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Inclusive transport as a priority for European transport policy

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Abstract
Transport accessibility, or rather the lack of it, increasingly referred to as transport exclusion or poverty, can lead to social exclusion and a range of negative social consequences. The aim of this article is to identify how accessibility and inclusiveness are treated in EU transport policies, in order to determine to what extent those policies are inclusive. The content analysis of EU transport policy documents issued between the years 2000 and 2022 will be conducted in this research. References to access and accessibility in the analysed documents consistently address mainly two issues: access for peripheral areas to the European transport system and ensuring accessibility of public transport. The second approach is relevant for ensuring the inclusiveness of the transport system.
Keywords: transport system, European Union, inclusiveness, transport accessibility, transport exclusion

Inkluzywność transportu jako priorytet europejskiej polityki transportowej

Streszczenie
Dostępność transportu, a raczej jej brak, coraz częściej określany jako wykluczenie transportowe lub ubóstwo, może prowadzić do wykluczenia społecznego i szeregu negatywnych konsekwencji społecznych. Celem artykułu jest określenie, w jaki sposób dostępność i inkluzywność są traktowane w polityce transportowej UE, aby określić, w jakim stopniu polityka ta jest inkluzywna. Mając na uwadze realizację tak postawionego celu, w niniejszym badaniu przeprowadzono analizę treści dokumentów polityki transportowej UE z lat 2000-2022. Odniesienia do dostępu i dostępności w analizowanych dokumentach w sposób spójny wskazują głównie na dwie kwestie: dostęp obszarów peryferyjnych do europejskiego systemu transportowego oraz zapewnienie dostępności

transportu publicznego. Drugie z wskazanych podejść jest istotne dla zapewnienia inkluzywności systemu transportowego.
Słowa kluczowe: system transportowy, Unia Europejska, inkluzywność, dostępność transportu, wykluczenie transportowe

Transport plays a key role from the point of view of the functioning of both the economy, through procurement, production service and distribution, i.e. the delivery of products to final consumers, and society, by enabling the movement of people to meet multiple needs. Any impediment affecting the transport services market will simultaneously affect other sectors and industries, whether it be supply delays causing production downtime or the inability to reach workplaces on time. The European transport system is crucial for the cooperation and integration of the Member States and for ensuring free trade and movement of people. In 2020 transport and storage services, with around 555 billion EUR in Gross Value Added (GVA) were responsible for 5% of total GVA in EU-27 and 5,2% of the total workforce. The performed transport work within the Union amounted to 3 272 billion tkm (tonne-kilometres) for freight transport and 4 446 billion pkm (passenger-kilometres) for passenger transport (European Commission 2022: p. 19). The crucial importance to the functioning of the EU economy is evidenced by the fact that, despite restrictions on movement during the COVID-19 pandemic, the transport of goods and people critical to countering the spread of the virus continued (European Commission 2020b).

Ensuring accessibility to the services provided by the transport system is one of the priorities of the European Union in its Community policies (Pappas 2021). The EU's common transport policy has evolved as the integration process has progressed, covering issues and areas such as creating a uniform transport and telecommunications infrastructure, integrating public and individual transport, ensuring the sustainability of transport, and improving the accessibility of public transport.

The article aims to identify the importance of transport inclusivity in European transport policy as a means to counteract exclusion in its broadest sense. The content analysis of common transport policies with a particular focus on the area of ensuring accessibility to the transport system will be used to achieve that goal. In addition, actions and recommendations focused on increasing the inclusiveness of the transport system as a tool to counteract social exclusion will be identified and presented.

In the following section, a literature review will be presented regarding the accessibility of the transport system, ways of measuring it, transport exclusion and ways to prevent it. The methodology used and the result of the content analysis of selected EU transport policy documents will be presented and discussed in the two following sections. Conclusions will be included in the final section.

Literature review

Accessibility is otherwise known as the ability to use something, describing how a thing/system/person is accessible, but not in the context of ease of use but the possibil-

ity of using/reaching it. Accessibility can also be defined as the possibility of using a given place/service/product by people with disabilities, or as a feature that allows content to be easily received and understood (Cambridge Dictionary 2023). Accessibility, due to its multidisciplinary character and use in many fields such as spatial planning, economic geography, economics and others, is defined in many ways (Geurs, van Wee 2004) and can have a spatial, social or cultural aspect in relation to places, people, objects or systems.

The focus of this study is accessibility in the context of the transport system and its functioning, defined as transport accessibility. When addressing the issue of the transport system (whether at the scale of a city, region, country or community), it should be taken into consideration that the shape and structure of transport systems are influenced by many differentiating factors, such as: geographical location, degree of urbanisation, distribution of industrial centres, international co-operation, level of technical and technological development, level of economic development, and political changes. Each of these factors can influence the level of transport accessibility (Górniak 2020).

At this point, it would be important to point out the similarities and differences between the two concepts pertinent to movement and transport needs: accessibility and mobility. Accessibility is the potential opportunity to use a service/function or get to a particular place and mobility is the actual use of the transport system to realise that potential opportunity. These concepts are closely related but not synonymous, often greater mobility will mean less accessibility and vice versa – a densely built-up urban area, lots of potential opportunities to exploit but not necessarily the ability to move quickly to take advantage of them (Herriges 2018).

The *European Accessibility Act* of 2019 (see: Directive (EU) 2019/882), a complex and horizontal regulation, that is due to take effect from 28 June 2025 sets the minimal accessibility requirements for products and services especially important for the quality of living. However, since some shortcomings concerning accessibility of transport and build environment still need to be addressed by further regulations (European Disability Forum 2020), for purposes of this article, the definition of transport accessibility proposed by the Polish Ministry of Transport, Construction and Maritime Economy will be used. According to that definition, transport accessibility is: "The ease of reaching a given place from a set of other places due to the existence of a network of transport infrastructure and services. A given point of an area is the more accessible in terms of transport, the more there are other points which can be reached satisfactorily quickly, cheaply and efficiently" (Ministerstwo Transportu, Budownictwa i Gospodarki Morskiej 2013: p. 5). The quoted definition indicates the need to take into account the spatial aspect (location of the places/objects interacting with each other), the media enabling this interaction to take place (transport infrastructure and available means of transport) and the characteristics attributed to the execution of the movement itself. This is consistent with the broad concept of accessibility proposed by Lucas, van Wee and Maat (2016), taking into account, in addition to the mere physical possibility to access a place/service/product, features of the transport system, such as, for example, reliability, affordability or availability of information about transportation options offered.

An accessibility assessment of the transport system should consider the following key components (Lucas et al. 2016):

- the individual component that takes into consideration the needs, abilities, and opportunities of a particular person, as they influence/limit that person's choice of transport modes and available opportunities thus defining the total accessibility levels,
- the land-use component that describes the supply (and quality) of available opportunities, the demand for those opportunities and the interplay between those two, describing the level of competition for accessing those opportunities,
- the transportation component that takes into account the feasibility of using the transport system for reaching particular opportunities in terms of time, cost and comfort. Both the supply of transport services and availability (demand for) of transport infrastructure are important for assessing this component,
- the temporal component that accounts for the availability of different opportunities at given times of day and the amount of time that a particular person can allocate for participation in a given activity (limited by other activities),
- cognitive component, especially important in the context of social exclusion, that reflects the person's ability to interact with the transport system.

There can be a compensating relationship between the different components, e.g. free public transport (transport component) will enable people on lower incomes (individual component) to use public transport; or an enhancing relationship if one of the components deteriorates, e.g. restricting the ability to purchase tickets at the station/conductor (transport component) will make it more difficult for people without digital competence to purchase an e-ticket (the cognitive component).

Transport accessibility is recognised as an important factor influencing the attractiveness of a location and affecting its development (Pokharel et al. 2023). There are a number of ways to measure transport accessibility, taking into account the components mentioned above. Koźlak (2012) identified three groups of indicators of transport accessibility that can be used to assess it: indicators describing transport infrastructure and service supply, indicators of location accessibility as a function of time or transport cost and innovative mapping solutions. The last group of indicators, including maps showing the relationship between transport and space, is gaining popularity due to the ease of visualizing the values and changes of indicators over time.

Transport accessibility studies can cover different areas and different modes of transport. The largest pan-European study at the global, European, and regional levels was carried out as part of the TRansport ACCessibility at regional/local scale and patterns in Europe (TRACC) project, carried out within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund. The study covered all modes of transport for freight and passenger transport. In terms of global transport accessibility at the time of the survey, the central area of Western Europe and countries such as Belgium, the Netherlands, Luxembourg, Germany, France and the United Kingdom performed best. Also, in the case of European transport system acces-

sibility, the countries of central-western Europe (Belgium, the Netherlands, Luxembourg, Germany, and the UK) show a clear advantage (TRACC 2015). To date, these are the only such comprehensive studies on transport accessibility. Studies on transport accessibility at the country level are not very common, to mention a study for selected EU countries prepared by Joanna Górniak (2020) or the TRACC case studies for countries and regions, including a study on Poland's transport accessibility (TRACC 2013). More popular are studies of accessibility at the city level, whether within a single country, such as the USA (Accessibility Observatory 2023), China (Wang et al. 2022), or Australia (Wu, Levinson 2018) or comparisons between cities from different countries, the most comprehensive comparison to date being of 117 cities from 16 countries (Wu et al. 2021). Studies on single cities or urban areas are most common, such examples being ones on the transport accessibility of London (Ford et al. 2015) or Warsaw (Mościcka et al. 2019).

Transport accessibility is particularly important in the context of social exclusion, i.e. the inability to participate in social and economic life resulting from the inability to reach a particular place or service (Lucas 2011). There are many phrases in the literature describing this phenomenon: transport-related social exclusion, transport disadvantage, transport poverty, and transport exclusion (Kamruzzaman et al. 2016). Transport exclusion can affect individuals who are unable to meet their transport needs by the means available to them, or entire communities that, due to their location in the transport network, have difficult access to it (Jaroš 2017). Nevertheless, it is important to note that limited transport accessibility does not necessarily categorically imply social exclusion, someone changing residence to one marked by less transport accessibility (e.g. to a rural area or suburbs) does not become an excluded person (provided they have access to an individual means of transport, usually a car) (Zmuda-Trzebiatowski 2016).

A number of characteristics of the transport system should be identified that may translate into reduced accessibility and thus into transport and/or social exclusion. These may include barriers of a physical nature (e.g. lack of facilities for people with reduced mobility), of an economic nature (e.g. too high costs), of a temporal nature (e.g. too low frequency of connections), and of a psychological nature (e.g. fear of safety when using public transport) (Church et al. 2000). Actions to address and reduce these barriers to improve the accessibility of the transport system require changes in regulation, long-term planning of transport infrastructure investments, efficient collection of data on system performance and its evaluation, cooperation between the various stakeholders (both public and private) ensuring the functioning of the transport system and involving the users of the transport system themselves (OECD 2020). Recommendations for improving accessibility often include recommendations similar to those applied to sustainable urban mobility for passenger transport – reducing the use of private cars in favour of public transport or alternative modes of transport, such as bicycles (Curtis, Scheurer 2016) or those relating to freight transport and aiming to reduce the share of road transport in the modal split in favour of rail or intermodal transport through an appropriate choice of infrastructure investments (Jubiz-Diaz et al. 2021).

Methodology and results

The author used in this research a content analysis method with reference to documents (communications, legislative resolutions, regulations and opinions) available in the European Union Legislative Acts Database (EUR-LEX) on EU transport policy, published between 2000 and 2022 by EU institutions such as the European Commission, the European Parliament, the Council, the European Economic and Social Committee, the European Committee of the Regions. The following EUR-LEX search criteria were used in the first instance:

- Domain: All,
- Subject matter, 1st level: Transport,
- Search language: English.

Sorting by date allowed the search results to be narrowed down to the assumed time frame of 2000–2022. The content of published documents was then searched using the following phrases: accessibility, accessible, access, inclusive, inclusiveness. In order to narrow down the number of the documents chosen for the in-depth analysis, the scope presented in this article was limited to documents on the transport system rather than individual modes of transport.

Table 1: European transport policy documents selected for analysis

Date	Title of the Document	Access & Accessibility Concerns
Lisbon Strategy		
2001	White Paper: *European transport policy for 2010: time to decide* (European Commission 2001)	• Improving access of outlying areas to the trans-European network • Ensuring access to different types of transport services (passenger & freight) • Improving accessibility of different modes of transport • Making public transport accessible for people with reduced mobility
Renewed Lisbon Strategy		
2007	Green Paper: *Towards a new culture for urban mobility* (European Commission 2007)	• Ensuring urban accessibility (internal & external) by focusing on improving public operations and limiting the use of private vehicles • Making public transport accessible for people with reduced mobility
2009	Communication: *Action Plan on Urban Mobility* (European Commission 2009a)	• Accessibility as a part of an integrated approach to urban policies • Making public transport accessible for people with reduced mobility

2009	Green Paper: *TEN-T: A policy review. Towards a better integrated Trans European Transport Network at the service of the Common Transport Policy* (European Commission 2009b)	• Assessing the fulfilment of the "access function" by the actions on the Community level • Improving access of outlying areas to the trans-European network • Improving cooperation between transport modes in order to improve accessibility and reduce emissions
2009	Communication: *A sustainable future for transport: Towards an integrated, technology-led and user-friendly system* (European Commission 2009c)	• Accessibility of remote regions set as a high priority • Identifying challenges concerning balancing between accessibility needs and sustainability concerns • Highlighting the importance of infrastructure for the endurance of accessibility • Identifying potential reasons for diminishing accessibility • Identifying the possible substitution effect between "virtual" access and transport needs
Europe 2020		
2011	White Paper: *Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system* (European Commission 2011)	• Assessing the role of infrastructural investments in improving geographical accessibility • Rising concerns about increasing accessibility gap between peripheral and central areas • Accessibility seen as crucial measure to promote public transport services (together with quality and reliability) • Informational aspects of accessibility as an important trait to improve door-to-door freight and passenger transport • Identifying the ICT's potential of satisfying accessibility needs without additional mobility • Making public transport accessible for people with reduced mobility
2020	Communication: *Sustainable and Smart Mobility Strategy – putting European transport on track for the future* (European Commission 2020a)	• Accessibility of remote regions persists as high priority • Setting the goals for affordable, accessible and fair mobility for all whenever they live • Ensuring that transport services are accessible for people with reduced mobility and special needs

Source: based on European Commission 2001, 2007, 2009a,b,c, 2011, 2020a.

A review of selected EU transport and mobility documents (Table 1) demonstrates that "access" and "accessibility" in their various forms have been present in them for a long time. The analysis focuses on two aspects of access/accessibility: ensuring that all areas of the community have access to the transport system, which the Trans-European Transport Network (TEN-T) is intended to do in the context of the "access function", and ensuring access/accessibility to transport services for passengers and other users of the transport system within the different modes of transport. The demands present in the documents to ensure access to the markets of individual Member States for companies from other countries, as they are not related to the concept of accessibility/accessible transport system considered in the study, have been omitted.

Discussion

Ensuring accessibility for peripheral areas appears in all documents that do not focus exclusively on urbanised areas and very quickly becomes a priority. It is a difficult measure to implement because it is closely linked to the need to provide adequate transport infrastructure, which involves financial outlays both at the EU level and locally on the part of regions with limited accessibility (Komornicki, Goliszek 2023). Plans to ensure accessibility for peripheral areas are closely linked to the extension of the TEN-T network, and investments made with the support of EU funds. The last document indicated in Table 1 – *Sustainable and Smart Mobility Strategy - putting European transport on track for the future* (European Commission 2020a) reiterates the crucial importance of the TEN-T network for the creation of a single transport area within the community and emphasises the need to complete all investments within the planned timeframe (before 2030).

Ensuring the accessibility of the different transport modes is often linked in documents to their better integration and the promotion of intermodal transport as a way to increase the efficiency of the transport system and reduce its external costs (European Commission 2011). Greater integration of the transport system applies to both freight and passenger transport (Oostendorp et al. 2019) and ICT systems are often used as a tool to accelerate this.

Much attention has also been paid to the accessibility of transport services, especially public transport, the uptake of which, especially in urban areas, is seen as a way to increase mobility while reducing the external costs of urban transport systems (Kos 2017; Saif et al. 2019; Stępniak et al. 2019). Despite extensive efforts to promote and implement sustainable urban mobility and collective transport during long-distance travels, the latest EU transport surveys indicate that the car remains the most widely used mode of transport. The share of passenger cars in transport within the EU, which had been experiencing a slow but noticeable decline for years in 2020 due to the COVID-19 pandemic, has reached a volume not seen since the early 1990s (European Commission 2022). The lack of more up-to-date data does not allow, at this point, to determine whether users will return to using alternative modes of travel once the sense of threat has ceased. The most recent strategy for the European transport system (European Commission

2020a), points to the need to ensure access to transport services to meet the need for mobility for all residents regardless of where they live, drawing attention to the difficult access to transport services in peripheral areas.

Requirements for accessibility, both of individual modes of transport and of public transport services emphasising attention to the needs of people with limited mobility appear in all EU transport documents. An additional indication and emphasis that transport should also be accessible to people with disabilities appears in the most recent transport strategy (European Commission 2020a) and in other documents, both those directly concerning people with disabilities (European Parliament 2011) and policies covering other areas of the Community cooperation such as tourism (European Parliament 2010, 2015a) or education.

The postulates regarding the accessibility of the EU transport system are most extensively set out in the Commission Communication *Sustainable future of transport: towards an integrated, technologically advanced and user-friendly system* (European Commission 2009c). The document addresses the need to reconcile demands for sustainability with meeting the growing demand for 'accessibility'. The integration of different modes of transport and the implementation of modern technological solutions as tools to increase the efficiency of the transport system were identified as priority actions in this regard. The document draws attention to the threat of reduced accessibility resulting from centralising the provision of public transport services and identifies the potential for substitution between virtual accessibility and demand for transport services and accessibility (European Commission 2009c).

The indication that the transport system should be accessible appears for the first time in the documents on the implementation of the White Paper of 2011 (European Commission 2016c), a report prepared by the European Parliament (2015b) and a working document of the European Commission (2016b). The European Parliament report (see: European Parliament 2015b), in addition to indicating the features desired for the transport system: "more efficient, sustainable, competitive, accessible, user- and citizen-friendly", also recommends actions for individual modes of transport that should be taken to achieve this goal. The same set of features to which the actions taken should lead was also repeated in the document accompanying *A European Strategy for Low-Emission Mobility* (European Commission 2016a), detailing the postulates of the strategy and indicating what actions should be taken to make the transport system more effective and meet the postulates of low-emission mobility (European Commission 2016b).

It is significant that despite the presence of statements and demands concerning access and accessibility in EU documents, nowhere is it specified what is meant by this term. In some documents, there are attempts to clarify that a given postulate concerns geographical accessibility or that the service should be accessible and affordable and that information about the possibility to use it should be available. Accessibility very often appears in combination with mobility, which would indicate the connection between the two terms signalled in the literature (accessibility as potential possibility, mobility as real use) (Herriges, 2018). Inclusivity appears in transport documents in relation to how

a sustainable transport system is a condition for creating an inclusive society (European Commission 2009c) or how, with the use of modern technologies, transport can become more inclusive (European Commission 2016a).

Conclusions

Accessibility is a postulate that appears in many EU transport policy documents, but usually without detailing what it would manifest itself as. In the few cases where such clarification appears, it is possible to indicate the components of transportation system accessibility to which it refers: usually spatial and transport (Lucas et al. 2016).

A lot of attention in transport documents is given to the accessibility of transport services, especially public transport, for people with reduced mobility with an indication of which groups it applies to. Requirements relating to the accessibility of transport services for all appear in later strategies (European Commission 2011; 2020a) and studies on specific modes of transport (e.g. when the European Year of Rail was established in 2021). The proposal that ensuring accessibility (in spatial terms) should become a condition for receiving EU funding appears in documents concerning tourism (European Parliament 2015a) and not transport.

Accessibility in relation to providing access to the EU's peripheral areas is also raised in a number of transport documents usually linked to the investment in transport infrastructure in the area of implementing the assumptions of the Trans-European Transport Network (TEN-T). Among the tools to achieve greater accessibility, the integration of different modes of transport, the promotion of multimodal and intermodal transport and the use of ICT systems are indicated. However, as in the case of accessibility itself, there is no more detailed indication of what these activities should be, or of the targets to be achieved in relation to accessibility, which does not allow progress on the accessibility postulates to be assessed. This is, for example, possible in the case of the intermodality postulates, where the current audit (European Court of Auditors 2023), indicates that the targets are not being met.

The inclusiveness of transport, understood as transport as a factor ensuring the inclusion of individuals in social and economic activities, does not appear directly in EU documents on transport, at most it can be assumed in relation to ensuring accessibility to transport services. Nevertheless, taking into account the prominence of the demand for accessibility to transport services for people with reduced mobility and the fact that accessibility is a broader concept than inclusiveness, it can be assumed that the European Union's transport policy promotes inclusivity.

An important limitation of this study is the lack of a clear definition of the terms used in the documents developed at the EU level regarding accessibility and inclusivity. The need for the identification of more specific measures to ensure accessibility and the development of common measures for transport accessibility remains a significant lack in the analysed documents. Given the multi-dimensionality of the transport systems' accessibility and its dependence both on the characteristics of individual systems and the external conditions affecting them, it may be difficult to develop such common indicators, especially if they were to be indicators other than those using measures of

transport infrastructure or service supply. No less, undertaking such an attempt seems to be a reasonable direction for further research.

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