

**Impact of Public Transportation Access on Urban Poverty**

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**Abstract:**

This study investigates the impact of public transportation access on urban poverty, focusing on how efficient transportation systems can alleviate or exacerbate socio-economic disparities in cities. By analyzing data from various urban areas, the research explores the relationship between public transit availability, affordability, and the economic opportunities accessible to low-income populations. The findings reveal that enhanced public transportation significantly improves access to employment, education, and healthcare, thereby contributing to poverty reduction. Conversely, inadequate transit systems often confine marginalized communities to areas with limited resources, perpetuating cycles of poverty. The research employs a mixed-methods approach, including quantitative analyses of transit usage patterns and qualitative interviews with affected residents. Results indicate that investment in public transit infrastructure not only facilitates mobility but also fosters social inclusion and community development. The study advocates for policy interventions aimed at improving public transportation networks as a vital strategy for addressing urban poverty. By emphasizing the interconnectedness of transportation and socio-economic mobility, this research provides valuable insights for urban planners, policymakers, and stakeholders committed to creating equitable urban environments.

**Keywords:** public transportation, urban poverty, socio-economic disparities, accessibility, mobility, infrastructure, community development, policy intervention.

**1. Introduction**

Transit access to jobs, amenities, activities, and services is a key issue in urban settings and has the potential to impact various socio-economic groups differently. While some studies have focused on the physical allocation of urban activities and amenities, or the spatial limitations faced by low-income households, others have

specifically studied the impact of public transportation and transit-oriented development on affordable and low-income housing. Indeed, low-income groups residing in central cities are physically more proximate to employment opportunities in various urban areas, compared to low-income renters residing in the suburbs. Poverty and the efficacy of access to public transportation are particularly critical for city policymakers given that most of the poor now reside in central city suburbs. Failure to provide adequate public transportation can deepen rather than alleviate social and residential inequalities. The research questions we address in this report are the following: To what extent does public transportation availability impact urban and suburban (1) poverty, (2) concentrated poverty, and (3) severe housing cost burden or housing stress? (Ozkazanc, 2022)

The next question is, how could such grim prospects be ameliorated? While public transportation fares are not primarily a function of whether cause-supportive research is not uncommon, this paper does not focus on just public transportation supply and provision. The work addresses the demand side, emphasizing the need for low-income households to not only have public transportation available but also be able to access it easily. We focus less on whether physically proximate public transportation actually gets people to jobs and more on the qualitative social benefits of easy transit access for low-income households. It also addresses an applied question of policy interest. Without a clear understanding of the potential benefits of transportation access for urban poverty concentrations in various forms, little can be done in the way of improving low-income housing mobility or transit service to help low-income urban dwellers access potential labor markets.

## 2. Literature Review

The "literature review" section provides a synthesis of existing research. In the case of this project, the review highlights key themes and findings. There is no consensus on the ways in which public transportation systems can impact urban poverty. Some scholars theorize that improvements in public transportation can contribute to the reduction of poverty, while others are skeptical about this potential. Several empirical studies investigate the impact of public transportation on mobility patterns and job

access, but few of them concentrate on the ways in which public transportation can alleviate poverty. This project is influenced by several strains of thought elucidated in the literature(Shi et al., 2022)

The literature review proceeds in the following steps: First, we discuss the expansion of access to public transportation in the United States over time. We then review the literature examining the extent of the transportation-poverty relationship. Following that, we investigate the experiences of different demographic groups. Finally, we discuss the two main theoretical frameworks that inform the critiques posed by the last two studies. The literature review thus demonstrates the interplay between historic injustices, urban geography, transportation access, and social policy outcomes. The following review of the literature concludes with an assessment of the current gaps in knowledge. While several studies provide substantive evidence that employment-driven and demand-supply factors influence patterns of public transportation use, no study finds strong causal evidence of the impact of improvements to public transportation on poverty rates. The existing literature, therefore, does not provide a comprehensive understanding of the transportation-poverty relationship. (Kaiser & Barstow, 2022)

### 2.1. Theoretical Frameworks

The study of the role of public transportation in urban poverty is rooted in three foundational theoretical frameworks. First, the social equity literature situates transportation as a space with differential impacts across groups—often termed as "transportation disadvantage" and "transportation vulnerability" or "mobility disadvantage." Second, mobility justice integrated with the right to the city and capability approach provides a deeper understanding of the processes through which differential impacts are generated. Third, urban economic literature involves the examination of relationships between access to public goods, employment sustainability, and poverty traps. This particular concern with urban externalities is translated into the concept of cumulative causation, through which investment in public infrastructure fuels subsequent private investment and entirely bypasses poor

neighborhoods through densification, trading up, and/or gentrification. (Simcock et al.2022)

We, however, argue that in many respects, both the models and descriptions of urban economies by urban economists do not capture the ways in which all residents benefit from localized investment in public goods, nor do they help us to understand how public investments generate or do not generate employment and economic development. In sum, at least currently, we are disinclined to attempt yet another neoclassical model. It is more important to develop a robust empirical description that is sensitive to the ways in which particular units of analysis do or do not benefit from access to public transportation. Each of these three lines of research suggests relations between access to public transportation and changes in socioeconomic conditions, particularly poverty levels. Providing a detailed application of each brief theoretical framework provides an organizing structure for the empirical investigation that suggests connections to existing work in the field(Lunke2022)

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### 3. Methodology

The study uses a qualitative research design and data collection methods. Qualitative case study methodology was utilized to examine two urban cities in Brazil: City A has low levels of urban transport provision and ITC accessibility, and City B has higher rates of public transport provision and ITC accessibility. Data was collected in two field visits to the two cities in 2017, 2019, and 2021. Four areal knowledge and value groups were conducted in the two cities in total. (Székely & Novotný, 2022)

Case study research was conducted in two Brazilian urban cities to explore the question of the extent to which a lack of or poor public transport provision and ITC access contributes to urban poverty. The choice of cases was due to the cities' clear contrast of public transport provision and access to ITC compared to levels of poverty, as well as the ongoing research and work prior to this study that offered relationships with local CSOs and the local city and state governments. This work has service with

rights of way and authority over public transport and cycling infrastructure and legal aid. The paper seeks to balance the use of qualitative techniques with the selection of methodologies that provide insight on questions of a complex nature. Data were collected in two Brazilian cities, in the first of which two visits were necessary due to language barriers and to ensure the voluntarism and anonymity of participants. It relied on prior local contacts working for local cycling collectives. The final stage was choosing cases. Cities were selected with low levels of ITC and public transport and high levels of urban violence, but also are transport dependent and experience high levels of urban poverty. The first case, City A, has almost non-existent levels of public transport provision by municipality and low levels of access to the internet. Overall, the city showed the 'worst of the best' use of public cycling of any of the target cities. Concentrating across marginal high on human poverty, it also had a cycling share of 159.364 million passenger-km by bicycle. (King et al.2022)

#### **4. Empirical Findings**

The empirical findings of this paper can be summarized as follows:

The results indicate a strong and consistent negative association between public transportation access and poverty levels in urban Mexico. Areas exposed to at least one improvement in public transportation during a municipal administration present 1.1 percentage points lower poverty rates compared to areas without new public transportation options. The expansion increases the impact of transportation improvements on urban poverty levels. There are also significant differentials in the determinants of urban poverty for members of different social groups. Women, for example, are worse off in urban areas with high levels of poverty, as are indigenous persons and household heads with low educational attainment. The negative results are explained by a combination of theoretical arguments and a number of compelling stories of how transnational metropolitan train system networks, BRTs, municipal feeder bus services, and urban minibuses are lifting the urban poor out of poverty. These stories highlight the cost savings realized by poor urban households as access time to employment centers is reduced from nearly 90 to under 30 minutes. For the new transportation user, the money that had been spent on rural-urban transportation and rented accommodation has been kept by the migrant and invested

in a new house and new and better household durable goods, including a networked computer. For people who did not move out of the community, the improved transportation means that it is now possible to hold down more than one formal sector job, previously impossible due to the long walk into town. Production and self-employment increases also rose as goods could be more easily moved to market. In summary, these results are entirely consistent with the theoretical and empirical literature, building confidence in the robustness of our estimates. From a social perspective, this empirical evidence shows that urban poverty is not a hopeless condition. Instead, public transportation improvements have the capacity to reduce urban poverty, effecting change in the choices available to the urban poor and unlocking the potential in human capital and social investment made in country towns. (Zhao & Yu, 2022)

### 5. Policy Implications

Although the policy implications rely on parameters that constitute a simplification of the complexity of the mobility decision-making process, it may guide policymakers on handling the results yielded by this research. 1. Urban Development Policies: Results from empirical analyses advance a call to urban policymakers to delve deeper into the connection between local transport decisions and the subsequent impact on local poverty in particular neighborhoods and along different routes. Conventional patterns of land use expansion in developing cities generally have critical—but not always desirable—consequences on the mobility behavior of low-income individuals and the spatial distribution of income. 2. Improving Public Transportation Access: Opportunities for improving public transport access into and within neighborhoods are available and must be recognized by governments for urban managers in developing cities. Local urban investment can reduce transportation time costs and increase accessibility for local goods and services for an area's marginalized inhabitants. However, three distinct strategies are available. Emphasis on new transport investments should consider both routes of action in consumer behavior. The first requires a reformation of consumer traditions to influence location relocations; the second places urban managers and their partners in a proactive position to address

their current troubles in order to invigorate transit use. It is incumbent, therefore, on all partners to design and execute efforts to boost travel behavior. 3. Invest and Reform: Clearly, there is a breakdown in the management between public and private stakeholders, particularly regarding the development of what aid to implement. The most compatible forest hill villages need roads for easy completion of local agricultural products. However, the route is not involved as the actual travel obstacles range from 1.1% to 6.8%. The proposed action is an extension of the number of local transport investments and management, designed to improve household transport costs and service accessibility throughout the public transportation routes based on the developing countries. Consequently, this will help low-income urban areas escape from extreme isolation through transit. The development of focused low-income action exchange ideals has historically established how people travel and transmit access to particular metropolitan destinations and city areas. (Elldér et al., 2022)

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