Pilot project: 'Measuring what matters to EU citizens: Social progress in European regions'

EU SPI – Background paper to support the discussion for the virtual peer learning event on “How can transport & mobility affect social progress? Examining transport poverty and social dimensions of transport”

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Introduction

Inadequate transport facilities have negative effects on personal mobility. The availability of transport options is vital for access to employment opportunities and basic services related to everyday life. But transport options are also crucial for maintaining social ties and fulfilling social obligations. In the contemporary world increasingly characterised by the expansion of social networks, mobility is key for full participation in society and for a meaningful life.

Over the last few decades, the social dimension of transport had been receiving somewhat little attention in both academic and policy-making circles. More recently, however, there has been a considerable shift of attention towards the relation between social disadvantage and mobility-related disadvantage. In this context, the term "**transport poverty**" has emerged. Despite greater awareness, transport poverty has not been comprehensively described as a concept yet: academia, policy makers and practitioners must still define and understand the full implications of the phenomenon.

Transport-related deficiencies affect individuals and groups differently according to various economic, social and cognitive parameters. The socio-economic and socio-demographic positions of individuals, their skills, personal attitudes, perceptions and aspirations are important factors to consider when designing suitable solutions. Equally important, gender is a key, underestimated element affecting transport poverty. Transport access and social inclusion are mutually interdependent, and transport poverty can lie at the root of social exclusion, spurring a vicious cycle that further disadvantages those who already experience difficulties or who are underprivileged in this sense.

Transport poverty is not only experienced differently by social groups that are vulnerable to exclusion. The surrounding environment where they live – i.e. the urban, rural or peri-urban setting – affects both an individual's transport-related difficulties and social position.

Furthermore, spatial and social conditions vary significantly across different – and even within – European member states. Hence, it is important to view transport poverty from this complex local perspective, identifying common elements that produce transport poverty across Europe and outlining joint solutions to eliminate it. [1]

What is transport poverty? Various approaches and definitions

There are several definitions to transport poverty, all linked to the notion of social exclusion, quality of life and opportunities. Some of the most know ones are presented below:

"Travel offers the means to reach essential opportunities such as jobs, education, shops, and friends, all of which affect the quality of life. Lack of mobility is inextricably linked to social disadvantage and exclusion"[2]

"Those lacking the resources and transport options required for being able to move, become deprived from interacting with the whole extent of opportunities offered by society."[3]

Transport poverty is also linked to many issues, for example well-being, housing and social exclusion. Groups that are especially exposed to transport poverty are: 1) low-income households, 2) households without a motorised vehicle, 3) persons too young or old to drive

[1] https://hireach-project.eu/content/rationale

[2] Markovich, J & Lucas, K (2011). The Social and Distributional Impacts of Transport: A Literature Review.

[3] Bauman, Z. (2000) Liquid Modernity, Cambridge Policy press (Cambridge).

a car, 4) persons with physical or cognitive limitations, 5) minority households and 6) immigrants.[4]

As mentioned by Gannon and Liu, "travel by modes other than walking, generally requires money. Faster modes such as the car and train, tend to be more expensive than slower modes, such as the bus and cycling; those who can afford these faster modes can reach a wider range of opportunities in a given time. Resources required for travel also include assets beyond purchasing power, like physical and mental capabilities, and time. Providing transport facilities or reducing financial barriers to travel can offer ways to address poverty, through for example, widening the range of opportunities for employment and education that can be reached. Transport should be seen as a service, which can reduce poverty by increasing economic efficiency and enhancing opportunities."[5]

An individual is to be considered as "transport poor", if in order to satisfy their everyday, basic activity needs, they are subject to one of the following conditions:

- **Non-availability (including reliability) and/ or affordability:** these are crucially important for those with low income and no access to cars.
- **Non-availability and accessibility of destinations:** not being able to travel towards a certain destination because there is no available means of transport to use or because a specific destination is not served, are both major barriers for people living in rural and deprived areas.
- **Adequacy (also including the notion of safety)**: this is the most meaningful transport barrier for those who suffer from disability (fully or to some extent). This is especially important for elderly and women - safety in transport is a fundamental precondition for using public transport options. Negative experiences can lead to avoidance of using public transport.
- **Healthy travel conditions**: health and safety measures should always be applied; they are crucial for children and young people;
- **Lack of information:** the absence of proper information on available mobility options (e.g. in different languages) can affect a lot, migrants and ethnic minorities.

How is transport (poverty) interrelated with aspects of social progress?

The importance of transport for social inclusion has recently been considered in a number of transport policies. In the near future the challenges related to demographic trends (for example, ageing and migration), increasing poverty and environmental sustainability may lead to even higher demand for public transport. The social role of transport must be internalised in transport policies, with closer attention to the specific mobility needs of the most vulnerable user groups. Improved accessibility for the elderly and people with reduced mobility, as well as higher-quality services and lower fares for all, need to be considered, together with improved efficiency in order to keep public transport financially viable.

[4] Research Report 94 / Tampere University of Technology. Transport Research Centre Verne · ISBN 978-952-15-4095-0 (2018)

[5] Gannon, C. & Liu, Z. (1997). Poverty and Transport.

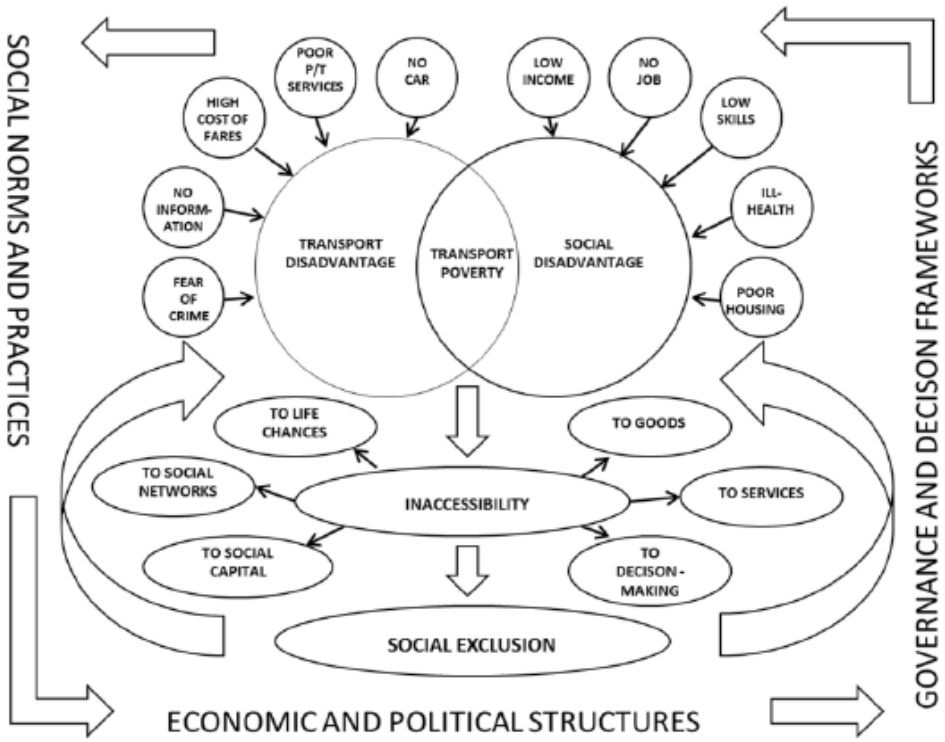


Figure 1: The relationship between transport disadvantage, social disadvantage and social exclusion (Source: Lucas, 2012)

In addition, new environmentally and energy- efficient public transport services and the promotion of their attractiveness are essential to reducing the negative impact of car use (European Union, 2013). Access to public transport is particularly important for the many people who do not own or cannot use a car. For these user groups the availability, accessibility and affordability of public transport has a major role to play in improving their quality of life and social inclusion, especially if they live in peripheral urban areas. Problems of poor access to transport are also particularly severe in rural, mountainous and remote areas, where a "circle of decline" (OECD, 2006) is observed, driven by a number of interacting factors that can impede local development and employment and make it difficult to establish sustainable basic services.

Cities themselves are usually in the best position to find the right responses to these challenges, taking into account their specific circumstances. Efficient and effective urban transport can significantly contribute to achieving objectives in a wide range of policy domains for which the EU has an established competence. The success of policies and policy objectives that have been agreed at EU level, for example on the efficiency of the EU transport system, socio- economic objectives, energy dependency, or climate change, partly depends on actions taken by national, regional and local authorities.

Should transport poverty be part of the policy agenda?

Transport is fundamental for social interactions with family and friends which, in turn, are important for maintaining good mental health and wellbeing. Disadvantaged groups present different needs (access to education, work, healthcare), and are affected in different ways by existing transport barriers. Transport plays a crucial role in exacerbating or mitigating the

social exclusion of disadvantaged groups, affecting their access to basic services, as well as employment.[6]

There exist several barriers that are particularly important for specific user groups. Poor transport and mobility services may intensify the disadvantage that these groups are facing already, leading to an increased risk of social exclusion. However, as socially disadvantaged groups have different mobility behaviours and needs, and face diverse transport barriers, they all need to be addressed adequately.[7]

The following table, shows the main transport-related issues for the groups most at risk of social exclusion:

*Figure 2: **transport related issues for vulnerable social groups***

SOCIAL GROUPS	Availability: No suitable transport option available	Accessibility: Transport options do not reach destinations and opportunities	Affordability: High cost burden	Time budget: Excessive amount of time in travel	Adequacy: Travel conditions are dangerous, unsafe or unhealthy for the individual
Low income and unemployed	✓	✓	✓	✓	
Elderly people		✓			✓
People with reduced mobility		✓		✓	✓
Women	✓	✓		✓	✓
Migrants and ethnic minorities			✓	✓	✓
Children and young people	✓		✓		✓
People living in rural and deprived areas	✓	✓	✓	✓	

(Source: HiReach project)

Individuals with low levels of mobility may also have unmet or unrecognized mobility needs that are out of sight for these individuals, due to lifelong experiences of disadvantage, habits and routines or gender roles. Hence, increasing accessibility of destinations and opportunities can secure basic needs, but life satisfaction and mental well-being may still be reduced due to the inability to "keep up" with others in society. Thus, in addition to accessibility, it is crucial to increase **motility** – the potential to move. It is important to increase the mental horizon and the capacity to plan and shape one's own life for members of vulnerable social groups.[8]

The table below, indicates the different stakeholders and their level of involvement in order to undertake the necessary policy initiatives or measures for addressing transport poverty:

Table 1: How can stakeholders be part of the policy agenda to address transport poverty

[6] Source: Civitas, Policy Note on Transport Poverty (2016)
[7] Ibid.
[8] http://hireach-project.eu/HiReach_D3.1%20Analysis%20current%20transport%20offer_v2_190524_TRT_draft.pdf

Key stakeholder	Involvement	Explanation
Local administration		The leading role for the implementation of measures in the field of transport poverty is usually assumed by the local administration. Other local or regional administrations, such as the town planning, traffic engineering, environmental or tourism departments should be involved in the implementation processes.
Public transport users and citizens		Current and potential public transport users, amongst others, depending on the type of measures these can be: commuters, women, people with reduced mobility, elderly and young people, residents and visitors, and constituent groups (e.g. cycling and walking groups, associations of people with special needs).
Public transport operator		For measures which support the combination of both public transport and bicycle use, public transport operators might take the lead. This also applies for measures regarding improving affordability and quality of service of public transport, safety and security and accessibility to public transport.
Schools		Schools and school departments can also be involved to lead educational activities.
Research institutions		Universities or similar research institutions may have to be involved in data collection (e.g. user needs analyses) and the evaluation of the results and impacts. Organisations, who can act as external auditors: city-consultants, transport consultants, city planners, and agencies/organisations which advise cities and regions on how to achieve energy efficient transport and/or on how to improve local/regional accessibility.
Private companies		For the technical support (adaption of personal software, development of technical equipment, etc.) private companies should be involved. For the promotion and information campaigns public relations consultancy firms should be assigned. Architects should be responsible for the design of the infrastructure to be installed to help assure compatibility with the surrounding built environment.

Source: Civitas, Policy Note on Transport Poverty (2016)

Transport poverty and SPI

Indirect links – through GDP

As with other notions examined during the virtual peer learning sessions – i.e. culture – we will try to examine the indirect impact of transport (and transport poverty) to social progress via income creation.

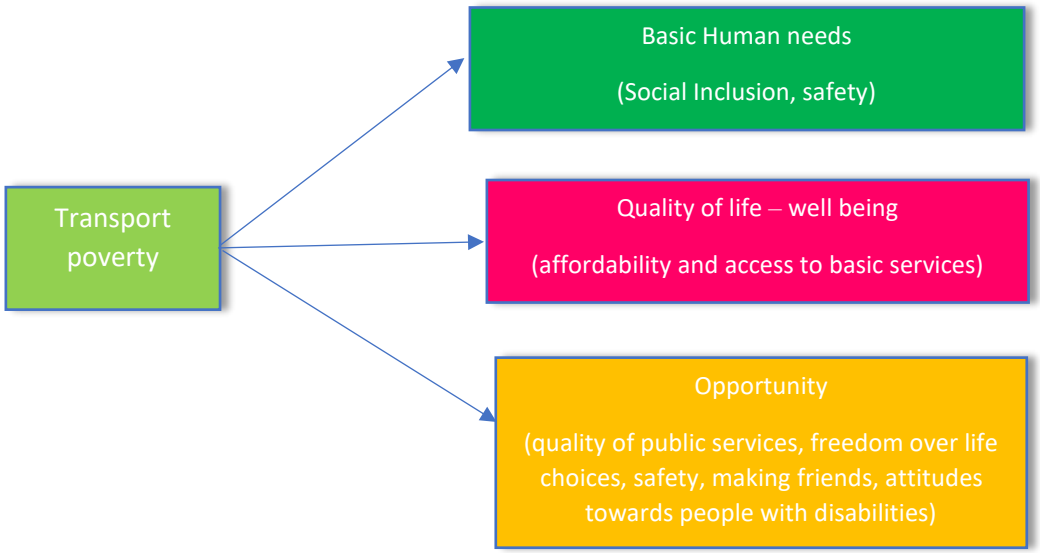
According to JRC[9] , transport plays an important role in both the economy and society and has a large impact on growth and employment. The transport industry directly employs around 10 million people and accounts for about 5% of gross domestic product (GDP). Effective transport systems are fundamental for the European companies' ability to compete in the world economy. Logistics, such as transport and storage, account for 10–15% of the cost of a finished product for European companies.

Direct links

[9] https://ec.europa.eu/jrc/en/research-topic/transport-sector-economic-analysis

As mentioned in the very beginning of this document, transport poverty is linked directly or indirectly to aspects of social exclusion, quality of life (i.e. well-being) and opportunity.

Figure 3: Transport poverty – Societal aspects: Links



Relevant literature on transport poverty addresses all three SPI dimensions either directly or indirectly:

- **Basic Human needs:** Public transport plays an important role in enabling people to travel to different places: to work to earn money, to school to get education, to hospital to get treatment and to places to meet friends and connect socially. Thus, sustainable transport also sustains equality in society. (Universal Declaration of Human Rights)
- **Well-being (quality of life and equality):** Whilst a relationship between transport and health is only generally acknowledged (rather intuitively) – for example access to health care, personal mobility, better accessibility and the benefits of active travel on health - there is a wider impact of improved mobility on mental health and wellbeing. Due to the significance of early travel socialisation as well as the importance of travel for accumulation of social and network capital at an early age, disadvantaged children and young people should have the opportunity to travel and experience a wide range of mobility solutions. Also, for elderly people, not only access to basic services is crucial, but also the ability to move is relevant for being part of social networks and maintaining a meaningful life at old age. Hence, elderly and mobility impaired people need to be informed and enabled to explore all the different mobility options that are available. While traditional gender roles and gender-based mobility models are steadily becoming less common, it is important to challenge transport policy and planning by including gender perspectives more strongly in these domains.[10]
- **Opportunity:** While the diverse impacts of transport policies and investments on different population groups have long been recognized, understanding and explicitly assessing these impacts is of increasing importance for several reasons. First, the expected mobility costs increase (fuel price, congestion charging, public transport budget constraints) for

[10] Alsnih, R & Hensher, D. (2003). The Mobility and Accessibility Expectations of Seniors in an Aging Population. Transportation Research Part A: Policy and Practice. 37. 903-916. 10.1016/S0965-8564(03)00073-9.

the use of private and public transport implies a change in the long-term trend of generalized costs of travel. Differences in transport policies across time and space, and thus in terms of the affected population groups, suggest that the related differential impacts should be treated seriously (Hengel et al., 1998). Second, the high level of mobility has created land use patterns that are difficult to navigate for non-motorized transport users. This issue has been gaining more and more attention due to the ageing of the population and the related growth in the number of people that are no longer able to drive a car or are becoming more car dependent (White Paper, 2011). Third, there is increasing realization that equity should play a constitutive role in transport provision, similarly to education and health care, where equity considerations form part of everyday decision-making. And yet EU guidebooks for transport project evaluation do not account specifically for equity issues. (Source: Transport Equity Analysis)[11].

Below, follows a table that summarises our perception of how the different aspects of transport poverty relate or have an impact to EU SPI indicators.

Table 2: Transport (poverty) impact on SPI indicators

Dimension	Component	SPI indicator	Impact*
Basic Human Needs	Nutrition and Basic Medical Care	Mortality rate before age 65	*
		Infant mortality	
		Unmet medical needs	
		Insufficient food	
	Water and Sanitation	Satisfaction with water quality	
		Lack of toilet in dwelling	
		Uncollected sewage	
		Sewage treatment	
	Shelter	Burdensome cost of housing	
		Satisfaction with housing	
		Overcrowding	*
		Lack of adequate heating	
		Homicide rate	*

[11] https://trimis.ec.europa.eu/project/transport-equity-analysis-assessment-and-integration-equity-criteria-transportation-planning

Dimension	Component	SPI indicator	Impact*
	Personal Safety	Safety at night	***
		Traffic deaths	***
Foundations of Wellbeing	Access to Basic Knowledge	Secondary enrolment rate	**
		Lower secondary completion only	**
		Early school leaving	**
	Access to Information and Communications	Internet at home	
		Broadband at home	
		Online interaction with public authorities	
	Health and Wellness	Life expectancy	**
		General health status	**
Opportunity	Personal Rights	Trust in the political system	**
		Trust in the legal system	*
		Trust in the police	*
		Quality and accountability of government services	***
	Personal Freedom and Choice	Freedom over life choices	***
		Teenage pregnancy	
		Young people not in education, employment or training	*
		Corruption	
	Tolerance and Inclusion	Impartiality of government services	***
		Tolerance for immigrants	***
		Tolerance for minorities	***
		Attitudes toward people with disabilities	***

Dimension	Component	SPI indicator	Impact*
		Tolerance for homosexuals	*
		Gender gap	***
		Community safety net	***
	Access to Advanced Education	Tertiary education attainment	*
		Tertiary enrolment	*
		Lifelong learning	*

Note: The use of a * indicates that impact or relevance is low, **indicates that impact or relevance is medium, ***indicates high impact or relevance

Transport Poverty: What is being measured?

Table 3: Some examples of indicators, metrics and benchmarks for transport poverty

Indicator	Metrics	Benchmark	Units of analysis	Source
Affordability	Income, quantity of travel, single trip fare	Average and bottom quintile per capita incomes	"Fixed basket" of trips and their cost examined in 27 large cities across the world.	Carruthers et al. (2005)
Mobility	Number of trips Distance of travel Commuting times	Vulnerable populations segments (elderly, children, disabled people, part-time jobs, job seekers)	Distance travelled by the elderly and disabled in the UK; Physical activity of vulnerable populations in Canada; Commuting times in the UK.	Schmöcker et al. (2005) Morency et al. (2011) McQuaid and Chen (2012)
Accessibility (transport social needs)	Transport disadvantage (TD)	Access to a private motorised vehicle, demographics, the level of crime, accessibility to key areas of interest	Transport needs and gaps in Australia; Spatial equity in Colombia; social exclusion in Latin America	Currie (2004), Delmelle and Casas (2012), Jaramillo et al. (2012)
Index of public transport	Availability of public transport (PT)	Transport provision per capita	Transport needs and gaps in Australia; Spatial equity	Currie (2004), Delmelle and Casas (2012),

			in Colombia; social exclusion in Latin America	Jaramillo et al. (2012)
Index of disparity between needs and provisions	The difference between transport need and the availability of public transport (TD – PT)	The gap existing between the social transport need, and the provision of public transport available	Transport needs and gaps in Australia; Spatial equity in Colombia; social exclusion in Latin America	Currie (2004), Delmelle and Casas (2012), Jaramillo et al. (2012)
Environmental justice	Traffic proximity and volume	Average annual daily traffic	Count of vehicles at major roads within 500 meters, divided by distance in meters (not km) in the US	Environmental Protection Agency (2015)

Source: Transport poverty and its adverse social consequences (2016), Lucas, Mattioli, Verlinghieri and Guzman

Questions & point for discussion

Although there is a clear relationship between transport and social progress, this has not been adequately addressed in literature, thus it is difficult to find relevant evidence; still, there are some efforts undertaken by researchers, focusing on case studies (either regional or national) that provide some insights that could further help and support the research process.

To make a concrete proposal for inclusion of transport related aspects within the EU SPI index, we need to make sure that adequate information and data exists to support our case.

Indicative points for further discussion could be the following:

- Is transport poverty “really” affecting social progress?
- Are social aspects of transport, such as transport poverty included in your regional policy agenda?
- Are there any policies and/or initiatives addressing such aspects?
- What can different stakeholders do?
    a. Can they contribute in reducing transport poverty?
    b. Can they contribute in reducing transport poverty impacts?
- Discuss the relevance of transport poverty on SPI components.
- Propose/ discuss relevant indicators to include in SPI (does it makes sense?)

References

Bailey K, Grossardt T and Ripy J (2012) Toward environmental justice in transportation decision making with structured public involvement. Transportation Research Record 2320: 102–110.

Bocarejo SJP and Oviedo HDR (2012) Transport accessibility and social inequities: a tool for identification of mobility needs and evaluation of transport investments. Journal of Transport Geography 24: 142–154.

CBT (Campaign for Better Transport) (2012) Transport and Poverty: A Literature Review. CBT, London, UK.

Currie G (2004) Gap analysis of public transport needs. measuring spatial distribution of public transport needs and identifying gaps in the quality of public transport provision. Transportation Research Record 1895: 137–146.

Currie G, Richardson T, Smyth P et al. (2009) Investigating links between transport disadvantage, social exclusion and well-being in Melbourne–preliminary results. Transport Policy 16(3): 97–105.

EPA (US Environmental Protection Agency) (2015) EJSCREEN: Environmental Justice Screening and Mapping Tool. EPA, Washington, DC, USA. See http://www.epa.gov/ejscreen .

European Commission (2014): Public Procurement as a Driver of Innovation in SMEs and Public Services.

European Commission (2016): A European agenda for the collaborative economy.

European Commission (2018): Study to monitor the business and regulatory environment affecting the collaborative economy in the EU.

European Commission (2019): The Single Market: Europe's best asset in a changing world.

Hannam, K; Sheller, M; Urry, J (2006): Mobilities, immobilities and moorings. In Mobilities 1 (1), pp. 1–22.

Kenyon, S; Lyons, G; Rafferty, J (2002): Transport and social exclusion. Investigating the possibility of promoting inclusion through virtual mobility. In Journal of Transport Geography 10 (3), pp. 207–219.

Kuttler, T; Moraglio, M; Bosetti, S; Chiffi, C; van Egmond, P; Grandsart, D (2019): Mobility in prioritised areas: inputs from the final users.

Kuttler, T; Moraglio, M; Reis, V; Freitas, A; Carvalho, D; Castelo, S et al. (2018): Mobility in prioritised areas: mapping the field. H2020 HiReach project. Litman T (2015) Transportation Affordability. Evaluation and Improvements Strategies. Victoria Transport Policy Institute, Victoria, Canada.

Lucas K (ed.) (2004) Running on Empty: Transport, Social Exclusion and Environmental Justice. The Policy Press, Bristol, UK.

Lucas K (2012) Transport and social exclusion: where are we now? Transport Policy 20: 105–113.

Lucas K and Jones P (2009) The Car in British Society. RAC Foundation, London, UK.

Lucas K and Markovich J (2011) International perspectives. In New Perspectives and Methods in Transport and Social Exclusion Research (Currie G (ed.)). Emerald, Bingley, UK, pp. 223–239.

Lucas K, Tyler S, Cervero R and Orfeuil J (2006) Moving from Welfare to Work: The Role of Transport. FIA Foundation, London, UK.

Lucas, K & Martens, K & Floridea, W & Ciommo, D & Dupont-Kieffer, A (2019). Measuring Transport Equity. 10.1016/C2017-0-01787-1.

Lucas, K & Mattioli, G & Verlinghieri, E & Guzman, A. (2016). Transport poverty and its adverse social consequences. Transport. 169. 10.1680/jtran.15.00073.