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SIGNIFICANCE OF THE PUBLIC TRANSPORT FOR TOURISM DEVELOPMENT IN DESTINATIONS

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Abstract

Economic and environmental consequences of transport connected to tourism are important topic in tourism transition. Public transport is in many countries strongly underated even though its potential for economic as well es environmental development is considered to be high. The aim of the contribution is to evaluate how the stakeholders involved in the development and management of tourism destinations perceive the importance of public transport and other transport services. A partial goal is to find out how this importance differs between countries and between different types of destinations and what effect public transport has on the development of a given tourism area. International comparison as well as comparison among types of destination in tourism centres for the Czech Republic, Germany, Austria, Italy, the Netherlands, and Mexico was done. Factorial repeated measures ANOVAs was used to test potential differences among those six countries and three types of destinations based on 121 questionnaires. The research was based on the data of expert estimates of stakeholders, i.e. on what the managers who make decisions and formulate policies think. It was therefore not a real state, because it is not about exact measured values. We have found that the contribution of individual means of transport to local development is perceived by stakeholders significantly different. Regardless of the country, public transport is considered the most important development element. Furthermore, it was found that public transport is generally considered to be the most environmentally friendly. It can also be stated that tourism experts expect further development of transport in their destination, but they are not completely satisfied with the state of development preparations. The level of public transport is the worst rated in Mexico, but the experts there are most aware of its influence on the development of tourism and the benefit to the local population. In the Netherlands and Italy, the public administration motivates the use of public transport the most, while in Mexico and the Czech Republic, this support is perceived to be comparatively less. In the Netherlands, Italy and Mexico, they are open to the integration of shared means of transport (e.g., shared bicycles, scooters or Uber) into the public transport system, on the contrary, the Czech Republic is more sceptical of these alternative means of transport. Further development of public transport is planned in all studied countries, and local public administration participates in its operation.

Keywords: Development, public transport, destination, tourism, ecology

INTRODUCTION

Mobility is very important for participation in tourism, and one of its basic elements is transport (Pourová, 2010; Vystoupil et al., 2011; Rodrigue, 2020). Every year, thanks to transport, millions of people from all over the world can participate in tourism, which Pásková and Zelenka (2012) define as the sum of activities and temporary stays of travelers outside their residence together with the sum of services and products provided to these

travelers. As stated by Nelson (2013), there is a strong relationship between transport and tourism because tourism creates demand for transport services. At the same time, transport is considered a necessary part of tourism and is taken as one of its most important components. As Virkar and Mallya (2018) pointed out, transportation is an important element for tourism development and helps tourists in a destination.

Private individual transport (e.g. car) or commercial public transport (e.g. air, bus) plays the most important role in tourism. Public transport is provided publicly to all persons, so it involves traveling with other people and thus there is social interaction during travel. Among the means of public transport in the city and its surroundings can be including a bus, trolleybus, tram, train, underground, ferry or cable car. These transport services follow timetables and transport schedules, passengers pay for their use and can be integrated into integrated transport system (ITS). We can also talk about non-conventional public transport, which offers, for example, shared bicycles and scooters. The importance of public transport providing transport on regular lines according to timetables and subsidized to a significant extent from public budgets is rather marginal and plays a larger role only in countries with a tradition of public transport. These include, for example, Great Britain or Spain, but also post-socialist countries in Eastern Europe, such as the Czech Republic. On the contrary, its position in the USA or countries outside the world economic core is completely different. As Cheng and Chen (2015) mention, the level of mobility of a city depends on a good organization of the transport system and a user-friendly public transport system that allows good connectivity and accessibility of stops.

In general, there is an effort to suppress individual journeys by private car, which are the least ecological, and more emphasis is placed on the development of public transport (Adamec et al., 2005). However, there are significant changes in the field of public transport, for example in connection with the development of integrated transport systems, which can significantly shift the possibilities of using public transport by participants in the tourism industry.

The issue of the possibilities of using public transport in tourism destinations is not sufficiently researched. That is why the aim of this paper is to evaluate how the stakeholders involved in the development and management of tourism destinations perceive the importance of public transport and other transport services. A partial goal is to find out how this importance differs between countries and between different types of destinations and what effect public transport has on the development of a given tourism area.

THEORETICAL BACKGROUND

Importance of Transport in Tourism Destinations

Traveling is necessary for tourism, as it involves the movement of the passenger to destinations and subsequently within the destinations (Kalousová & Jarábková, 2015). Orieška (2010) and Šejvlová et al. (2011) mention that the most important role in developing tourism is the transport infrastructure and its quality besides other issues of destination management (Navrátil et al. 2012, 2013, 2018). Crouch and Ritchie (1999) perceive transport as a supporting resource that affects access to a tourism destination. It is an integral part of the core activity of tourism, and its quality contributes to the destination's competitiveness.

Currently, the influence of public transport on tourism is growing more and more, therefore authors such as Hoenninger (2003) or Gronau and Kagermeier (2007) deal with its planning, passenger awareness, traffic restrictions within city districts, or the possibility of involving alternative means of transport that support mobility. High-quality public passenger transport helps support the development of tourism (Mrníková, Poliak, Šimurková, & Reuter, 2018). Public transport is more flexible in providing access to more places for a greater number of visitors, therefore, it is important for the development of low-carbon tourism (Gössling, 2010). Yang (2010) and Mandeno (2011) state that cities with an extensive and efficient public transport network are more attractive to tourists. Even more public transport involves traveling with other people, so there is considerable social interaction between tourists and local inhabitants (Currie & Stanley, 2008). It is advisable to effectively replace individual car transport with public transport or other alternative means of transport (e.g., cycling and walking). At the same time, public transport reduces the negative externalities of cars and increases the quality of the environment in a given locality (see the next chapter for more details).

Among the means of urban public transport, it can include buses, trolleybuses, trams, subway, or even trains, cable cars or ferries (Simon, 2012; Le-Klähn, Hall, & Gerike, 2014). Complementary to these means of transport can be alternative means of transport, such as shared transport (bikesharing, scootersharing, carsharing, ridesharing), or taxi services and car rental companies. On the other hand, rural areas of tourism are mainly served by bus service. According to the authors Thompson and Schofield (2007), Farag and Lyons (2012) or Le-Klähn, Hall and Gerike (2014), users of public transport in rural areas differ from users in cities, and the age of the passengers also affects the choice of transport. Barr and Prillwitz

(2012) also mention the difference in the choice of means of transport depending on the type of passengers, which they divide into:

- reluctant users of public transport – elderly people with limited access to a car,
- committed ecological travelers – middle-aged people, often managers, who use different means (including active transport),
- aspiring eco-travellers and
- dependent car users.

Transport availability and connectivity influence the choice of a tourist destination. If tourist attractions are not well connected by public transport, travelers prefer to choose a car (Su & Wall, 2009; Xiao, Jia, & Jiang, 2012). Ho and Mulley (2013) claim that the complexity of the selected tour of the area is also important for the choice of transport mode – tourists with complex itineraries are more likely to use private transport, while visitors who have multiple destinations near one destination with good connectivity prefer to choose public transport. As, e.g., Grigolon, Kemperman and Timmermans (2012) or Masiero and Zoltan (2013) state, it is important to understand the factors that influence the choice of means of transport, as it also affects the choice of destination and accommodation.

Lumsdon and Page (2007) address the difference between the use of transport for tourism - i.e., for the purpose of relocating and the necessary movement of passengers, and transport that is itself tourism and brings added value. In the second case, the transport is taken as an attraction that the passenger deliberately chooses because of some peculiarity (e.g., sightseeing cruises, historical drives, etc.). These two forms of transport use intertwine and thus form a continuum.

Different means of transport can have different meanings for different destinations in individual countries. **Hypothesis H1** was therefore established: **Different means of transport in the destination have different meanings, which is influenced by the cultural milieu and the type of destination.**

The Importance of Different Means of Transport for the Environment

Transport is constantly developing and modernizing, but it also has negative effects on the environment. These negative externalities include especially (Gao et al., 2018):

- pollution (i.e., emissions and waste),
- congestion,
- land take,

- noise,
- vibration,
- congestion, etc.

The ecological aspect is currently a much-discussed topic not only in transport. Society tries to behave pro-ecologically. There are also so-called "green consumers" (Pícha & Navrátil, 2019), but it is necessary to distinguish between a real interest in the environment or a mere attitude toward social prestige. Nilsson and Küller (2000) mention that commuters do not look at the environmental aspect. Convenience and speed of transportation are more important to them when traveling on a daily basis.

As Manniche, Larsen, Broegaard, and Holland (2018) state, transport offers many opportunities for improvement and environmental sustainability. Possibilities for reducing the negative impacts of tourist travel include, for example, a smaller number of trips, traveling shorter distances, longer stays in the destination or the use of ecological means of transport. For sustainable transport, it is necessary to pay attention to the reduction of emissions and greenhouse gases, the use of vehicles with alternative drive (electric and hybrid) or alternative vehicles (bicycles, scooters, etc.), traffic regulation, the possibility of shared transport, suitable infrastructure, ecological production of vehicles, sustainable fleet management or driver training on ecological driving.

Yatskiv, Budilovich, and Gromule (2017) mention that public transport helps reduce the negative impacts of private cars. According to available statistics and authors Elias and Shiftan (2012), it is transport that contributes the most to environmental pollution and CO_2 emissions in urban areas. For this reason, there is an effort to transition from cars to the use of public transport or shared means of transport and walking. It is precisely these active forms of mobility (bicycle, scooter, skates, walking) that are the most ecological and at the same time safer and healthier than classic transport. For their greater use, it is necessary to invest in shared multimodal infrastructure (integration of cycle paths, charging stations for e-bikes, etc.), but it is expected that they could reduce global CO_2 emissions by 70% by 2040 and also reduce costs for European households by 70% by 2050.

In an article by Mazal (2020) focusing on the impact of public transport on city life, analyst Jil Gonzalez from WalletHub is quoted as saying that even the ITS reduces emissions of harmful substances around transport routes, helps the city's economic growth and saves passengers travel costs. A quality transport system, therefore, has the potential to improve the environment, public health, transport sustainability and the economy. The need is to

streamline the level of transport services and reduce traffic and travel (Givoni & Banister, 2010).

According to experts, there is an increasing effort to be environmentally friendly, i.e., to make ecological means of transport more attractive. Public transport is thus preferred over individual transport for the transfer of passengers, as it reduces the negative impacts of transport (Adamec et al., 2005). Manniche, Larsen, Broegaard and Holland (2018) also mention that using greener means of transport would lead to a reduction in the negative impacts of tourist travel. The negative effects of transport development on the destination and the consequences of pollution lead to the devaluation of the destination (Hall, 1998; Duval, 2007).

Hypothesis H2 was chosen for the topic concerning the impact of different means of transport on the environment in individual coutries: **Different means of transport in the destination are perceived differently from the point of view of impact on the environment, and the cultural milieu and the type of destination influences this perception.**

Support for the Development of Public Transport in Destinations

The transport offer and its development are governed by demand from residents and tourists, who decide according to their preferences whether to use individual car transport or public transport to move around the city. Discrete choice models or disaggregated demand models can be used to choose from several options (McFadden, 1981; Schakenbos, La Paix, Nijenstein, & Geurs, 2016). As Hagman (2003) states, nowadays car transport is more attractive than public transport because it is more comfortable, more free, in most cases faster, more reliable, and the passenger feels a better social status. Schödlbauer (2009) states that in order for passengers to prefer public transport, positive motivation is needed, i.e., to show its positive aspects (modern and safe vehicles, frequency of connections, speed and smoothness of driving through the city, etc.). The interest in ecology and the quality of urban life is still growing. For this reason, urban public transport is also being addressed more recently (Bok & Kwon, 2016).

One of the most important factors for evaluating the quality of transport is the transport infrastructure, therefore, it is important to pay attention to its quality, scope, and modernization and invest in it effectively. The level of mobility can be improved thanks to an effective ITS, in which it is necessary to solve connections, coordination of timetables,

availability of stops, multimodal terminals, ticketing system or P+R parking (Cheng & Chen, 2015). Providing efficient and affordable public transport should be one of the goals for policy makers worldwide (Saghapour, Moridpour, & Thompson, 2016). Janic (2001) agrees that the development of ITS should be the goal of national and local authorities and administrations.

Public transport is subsidized from public sources; therefore, it is an integral part of the planning process of local and regional development. According to the American Public Transportation Association (APTA, 2020), there are social, environmental and economic reasons for investing in public transport. Investments impact the area's economy, money flow, and job creation and help reduce the growth of individual car transport. Public transport provides mobility for people who do not own a car but also offers benefits to car users. Good public transport accessibility also improves the availability of other services because there is better connectivity of localities and people (Abreha, 2007). Yatskiv, Budilovich and Gromule (2017) deal with door-to-door mobility, as it offers a more attractive form of public transport for passengers and further claim that the development of the transport service industry is a very important factor of social quality. According to Janic (2001), the solution is integrating different means of public transport and the integrating individual transport and public transport systems.

Transport is also a very important element in the development of tourism destinations, and its role is key, as the public transport system enables the flow of arriving visitors to the destination, and access to tourist destinations and thus appeals to a wider market of potential tourists (Prideaux, 2000). There are several possible steps to promote public transport in tourism. First of all, it is necessary to identify the key target groups in the destination, then to ensure the connection of various means of transport to the public transport system, and promote the offer appropriately to potential customers (Gronau & Kagermeier, 2007). These authors also mention other possibilities to support recreation using public transport. It can be, for example, a discount on the entrance fee when buying a ticket or restricting the accessibility of tourism destinations by car (e.g., adjusting parking or restricting entry). As an example, they cite the metropolitan area of Munich in Germany, where a €2 parking fee at an amusement park helped increase public transport use by 5%. Hall (1999) and Duval (2007) also draw attention to the negative impact of transport development on the destination, as it can lead to greater traffic congestion or air pollution, thereby devaluing the destination. There is so-called community-based tourism (CBT), which is based on the fact that the community

plays an important role in the development of tourism and emphasizes the cooperation between local residents, local authorities, the private sector and tourists (García Sánchez, Crespo Stupková, & Coria Téllez, 2021). These authors also mention that despite mass tourism, tourism can strengthen the local community and thus have a positive impact. Hall (1996) states that community involvement in tourism development aims to create a more sustainable industry.

Support for transport development in tourism destinations can be perceived differently and in several different areas there can be a different priority and level of support. For a closer examination of this issue, **hypothesis H3** was stated: **Support for the development of individual means of transport is perceived differently and is influenced by the cultural milieu and the type of destination.**

DATA AND METHODS

Study Area and Respondents

To test our hypotheses data were collected in broad spectrum of countries representing all main types of countries regarding public transport issues with special attention paid to central European countries. The Czech Republic was chosen as the typical example of post-socialist Central European country. Two other countries from Central Europe, namely Germany and Austria, were chosen for comparison as examples of "western" countries with tradition of public transport. Furthermore, Italy was selected as a representative of one of the most important tourist destinations worldwide. The Netherlands was included as an example of a typical Western European destination with a tradition of international travel and as an important source and destination country outside Central European realm. At the same time, public transport and alternative means of transport, such as bicycle transport, are well developed in this country. Finally, Mexico was chosen as an example of Newly Industrialized Countries (NIC) with a different history and functioning of public transport than in European countries.

Furthermore, individual countries will be also marked according to official international codes - the Czech Republic (CZE), Germany (DEU), Austria (AUT), Italy (ITA), the Netherlands (NLD) and Mexico (MEX).

Data collection was carried out among experts and practitioners in tourism from two cities of selected Europe Union countries (in the capital city, which is considered the main tourism

destination, and one randomly selected regional city – all the selected cities are the seats of universities with experts in tourism, travel and transport as well as seats of national/regional destination managements and public administration), so that data from individual countries could be compared. The following cities were selected: Czech Republic – Prague and České Budějovice, Germany – Berlin and Munich, Austria – Vienna and Linz, Italy – Rome and Milan, and the Netherlands – Amsterdam and Rotterdam. Research in Mexico was conducted in the cities of Zamora, Guadalajara, Cancún, Mérida, and Mexico City. As mentioned above, these cities were considered as centres of tourist destinations.

Among the selected experts in tourism were university employees with a given focus, transport experts, employees of travel agencies, guides, local self-government authorities, or destination management of the given destinations and public administration. These experts were selected on the basis of available contacts, which were obtained through online searches, personal visits to institutions in the given countries, and subsequently by the snowball method, when the contact was recommended by an already contacted respondent. In each country 40 respondents were addressed to obtain comparable amount of responses from each country as analyses based on means of responses were intendet to use in further analyses. Data collection took place directly in individual cities from September 18, 2021 to September 27, 2022. Respondents were personally approached after contacting them by email in advance. During these researches, tourism experts in individual countries were personally visited, or subsequent online meetings were arranged.

The final number of questionnaires received in individual country was – the Czech Republic 20, Germany 18, Austria 22, Italy 17, the Netherlands 21, and Mexico 23. The return rate of the questionnaires was 50,4% with comparable number of respondents in each country.

Questionnaire

In order to fulfill the goal of our study, which is (i) to evaluate the importance of public transport and other transport services for tourism development, (ii) to find out the differences in such importance among selected countries and among different types of destinations, and (iii) the influence of public transport on the development of a given area of tourism, three hypotheses were chosen. The data needed to test our research hypotheses stated in previous part were obtained by the means of a questionnaire survey among experts in the tourism industry. Based on the analysis of available sources, a bank of questions measuring the

specified variables was prepared, which was piloted on a test sample of eight experts. The questions became part of an inquiry tool solving a wider range of problems in destinations, dealing with the issue of shared accommodation. Only the results related to public transport are presented in this paper. The final questionnaire was translated into the official languages of the countries in which it was subsequently carried out.

The questionnaire consisted of several parts dealing separately with each of our hypotheses.

First part was dedicated to the typology of selected destinations. Respondents had to rate six main possible potentials of development of their destination: Recreational, Cultural-social, Spa, Congress, Rural tourism and Nature, natural parks and natural heritage. This question was chosen to identify the types of tourism areas in the selected countries and was used in further analyses as independent variable alongside the country of origin of the respondent. Each potential was measured on 5-point scale (1 = very poor potential, 2 = poor potential, 3 = not poor but not good potential, 4 = good potential, 5 = very good potential).

Second part was dealing with our first hypothesis. Respondents had to rated how different means of transport within the destination contribute to local development. Four most common transport services were to be evaluated: Public transport, Uber, Taxi, and Car rental. These four options are the basic transport options offered within the city and its surroundings. Each service was evaluated on 5-point scale (1 = very negative contribution, 2 = negative contribution, 3 = not negative but not positive contribution, 4 = positive contribution, 5 = very positive contribution).

Third part was dealing with our second hypothesis. Respondents had to rated how different means of transport within the destination influence the environment of the destination. Three most common transport services were to be evaluated: Public transport, Uber, and Taxi. Each service was evaluated on 5-point scale (1 = very negative influence, 2 = negative influence, 3 = not negative but not positive influence, 4 = positive influence, 5 = very positive influence).

The last part was dealing with our third hypothesis. Respondents had to evaluate their perception of the level of support for transport development in individual countries based on the level of agreement with seven statements connected different aspects:

- Level: The level of public transport in the given region is sufficient.
- Impact: A high-quality transport system has an impact on the development of the given area and on tourism.
- Benefit: Public transport is beneficial for the local population.

- Motivation: The public administration motivates the use of public transport.
- Alternative: It would be possible to connect shared bicycles and scooters or taxi service vehicles/Uber to public transport in the given area.
- Preparation: The development of public transport and service of the region is being prepared in the given area.
- Operation: The local administration participates in the operation of public transport.

To measure the agreement with those seven statements a 5-point Likert scale was used (1 = strongly disagree, 2 = disagree, 3 = neutral dis/agreement, 4 = agree, 5 = strongly agree).

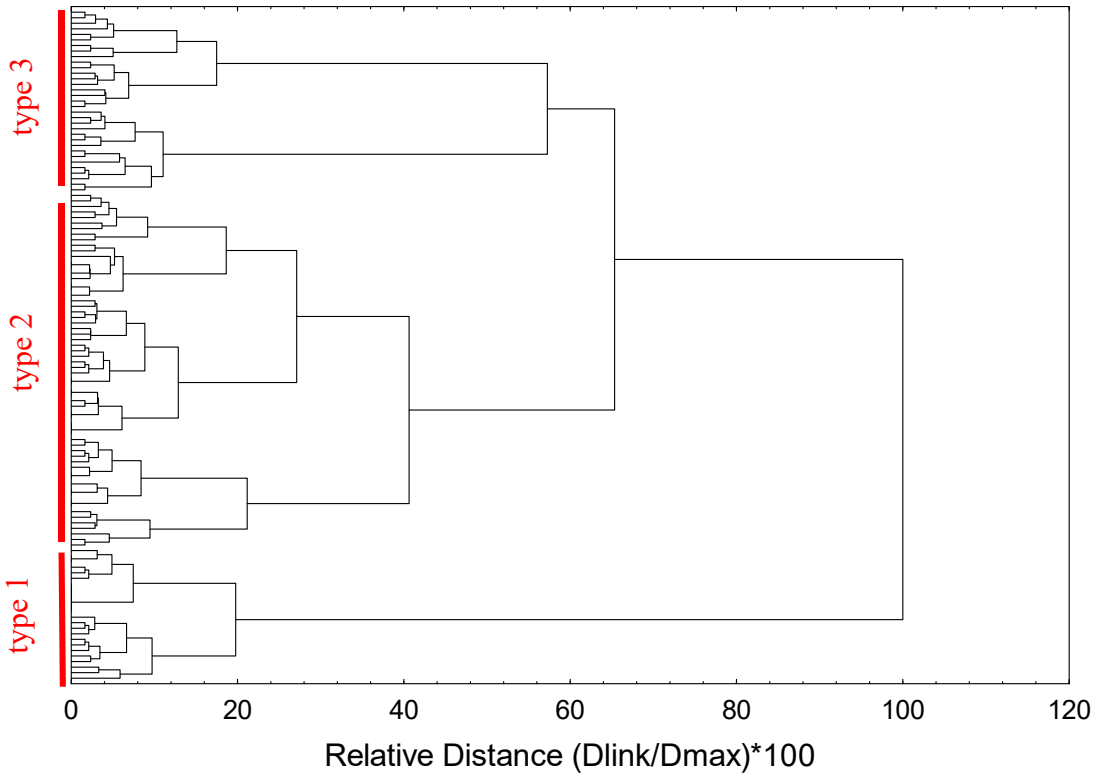
Data Handling and Analyses

Type of Destination

Before testing of our hypotheses, we have identified the type of destination from which the individual experts came as reponses of respondent could not be influenced only by the country of origin of the respondent but also by the type of destination – all destinations are urban-based, but the cities of our interest are also centres of larger destinations, that have different levels or tourism resources. All respondents were divided into destination types using the hierarchical clustering method of respondents based on their responses to the first part of the questionnaire – we have identified three types of destinations that were determined from the six above mentioned potentials of development of destination (please see further paragraphs in this section). Ward's method was used, and the similarity of individual experts was measured by Euclidean distance, which allowed us to have a uniform scale on which the experts answered. The respondent's belonging to the cluster was determined on the basis of 60% loss of information. Potential differences between clusters in the representation of individual sub-types of tourism were assessed using One-way ANOVA with Tukey's post-hoc test for an unequal number of n. The type of destination together with the country of origin were used as independent variables in our further analyses. The potential dependency between our two independent variables (country and type of destination) was assessed by Fisher's exact test.

Using the hierarchical clustering method, three relatively well-defined and at the same time approximately equally large groups of areas from which the respondents came from were obtained (Fig. 1).

Figure 1 Cluster analysis according to the main types of destinations identified by respondents



Source: own inquiry

The differences between clusters of respondents are statistically significant for all monitored types of tourism (see Tab. 2). The differences are mainly between group 1, in which experts rate the potential of all sub-types of tourism in their region as above average, and group 3, in which these ratings are below average (Tukey's post-hoc test, $p < 0.05$); group 2, i.e., with an average rating, is then always located between them (these results are not shown).

Table 2 One-ANOVA results of three destination types

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
Recreational	108.876	2	54.438	74.363	118	0.630	86.383	< .001
Cultural-social	6.240	2	3.120	66.867	118	0.5667	5.506	< .01
Spa	96.733	2	48.367	78.787	118	0.668	72.439	< .001
Congress	28.801	2	14.400	133.629	118	1.1324	12.716	< 0.01
Rural tourism	55.495	2	27.747	145.662	118	1.2344	22.478	< .001
Nature, natural parks and natural heritage	52.107	2	26.053	122.125	118	1.0349	25.173	< .001

Source: own inquiry

The representation of individual groups differs between countries (see Tab. 3 for the frequency representation of individual countries in tourism types; Fisher's exact test: p = .0004998). In most of the selected European countries, group 2 dominates. Only in Italy dominates group 3. In Mexico, there is an equal number of type 1 and 3 destinations.

Table 3 Cross-tabulation of countries and types of destinations (numbers of respondents are shown)

Cluster Membership	MEX	NLD	ITA	DEU	AUT	CZE
above average meaning (type 1)	11	2	1	3	4	3
average meaning (type 2)	2	16	5	11	14	16
below average meaning (type 3)	10	3	11	4	4	1

Source: own inquiry

Hypotheses Testing

All three hypotheses were tested separately by testing the average values of respondents' answers by country and type of destination. For this, a fully factorial combined ANOVA model was used, including testing the additivity of factors (three-way full-factorial repeated measures ANOVA - hereinafter referred to as ANOVA) - the type of destination and the country of origin of the respondent were used as factorial categorical variables and the given groups of question categories of the given hypothesis were considered as repeated measurement. Factorial repeated measures ANOVA was used because the responses to the given factors in the given variable cannot be considered mutually independent (for example, we ask an expert about the importance of different means of transport for local development, and there are four means of transport – Public transport, Uber, Taxi, Car rental). Therefore, it is necessary to adequately reduce the number of degrees of freedom. Subsequently, a Tukey HSD post-hoc test for an unequal number of n was performed.

The STATISTICA 13 software (Tibco) was used for all statistical analyses except Fisher's exact test, that was calculated in R software.

RESULTS

Importance of Different Means of Transport in the Destination

By testing hypothesis H1 (Tab. 4), it was possible to identify differences in the perception of the importance of transport for the development of destinations on the basis of primary data. This different perception is influenced by the respondent's country of origin. A different level of perception of the importance of transport development in individual types of destinations was also identified.

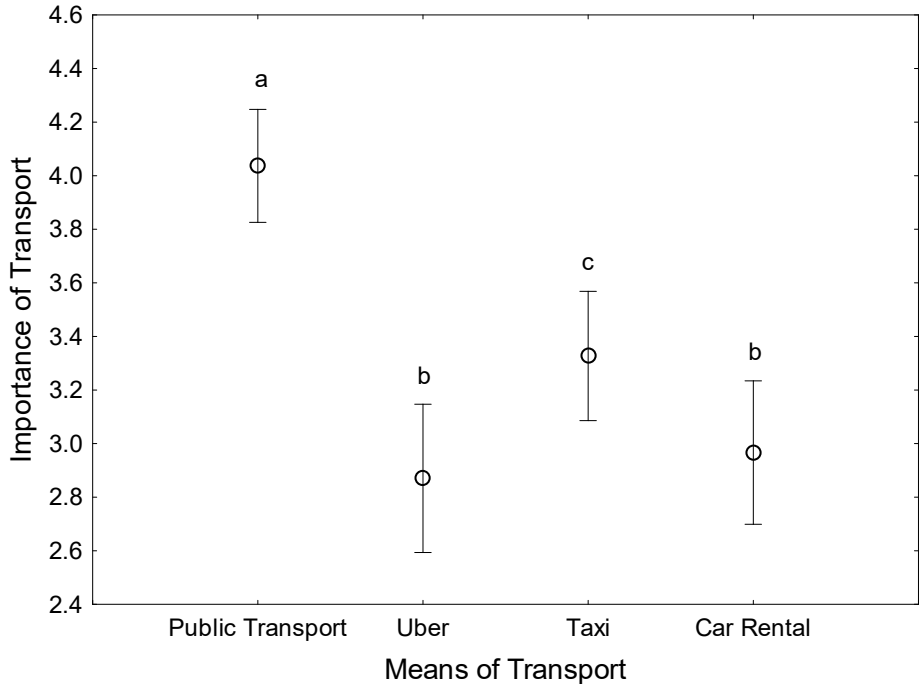
Table 4 ANOVA result for the importance of transport means in the destination

	SS	Degr. of Freedom	MS	F	p
Intercept	2555.416	1	2555.416	1111.866	< .001
Cluster Membership	48.383	2	24.192	10.526	< .001
Country	21.686	5	4.337	1.887	n.s.
Cluster Membership*Country	21.965	10	2.196	0.956	n.s.
Error	234.428	102	2.298		
Means of transport	49.238	3	16.413	34.125	< .001
Means of transport *Cluster Membership	2.634	6	0.439	0.913	n.s.
Means of transport *Country	13.476	15	0.898	1.868	< .05
Means of transport *Cluster Membership*Country	14.489	30	0.483	1.004	n.s.
Error	147.174	306	0.481		

Source: own inquiry

In all answers, public transport is perceived as the most important development element. On the contrary, Uber and rental companies are perceived as the least important. Taxis are between them. Regardless of the country, public transport is considered to be significantly more beneficial for local development than the other selected means of transport (Fig. 2).

Figure 2 The importance of individual means of transport

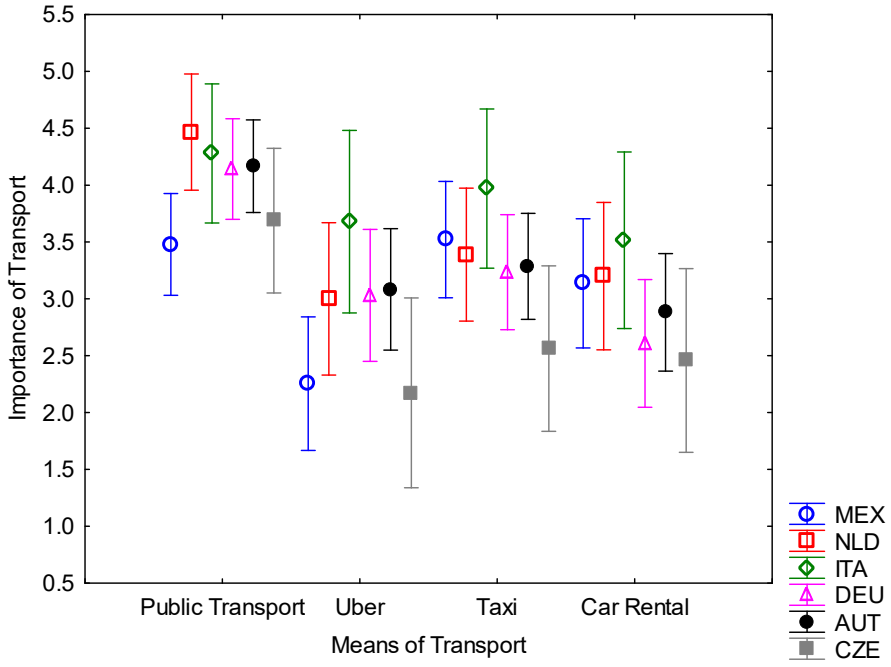


Source: own inquiry
Notes: Means and 95% confidence intervals are shown; means marked with the same letter do not differ based on Tukey's post-hoc test at the p = .05 level of significance

In this analysis, a significant effect of the Means of Transport factor was found. For this finding, a subsequent Tukey HSD post-hoc test for an unequal number of n was performed. According to the results of this test, it turned out that all means of transport are significantly different from each other, and at the 5% significance level, Uber and the Car rental company do not differ. Thus, three homogeneous groups were identified - Public transport (a), Uber and Car rental (b) and Taxi (c).

It is interesting, that this meaning differs quite fundamentally between individual countries (see Fig. 3). Compared to the overall model, in the case of Mexico, the importance of public transport is significantly suppressed and the importance of taxis is strengthened, whose average values are almost identical. The opposite is the case in the Czech Republic, where the importance of other means of transport than public transport is small. All four monitored means of transport have almost equal importance in Italy, but public transport again dominates a bit.

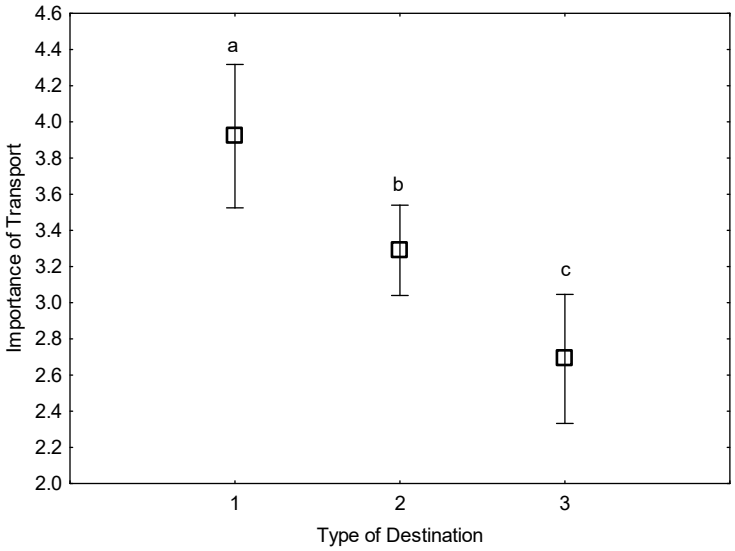
Figure 3 The importance of individual means of transport in individual countries



Source: own inquiry

The importance of different means of transport for local development is perceived differently between individual types of destinations (see Fig. 4).

Figure 4 Importance of transport in individual types of destinations



Source: own inquiry

Notes: Means and 95% confidence intervals are shown; means marked with the same letter do not differ based on Tukey's post-hoc test at the p = .05 level of significance

The Influence of Means of Transport on the Environment in the Destination

The importance of these means of transport (without car rental) for the development of the destination was then further investigated by asking about their effect on the environment in the destination (hypothesis H2). After carrying out ANOVA, differences were identified in the same factors as in the previous question, and also for individual countries (Tab. 5).

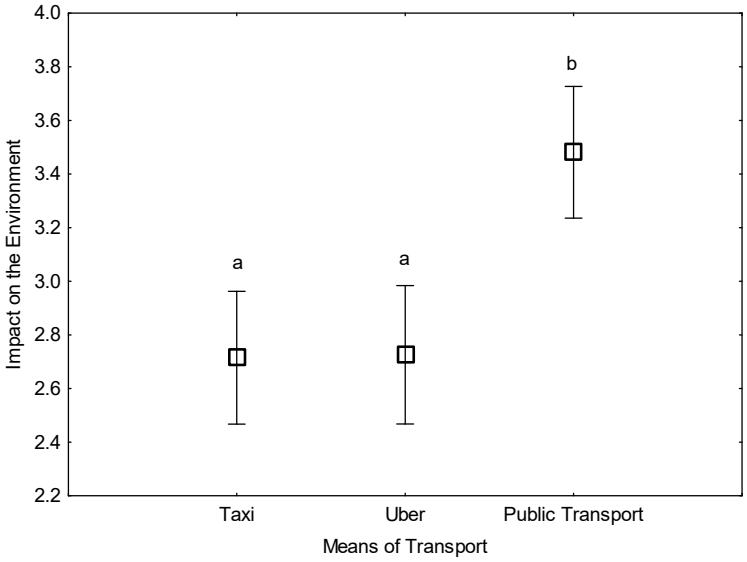
Table 5 ANOVA result for the perception of the influence of transport means on the environment in the destination

	Repeated Measures Analysis of Variance; Sigma-restricted parameterization Effective hypothesis decomposition				
Effect	SS	Degr. of Freedom	MS	F	p
Intercept	1511.984	1	1511.984	838.606	< .001
Cluster Membership	14.779	2	7.390	4.099	< .05
Country	40.683	5	8.137	4.513	< .001
Cluster Membership*Country	31.153	10	3.115	1.728	n.s.
Error	183.903	102	1.803		
Means of transport	21.973	2	10.986	23.797	< .001
Means of transport *Cluster Membership	0.953	4	0.238	0.516	n.s.
Means of transport *Country	14.066	10	1.407	3.047	< .01
Means of transport *Cluster Membership*Country	5.671	20	0.284	0.614	n.s.
Error	94.182	204	0.462		

Source: own inquiry

For individual means of transport, it can be found that public transport is considered the most environmentally friendly (Fig. 5).

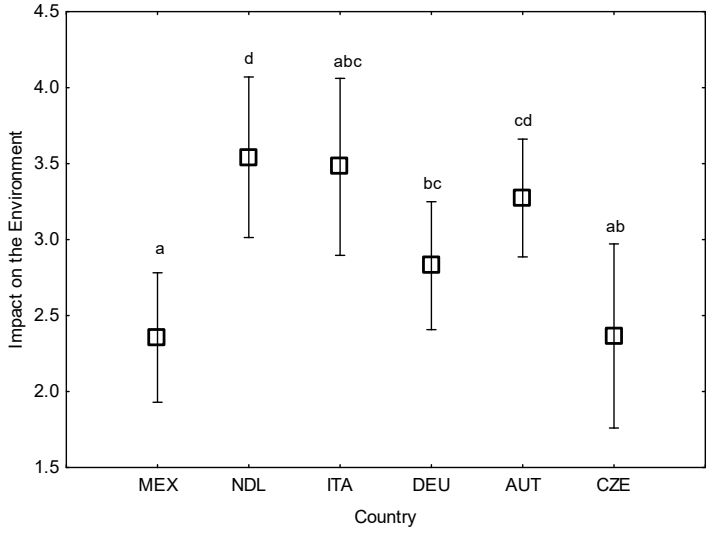
Figure 5 The impact of individual means of transport on the environment



Source: own inquiry
Notes: Means and 95% confidence intervals are shown; means marked with the same letter do not differ based on Tukey's post-hoc test at the p = .05 level of significance

The overall view of the environmental consideration among all means of transport is perceived worst in the case of the Czech Republic and Mexico. Experts from the Netherlands and Italy are convinced of the opposite (see Fig. 6).

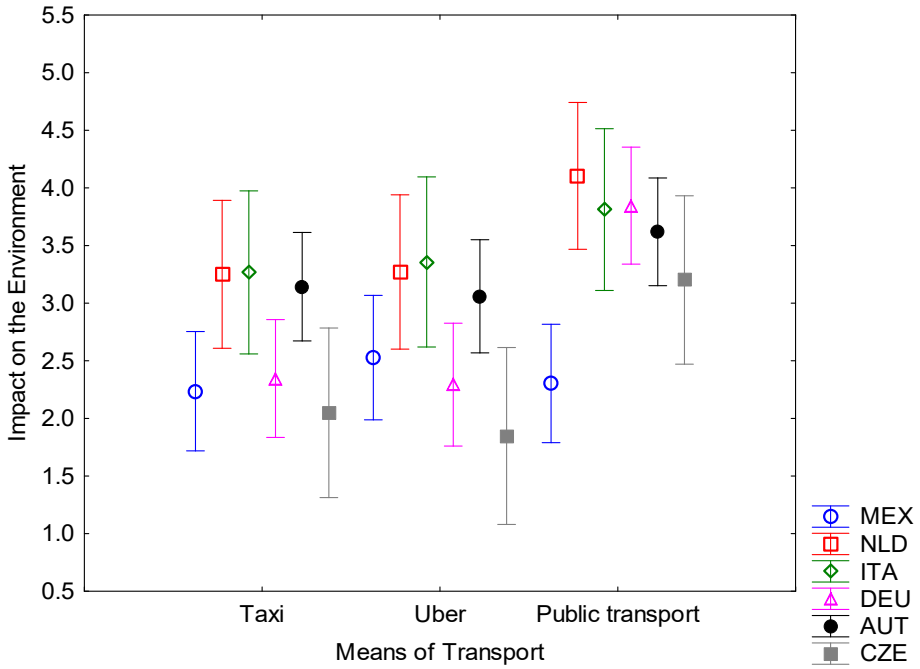
Figure 6 The impact of transport on the environment in individual countries



Source: own inquiry
Notes: Means and 95% confidence intervals are shown; means marked with the same letter do not differ based on Tukey's post-hoc test at the p = .05 level of significance

Furthermore, it can be said that this view differs between countries, and behind this difference is Mexico, where no difference is perceived between means of transport on the environment - for all other countries, the model presented for the set of responses applies, i.e., that public transport is the most environmentally friendly (see Fig. 7).

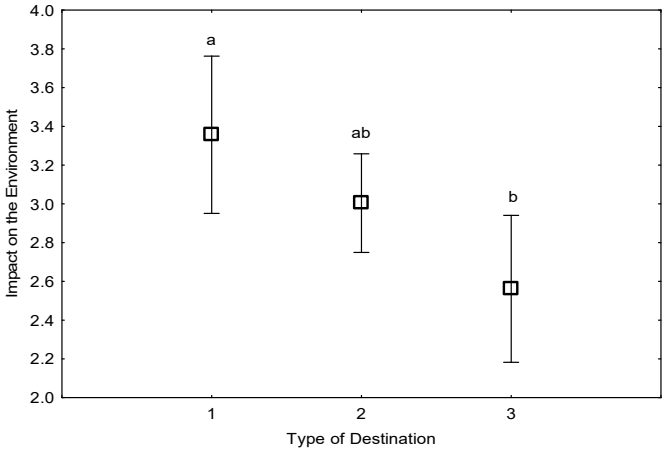
Figure 7 The impact of individual means of transport on the environment in individual countries



Source: own inquiry

Even in the case of environmental impact, differences were found between destinations of type 1 and type 3, destination type 2 is between them (Fig. 8).

Figure 8 The impact of transport on the environment in individual types of destinations



Source: own inquiry
Notes: Means and 95% confidence intervals are shown; means marked with the same letter do not differ based on Tukey's post-hoc test at the p = .05 level of significance

Support for the Development of Public Transport in Destinations

The perception of the level of support for public and other transport in destinations was measured by seven statements. The analysis shows that this support is significantly differentiated between types of destinations and countries but mainly between individual statements of the perception of support (see Tab. 6).

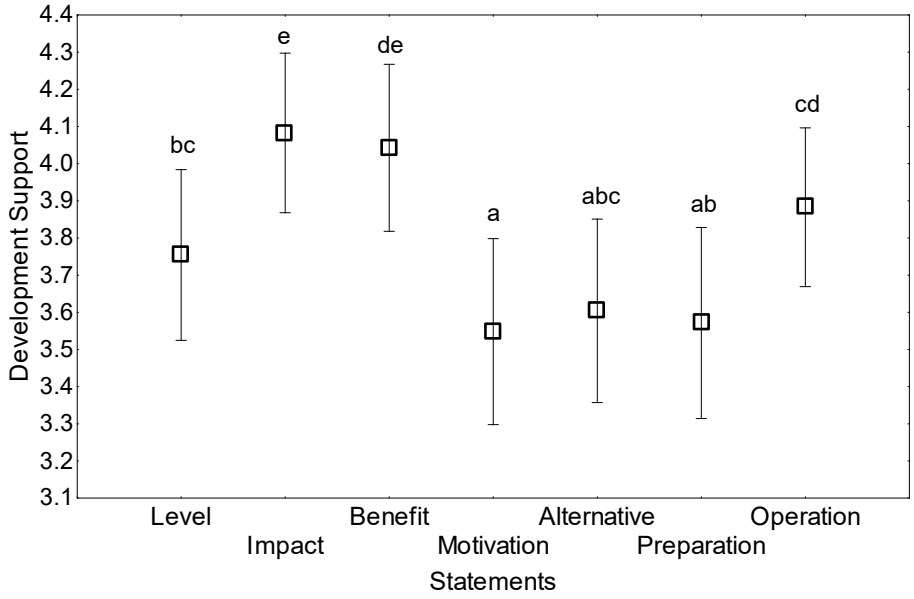
Table 6 ANOVA result for the perception of the degree of support for the development of public transport in destinations

Effect	Repeated Measures Analysis of Variance; Sigma-restricted parameterization Effective hypothesis decomposition				
	SS	Degr. of Freedom	MS	F	p
Intercept	5883.102	1	5883.102	2307.073	< .001
Cluster Membership	36.341	2	18.170	7.126	< .01
Country	20.230	5	4.046	1.587	n.s.
Cluster Membership*Country	69.829	10	6.983	2.738	< .01
Error	262.653	103	2.550		
Means of transport	17.611	6	2.935	5.519	< .001
Means of transport *Cluster Membership	5.720	12	0.477	0.896	n.s.
Means of transport *Country	52.647	30	1.755	3.300	< .001
Means of transport *Cluster Membership*Country	47.956	60	0.799	1.503	< .05
Error	328.669	618	0.532		

Source: own inquiry

The main result can be seen from the repeated measurement analysis of the seven statements that the experts evaluated (see Fig. 9). The experts mainly agreed with the statements that "Public transport is beneficial for the local population" and "A quality transport system has an impact on the development of the given area and on tourism". That confirms the general importance of transport in and also public transport for the development of tourism in the destination. The statements "The development of public transport and service of the region is being prepared in the given area" and "The public administration motivates the use of public transport" were rated the worst. The average of the answers is above the expected average answer (i.e., above 3.5), so the experts expect further development of transport, but they are not completely satisfied with the current state of development preparations.

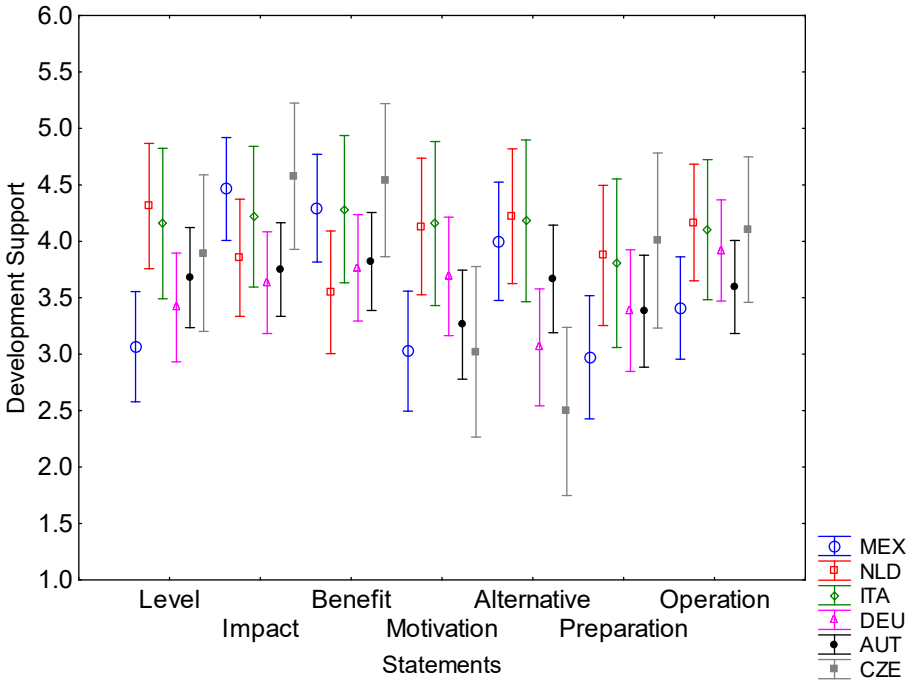
Figure 9 Evaluation of statements related to transport development support



Source: own inquiry
Notes: Means and 95% confidence intervals are shown; means marked with the same letter do not differ based on Tukey's post-hoc test at the p = .05 level of significance

Differences in the perception of transport development were not found between types of destinations, but between countries (Fig. 10). The level of public transport in the Czech Republic is perceived well, even better than in Germany and Austria. the worst rated is in Mexico, but the experts there are most aware of its influence on the development of tourism and the benefit to the local population. Conversely, in the Netherlands and Italy, the level of public transport is evaluated positively. In these countries, the public administration is also the most motivating to use public transport, while in the Czech Republic and Mexico this statement has the lowest value. The Netherlands, Italy and Mexico are open to the inclusion of shared means of transport in the public transport system. On the contrary, the Czech Republic is more sceptical of these alternative means of transport. In all countries, the development of public transport is being prepared, and the local administration is involved in its operation.

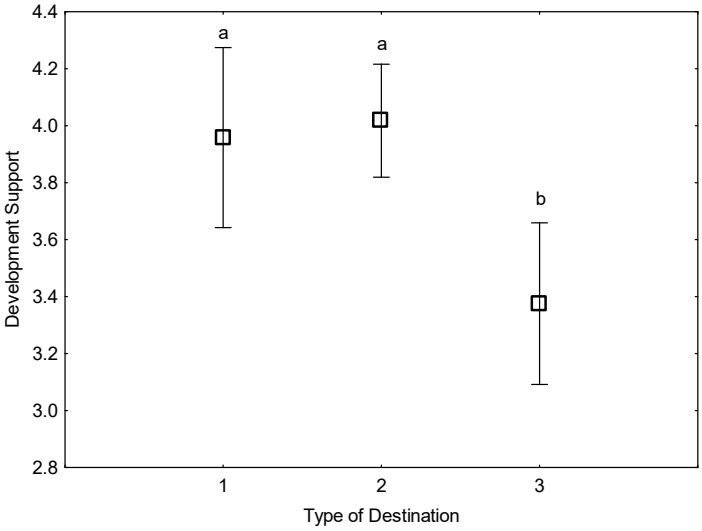
Figure 10 Evaluation of statements related to the support of transport development in individual countries



Source: own inquiry

The overall level of perception of support for transport development in destinations does not differ between individual countries, but between types of destinations. Low support is in destination type 3, which is significantly different from the equally high perception rate in destinations 1 and 2 (see Fig. 11).

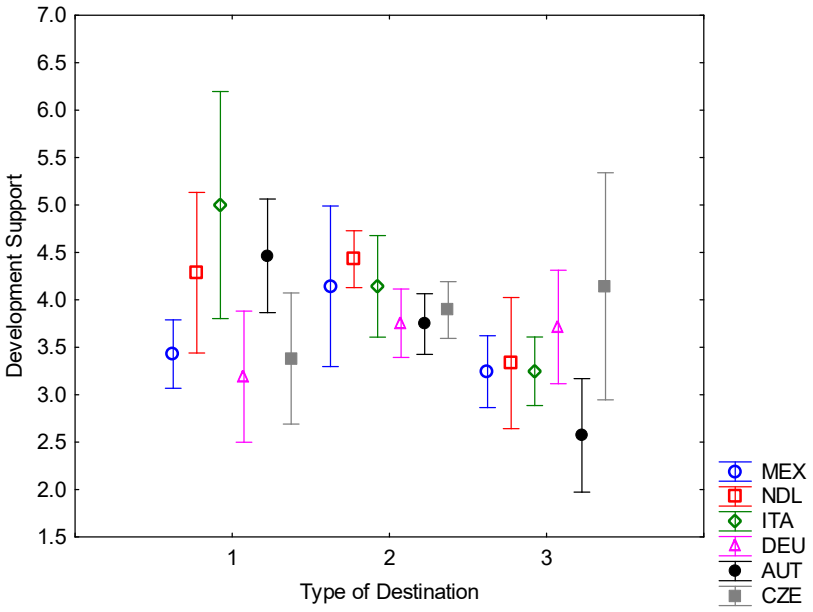
Figure 11 Support for the development of transport in individual types of destinations



Source: own inquiry
Notes: Means and 95% confidence intervals are shown; means marked with the same letter do not differ based on Tukey's post-hoc test at the p = .05 level of significance

It was found that the level of perceived support also differs between types of destinations in different countries (see Fig. 12). The result in the Czech Republic and Germany is particularly interesting, where the perception is the lowest in destinations type 1.

Figure 12 Support for the development of transport in individual types of destinations in different countries



Source: own inquiry

DISCUSSION

The research was based on the data of expert estimates of stakeholders, i.e. on what the managers who make decisions and formulate policies think. It was therefore not a real state, because it is not about exact measured values. By testing hypothesis H1 (**Different means of transport in the destination have different meanings, which is influenced by the cultural milieu and the type of destination.**) it was possible to identify differences in the perception of the importance of transport for the development of destinations. We have found that different perception is influenced by the respondent's country of origin and the type of destination. After conducting statistical tests, hypothesis H1 can be accepted. According to the results obtained, it can be said that at the 5% level of significance, all means of transport are significantly different from each other, only Uber and the car rental company are not different. Regardless of the country, public transport is considered the most important development element, followed by taxis and the least important are Uber and car rental companies. Adamec et al. (2005), Le-Klähn, Hall and Gerike (2014), or Mrníková, Poliak, Šimurková and Reuter (2018) also mention the great contribution of public transport to tourism. According to the results, Uber has the lowest importance for destination

development, although this type of shared transport is more flexible than public transport (Enoch, Potter, Parkhurst, & Smith, 2004; Brake, Nelson, & Wright, 2004; Logan, 2007).

The meaning of individual means of transport differs fundamentally between individual countries. In the case of Mexico, public transport's importance is suppressed and taxis' importance is strengthened (they have almost identical average values). This may be due to the poorer quality of Mexico's public transport, in which according to Doder (2013), the traditional management of public transport, the so-called "man-and-his-bus", still prevails, public transport is therefore provided by a large number of small private companies and unregulated bus operators who fight for customers, therefore, it is poorly managed, and its level is lower. Another part of public transport is then offered by legally constituted transport companies. Ortiz Mantilla (2005) and Lobo et al. (2006) mention that the capital city of Mexico City consists of several different entities and thus transport providers face different rules and capacities. This results in city traffic being interconnected without metropolitan planning and road transport lacking coherent standards and traffic regulations. The opposite is the case in the Czech Republic, because here the significance of other means of transport than public transport is minor. In the Czech Republic, the Uber service is rated the worst, despite the fact that the government of the Czech Republic concluded a cooperation agreement with the company Uber and the capital city of Prague, the so-called memorandum of understanding on the provision of transport services in the territory of the Czech Republic (Memorandum, 2018). All four monitored means of transport in Italy are of almost equal importance, but public transport again dominates a bit. In the Netherlands, the importance of public transport is rated best. In this case, a significant factor can be the long-term efforts of the public administration and municipalities to reduce the fragmentation of the mass transport system, joint tendering procedures of individual municipalities for transport providers, the creation of a nationwide unified card system (Veeneman & van de Velde, 2014), which functions either as a payment card based on a pre-deposited amount or as a medium for uploading a specific travel document. It is a collaborative initiative of the five largest public transport providers in the Netherlands, which other public transport providers have gradually joined.

The importance of different means of transport for local development is perceived differently, even between individual types of destinations. The differences are mainly between group 1, in which experts assess the potential of all sub-types of tourism in their region as above average – here transport is perceived as more beneficial for development, and group 3, in which these assessments of sub-types of tourism are below average – here the contribution of individual means of transport is also rated worse. Group 2 is located between them. In

destinations with well-developed tourism, the development of transport services is also needed because they allow tourists to move around the destination and thus have a great contribution to local development. Ho and Mulley (2013) state that if there are multiple tourist places of interest in one destination, tourists choose public transport. However, in many natural attractions that are further from the centers, it is difficult to provide public transport due to the seasonal nature, distance and thus the area's economic aspect and environmental demands.

The second hypothesis is related to this because it is important to focus on the ecological aspect of transport, and thus its impact on the environment - **H2: Different means of transport in the destination are perceived differently from the point of view of impact on the environment, and the cultural milieu and the type of destination influences this perception.** The same means of transport were evaluated without the rental car, i.e., public transport, Uber and taxi. After performing the ANOVA, differences were again identified between individual countries and for types of destinations, so hypothesis H2 can be accepted. It was found that public transport is generally considered by stakeholders to be the most environmentally friendly. This statement is also supported by the authors Le-Klähn, Hall and Gerike (2014), who mention the importance of public transport in the development of sustainable mobility and urban tourism. Passengers transport by public transport reduces the negative impacts of passenger cars (Adamec et al. 2005).

The worst rated environmental considerations among all means of transport is in the Czech Republic and Mexico. The condition of the vehicle fleet can also cause this, e.g., the average age of buses in the Czech Republic is 14.6 years, which is more than the average in the EU, which was 12.8 years in 2020 (ACEA, 2022). Experts in the Netherlands and Italy have the opposite view. They rate the environmental friendliness of transport in the given country better. The view of individual means of transport differs between countries. A general pattern applies to all countries except Mexico. In Mexico, there is no perceived difference between means of transport, i.e., the impact of individual means of transport on the environment is perceived equally. Differences were also found between destinations, where destination type 1 again evaluates the impact on the environment less negatively than destination type 3. Destination type 2 is in between. This may be due to the fact that in destinations where tourism is above average developed (i.e., there is a significant influx of tourists in all types of tourism), more investment is made in the development of transport and thus also in its sustainability, i.e., reducing the impact on the environment. As reported by Jackson et al. (2009), greater investment in tourism will support long-term tourism revenue, innovation and

sustainable growth in the industry. Modern transport and tourism investments have directly positive effects on the environment (USAID, 2015). There are also indirect benefits from improved infrastructure, for example transport investments lead to reduced fuel consumption and CO_2 emissions (Khadaroo & Seetanahah, 2008). In a study on the development of sustainable tourism, Bakan and Bosnic (2012) claim that the slow pace of tourism development is due to the low volume of investment in tourism infrastructure. It is therefore a kind of spiral, when investments in transport have positive effects on the environment, this will cause a greater rate of growth in the development of tourism, which supports income from tourism and creates the possibility for further investment.

The third hypothesis was related to the development of public transport in destinations – **H3: Support for the development of individual means of transport is perceived differently and is influenced by the cultural milieu and the type of destination.** The perception of the level of support was measured by seven statements, their ratings differ significantly. The analysis also showed that the support is differentiated between countries and types of destinations, so hypothesis H3 can be accepted. When evaluating seven statements, the experts mainly agreed with the statements that "Public transport is beneficial for the local population" and "A quality transport system has an impact on the development of the given area and on tourism". This confirms the importance of transport in general and the importance of public transport for the development of tourism in the destination. The tourism experts expect further development of transport, but they are not completely satisfied with the current state of development preparations, as the statements "The development of public transport and service of the region is being prepared in the given area" and "The public administration motivates the use of public transport" were rated the worst. Average claim ratings vary from country to country.

The level of public transport is the worst rated in Mexico, which is also consistent with the conclusions of research on the quality of public transport (e.g., Hidalgo & Huizenga, 2013; Uribe, Ávalos, Rodríguez, & Villa, 2022). However, local experts are most aware of its influence on the development of tourism and the benefit for the local population. Conversely, in the Netherlands and Italy, the level of public transport is evaluated positively. In these countries, the public administration motivates the use of public transport the most, while in Mexico and the Czech Republic this support is perceived to be comparatively lower. In the Netherlands, Italy and Mexico, the integration of shared means of transport (e.g., shared bicycles, scooters or Uber) into the public transport system is open, on the contrary, the Czech Republic is more sceptical of these alternative means of transport. As Pichrt, Boháč and

Morávek (2017) mention, the operation of shared services such as Uber is not explicitly regulated by law in the Czech Republic, which is why protests and negative opinions about this type of transport still persist. There were massive protests by taxi drivers and companies after the arrival of Uber across Europe, as Uber did not have to comply with taxi regulations and therefore engaged in "unfair competition". For this reason, in some EU states (e.g. also in Germany) the operation of Uber was strictly limited or completely banned by court (Geradin, 2015). The author further mentions that public authorities are considering changes to the regulatory framework to accommodate companies like Uber. As Valdez (2023) states, despite rapid growth in different locations, Uber has been forced to provide different services, adapt to different rules and negotiate different regulatory frameworks. The lower level of regulation in the sector initially allowed for a smoother entry and greater expansion of the market for Uber. Providing services increases its infrastructural strength, which it can then use to achieve more favorable regulations. Contentious compliance is a push-pull process between the government and Uber, which has been adjusting to existing rules to expand while still trying to achieve gradual deregulation. Problems of a social and legal nature concern not only shared personal transport, but the entire shared economy in general, so these companies sometimes operate in a "grey zone". In all countries, the development of public transport is being prepared and the local administration is involved in its operation.

The overall level of perception of support for transport development in tourism destinations also differs between types of destinations. Support is perceived as low in destination type 3 (that is, in destinations where the development potential of individual types of tourism is perceived as below average), which differs significantly from the equally high level of perception in destinations 1 and 2. It was found that the level of perception of support it also varies between destination types in different countries. The result in Germany and the Czech Republic is particularly interesting because experts in type 1 destinations in Germany and the Czech Republic perceive public transport support as weaker compared to the perception of experts in destination type 1 in the other surveyed countries.

CONCLUSION

The aim of the contribution was to evaluate how the stakeholders involved in the development and management of tourism destinations perceive the importance of public transport and other transport services. A partial goal is to find out how this importance differs between countries and between different types of destinations and what effect public transport has on the

development of a given tourism area. The paper studied the views of tourism experts on the importance of public transport in tourism. Transport is an integral part of tourism, and its quality contributes to the destination's competitiveness. It can be said that transport is one of the most important development elements in tourism, and there is an effort to have the most efficient and ecological transport in the destination, therefore, it is necessary to deal with this topic.

The results showed that regardless of the country, public transport was considered the most important development element of tourism. Uber has the lowest importance for the development of the destination, although this type of shared transport is more flexible compared to public transport. The meaning of individual means of transport differs between individual countries and between types of destinations, therefore, hypothesis H1 - "Different means of transport in the destination have different meanings, which is influenced by the cultural milieu and the type of destination" – was confirmed. In the case of Mexico, the importance of public transport is suppressed, which may be due to the poorer quality of Mexican public transport.

The second hypothesis (H2) – "Different means of transport in the destination are perceived differently from the point of view of impact on the environment, and the cultural milieu and the type of destination influences this perception" was also confirmed. Using statistical tests, differences were again identified between individual countries and for types of destinations. It was found that public transport is generally considered to be the most environmentally friendly. As stated by many authors, the transportation of passengers by public transport reduces the negative effects of passenger cars. The worst rated environmental considerations among all means of transport is in the Czech Republic and Mexico, which may be due to the condition of the vehicle fleet, which is relatively old. On the contrary, experts in the Netherlands and Italy rate their transport as ecological. In destinations where tourism is above average (there is, therefore, a significant influx of tourists in all types of tourism), the impact of transport on the environment is assessed less negatively. A kind of spiral can occur here, where investments in transport have positive effects on the environment. This will cause a greater growth rate of tourism development, thereby supporting income from tourism and creating an opportunity for further investment.

The third hypothesis was related to the development of public transport in destinations – H3: Support for the development of individual means of transport is perceived differently and is influenced by the cultural milieu and the type of destination. The analysis showed that the support is differentiated between countries and types of destinations, so hypothesis H3 was

accepted. The experts mainly agreed with the statements that "Public transport is beneficial for the local population" and "A quality transport system has an impact on the development of the given area and on tourism". This confirms the importance of transport in general and the importance of public transport for the development of tourism in the destination. Experts anticipate further development of transport, but they are not completely satisfied with the current state of development preparations. The level of public transport in the Czech Republic is perceived well, even better than in Germany, Austria, or Mexico (where it is rated the worst, which is also in line with the conclusions of research on the quality of public transport in the long term). Conversely, in the Netherlands and Italy, the level of public transport is evaluated more positively. In these countries, it is public administration that most motivates the use of public transport, while in the Czech Republic and Mexico this support is perceived relatively less. The Czech Republic is more sceptical about shared means of transport (e.g. shared bicycles, scooters or Uber), on the contrary, in the Netherlands, Italy and Mexico they are open to the integration of these alternative means of transport into the public transport system.

Further research could deal with the possibilities of making public transport more attractive and the motivation of passengers to use it. Researchers should also focus on the negative impacts of traffic on tourism destinations. Here it is also possible to deal with the question of whether public transport is really more ecological. Another topic suitable for future investigation is the possibility of better involvement of alternative means of transport. As has been said, the Czech Republic is sceptical of alternative means of transport, so it would be advisable to find out the reasons for this negative attitude and suggest possibilities for their better acceptance.

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