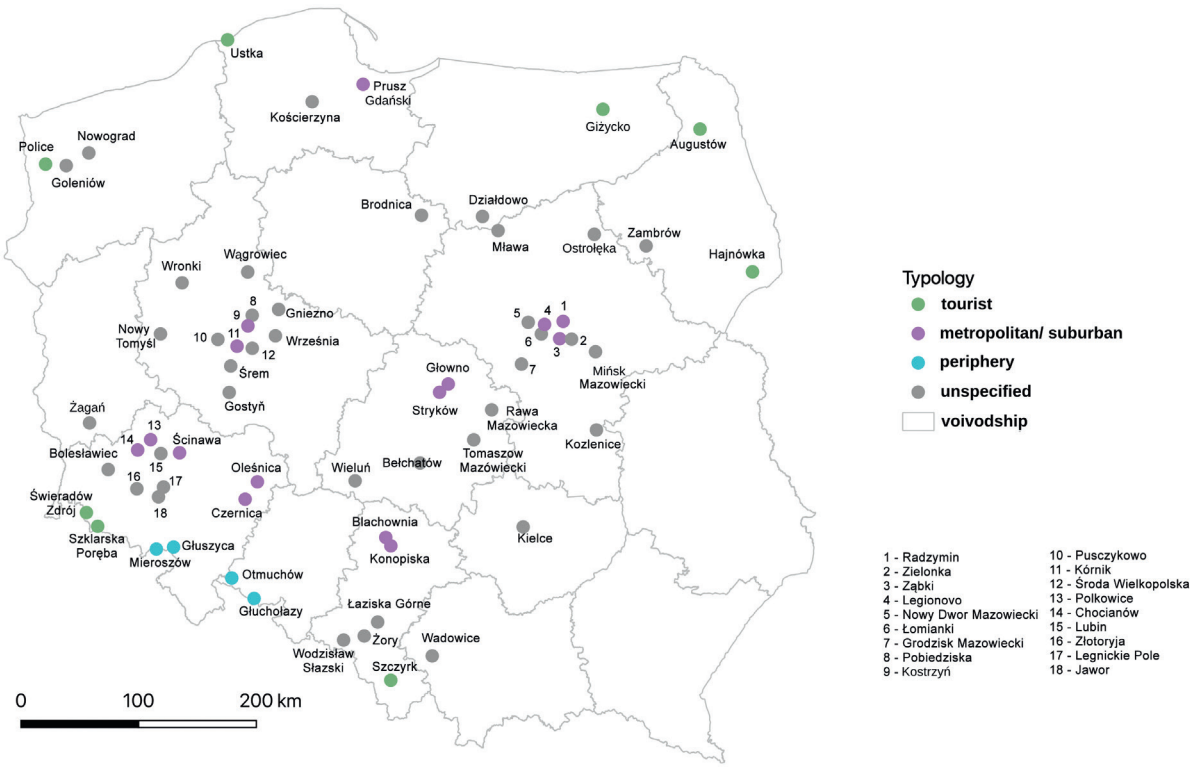

FIGURE 3
Typology of FFPT cases, Poland
Note: the number of FFPT projects adopted in 2019 is up-dated to the end of March 2019
Source: own study, base map source – *Główny Urząd Geodezji i Kartografii*

of sufficient policies, they have been left as unspecified. Without doubt, the emergence of the policy is a consequence of the suburbanisation processes in the areas concerned. In addition to this, the next thing to highlight is the emerging pattern of spatial diffusion in municipalities in suburban and metropolitan regions. Examples include the free fare transport scheme in the powiats of Lubin and Polkowice (second-tier unit of local government) or in the hinterland of Warszawa.

Conclusion

By answering the call to fill in the gap in research on free fare public transport policies (see Kębłowski 2019), this study shows a new dynamic in the development of transport systems in Poland and provides us with an up-to-date inventory of schemes which implement an FFPT policy. The results show that many different municipalities across Poland adopted similar policies. Even though the reasons underlying the adoption of this policy are to some extent similar to other examples from abroad, the study findings indicate that the policy is, in the vast majority of cases according to the official statements of the municipal authorities, predominantly focused on issues connected with the protection of the environment or enhancing mobility under the influence of the paradigm of sustainable mobility, which corresponds with other FFPT schemes throughout Europe (e.g. Kębłowski 2019). Nevertheless, further investigation is needed in order to explore what are the real effects of the policy and, if it follows the initial direction, to be sure of those statements or to uncover other possible motivations hidden beneath the surface (e.g. gaining popularity, marketing practices).

Due to analyses of the main hidden motivations behind the introduction of FFPT schemes, this research is providing us also with a unique typology of FFPT schemes. Such a typology uncovers additional factors which drove different stakeholders to implement an FFPT policy and is to some extent similar throughout the dataset. While municipalities in the hinterland of natural heritage features focus on the protection of the environment and the adoption of FFPT principles provides an answer to the increasing volume of car traffic in the main tourist seasons (*tourist*), other municipalities focus on improving accessibility in a particular area to create a more car-independent and socially just transport system (*periphery*). Interesting patterns of development were then observed in *metropolitan/suburban areas* where the policy is the result of growing demand for a quality transport system due to the general growth of dynamically developing locations in the

hinterland of the main regional and sub-regional centres. Implementation of an FFPT scheme is a step towards creating an integrated transport network in metropolitan areas and sub-regional centres.

The next output of this study is that the introduction of a free fare public transport policy mainly occurs in small- to medium-sized municipalities with a less complex transport system. For such municipalities it is easier to adopt such a policy and they are more likely to benefit from economic savings. Those findings are similar to J. Taczanowski et al. (2018), where the same type of municipality is also more likely to adopt ecological instruments to improve the quality of the environment in a specific area.

Even though recent studies of FFPT argue that the emergence of the policy is rather random, the research has shown that in some cases the implementation of free fare public transport policy is a result of spatial diffusion and coordination between different stakeholders from municipalities in the same area. This is mainly common in settlements which are in the hinterland of main regional or sub-regional centres, where the concept is seen as a way to create a more resilient and interconnected transport system.

The study has indicated that there is a new trend in the development of transportation in Poland, which has not been fully examined and understood, either by scholars, or by policymakers, since there is no mention of the newly exploited phenomenon in the Transport Development Strategy to 2020 (with a perspective to 2030) in Poland (*Ministerstwo Transportu Budownictwa i Gospodarki Morskiej* 2013). This fact just highlights the importance of further investigation of free fare public transport policy to not only better understand the changing landscape of public transport strategies and the use of free fare public transport policies in Poland, but also to bring this to the attention of people outside academia. Further research should thus focus on analyses of individual schemes to know what are the real effects of implementing FFPT schemes. Such analysis should also examine the topic through the lens of the political discourse to uncover other intentions, which the implementation of fare-free principles could possibly represent. Besides the impact of the policy on the changing dynamic in the given transport system or on transport behaviour, it is also important to bring attention to the financial effects of the policy (e.g. costs and income). The last thing to remember for the following research is that FFPT policies represent only one out of many existing transport measures and thus should respect the complex nature of transport systems and their development.

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