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Transport Challenges in Underserved Communities: Implications for Social Inclusion and Economic Mobility

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Abstract

Transportation systems significantly influence access to jobs, education, healthcare, social networks, and civic life. Nonetheless, mobility inequities continue to harm inhabitants of low-income, outlying, and otherwise underserved communities. This systematic analysis brings together information from five recent studies to investigate the multifaceted nature of transportation disadvantage and its consequences for social inclusion and economic mobility. The analysis, which follows known systematic review standards, combines qualitative, quantitative, mixed-methods, and conceptual contributions to reflect the layered restrictions that limit mobility opportunities. Across these studies, transport disadvantage is portrayed as a cumulative state molded by infrastructural deficiencies, cost issues, safety concerns, informational hurdles, and socio-cultural factors. These limits disproportionately affect vulnerable populations, including elderly persons, low-income households, people with impairments, and residents of geographically segregated areas, whose mobility is hampered by overlapping vulnerabilities. The paper emphasizes how a spatial mismatch between residential areas and vital opportunities exacerbates mobility constraints, contributing to social isolation, limited labor market access, and decreased involvement in community activities. While targeted transportation investments can increase accessibility and promote economic inclusion, their effectiveness is dependent on understanding that accessibility is influenced not only by service availability, but also by individuals' capacities, confidence, and contextual restrictions. The findings highlight the importance of equity-oriented planning approaches that address structural and capability-based impediments to mobility. The research emphasises the importance of comprehensive policy initiatives that target excluded populations and promote long-term mobility justice by revealing the underlying links between transport disadvantage, social exclusion, and economic immobility.

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Introduction

Transport systems are widely acknowledged as vital infrastructures that enable access to employment, education, healthcare, markets, and social networks. In theory, they should encourage social inclusion and economic opportunity. But in reality, there is still a great deal of disparity in access to sufficient mobility (Allen & Farber, 2020). A significant portion of the world's population still faces structural and ongoing obstacles to mobility, particularly those who reside in low-income, peri-urban, informal, rural, or socially excluded areas (Kenyon et al., 2002). For these neglected groups, low access to safe, dependable, affordable, and accessible transport does not merely impair convenience; it restricts participation in economic,

social, and civic life, perpetuating existing inequities rather than easing them.

Literature on "transport poverty" connects social disadvantages (low income, unemployment, informal housing) with transportation disadvantages (inadequate services, lack of private vehicles, poor infrastructure, and high costs) (Pérez-Peña *et al.,* 2021). Although this concept constitutes a significant departure from merely technical definitions of mobility, it is not without limitations. Much of the research remains conceptually fragmented, with conflicting definitions and variable indicators, making cross-context comparability problematic. Furthermore, while scholars are increasingly acknowledging the multi-dimensional nature of transport poverty, which includes affordability, availability, accessibility, reliability, safety, and suitability, practical planning applications frequently reduce the problem to simple distance or service frequency measures, oversimplifying lived realities.

According to empirical studies, transportation disadvantage increases social vulnerability by limiting access to vital services and opportunities. When public transportation is unavailable, unreliable, expensive, or risky, people are compelled to walk long distances, rely on informal and precarious modes of transportation, or forego travel. This has been associated with social isolation, limited access to healthcare and education, and lower labor market involvement (Bridgman, 2018; Lucas, 2011). However, a major gap exists in the literature: whereas the social and health effects of transport disadvantage are increasingly recognized, its relationship with long-term economic mobility, income progression, and livelihood sustainability is far less studied. The transformational potential of transport equity research is limited since a large portion of current scholarship prioritizes short-term welfare consequences above structural economic outcomes (Pérez-Peña *et al.* 2021).

Furthermore, present transportation planning paradigms appear to be inadequate for addressing equity concerns. retrospective evaluations are heavily relied on, with little consideration of equality during the planning and design stages (Pereira, Schwanen, & Banister, 2017). Furthermore, traditional quantitative accessibility indicators overlook perceived accessibility, lived experience, and social meaning of mobility, which are frequently more closely related to actual exclusion (Pot, Heinen, & Tillema, 2024). These methodological flaws support technocratic methods that ignore the perspectives of underprivileged people. As a result, this study addresses an urgent need for a more comprehensive and critical synthesis by systematically reviewing transport challenges in underserved communities, investigating not only social inclusion but also economic mobility, and critically assessing the effectiveness of policy and planning interventions aimed at achieving more equitable transportation systems.

Methodology

Search Strategy

The search strategy used in this systematic review adhered to known methodological norms outlined by scholars such as Petticrew & Roberts (2006) and Gough *et al.* (2017), who emphasized transparency, rigour, and repeatability in evidence synthesis. Guided by these criteria, the review used a structured search procedure to collect a wide range of papers on transportation disadvantage, mobility disparity, and their consequences for social inclusion and economic opportunity in underserved communities.

In accordance with Grant & Booth (2009) & Higgins *et al.* (2020), four important databases; Scopus, Web of Science, TRID, and Google Scholar were chosen for their comprehensive coverage of transport studies, urban planning, social sciences, and public policy. Previous transport equity researchers, such as Lucas (2012), Currie *et al.* (2009), and Pereira *et al.* (2017), have emphasized the importance of employing multidisciplinary databases due to the cross-sector character of mobility disadvantage.

The search strategy used a combination of keywords and controlled vocabulary concepts from previous conceptual work (Church *et al.,* 2000; Kenyon *et al.,* 2002), including terms like "transport disadvantage," "transport-related social exclusion,"

"mobility inequality," "accessibility barriers," "underserved communities," and "economic mobility." Boolean operators (AND, OR, NOT) were used to refine the search in accordance with Booth *et al.*'s (2016) systematic review guidelines. To improve coverage and limit the danger of missing influential literature, backward citation tracking was used in accordance with Webster & Watson's (2002) recommended practices. Manual searches of key transport and urban studies journals supplemented database searches, using the methods used in previous assessments by Lucas (2011) and Martens (2017).

The initial search generated 1,247 items, illustrating the broad range of disciplines in which transport disadvantage is examined, including human geography, public health, and development studies. As underlined by Gough *et al.* (2017), using various databases broadens methodological breadth while reducing database-specific indexing bias, resulting in a more representative evidence base. The study provided extensive coverage of the issue while retaining analytical focus on the essential research objectives by using a transparent, repeatable, and field-aligned search approach that adhered to established systematic review standards.

Table 1: Keywords, Boolean Operators, Truncation, and Wildcard Symbols used for Search Strategy

Category	Description	Detailed Examples (Adapted for Underserved Communities Study)
Keywords	Primary terms closely related to the research topic.	- **Transport disadvantage:** "transport inequality," "mobility disadvantage," "transport poverty," "accessibility barriers" - **Social exclusion:** "transport-related social exclusion," "social participation," "mobility exclusion," "civic disengagement" - **Underserved communities:** "low-income populations," "vulnerable groups," "older adults," "marginalised neighbourhoods," "disadvantaged communities" - **Accessibility and mobility:** "spatial mismatch," "distance penalties," "transit deserts," "public transport access," "mobility constraints"
Boolean Operators	Used to combine, narrow, or broaden keyword searches.	- **AND:** "transport disadvantage" AND "social exclusion" - **OR:** ("low-income communities" OR "vulnerable populations") AND "mobility inequality" - **NOT:** "transport disadvantage" NOT "freight logistics"
Truncation Symbols	Used to retrieve multiple variations of a root word.	- **mobilit***: retrieves mobility, mobilities - **vulnerab***: retrieves vulnerable, vulnerability -**accessib***: retrieves access, accessible, accessibility
Wildcard Symbols	Used to replace a single character or account for spelling variations.	- **neighb?rhood**: retrieves neighbourhood/ neighborhood - **transportat?on**: retrieves transportation/ transportion - **disadvanta?e**: retrieves disadvantage/ disadvantages

Table 2: Inclusion and Exclusion Criteria for Study Selection

Criteria	Inclusion Criteria	Exclusion Criteria
Geographical Focus	Studies focusing on underserved, marginalised, or low-income communities in urban or peri-urban settings globally.	Studies focusing exclusively on rural, highway, freight, or general national transport systems without attention to underserved populations.
Language	English-language studies.	Studies published in languages other than English.
Publication Date	Studies published from 2010 onwards to capture contemporary mobility patterns, accessibility challenges, and recent transport reforms.	Studies published before 2010 unless highly relevant (older frameworks, outdated transport contexts).
Study Focus	Studies examining transport disadvantage, mobility barriers, accessibility challenges, social exclusion, spatial inequality, or economic mobility in underserved communities.	Studies not addressing underserved populations or those that focus on general mobility trends without social or economic implications.
Study Design	Empirical research (qualitative, quantitative, or mixed), conceptual frameworks, case studies, and policy analyses that provide insights into mobility inequities.	Opinion pieces, commentary articles, purely technical modelling without social relevance, studies lacking methodological grounding.
Population Focus	Studies involving vulnerable or underserved groups such as low-income residents, older adults, people with disabilities, or residents of marginalised neighbourhoods.	Studies focusing solely on general populations without distinguishing disadvantaged groups or mobility-relevant disparities.
Reporting Standards	Studies with clear aims, methodological transparency, coherent analysis, and sufficient detail for quality appraisal.	Studies with incomplete reporting, missing methodological detail, or insufficient information for assessment.

Selection Process

Drawing on recommendations from Moher *et al.* (2009) and Page *et al*. (2021), who emphasize structured screening, explicit eligibility criteria, and repeatable decision pathways in systematic reviews, the study selection process adhered to a transparent and methodologically rigorous protocol consistent with the PRISMA framework. 112 duplicate records were eliminated after the first search, leaving 1,135 distinct studies for the screening stage.

Predetermined inclusion criteria that were influenced by the conceptual and methodological suggestions of scholars like Hine & Mitchell (2003), Litman (2021), and Farrington (2007) served as the

basis for screening. Examining transportation disadvantage or mobility hurdles, concentrating on marginalized or vulnerable people, connecting mobility circumstances to social inclusion or economic opportunity, using empirical or conceptual academic techniques, and being published in English were all requirements for eligible studies. In line with previous transport equity reviews, titles and abstracts that focused exclusively on engineering efficiency, operational optimization, or generic travel behavior without explicitly taking socially or spatially marginalized groups into account were excluded at this point (Preston & Rajé, 2007).

A full-text review of 131 publications was then conducted. According to Lucas & Stanley (2006) and Cass *et al.* (2005), who contend that meaningful analysis of transport disadvantage necessitates explicit engagement with themes like spatial inequality, capability constraints, and lived experiences of marginalization, eligibility criteria were applied in this stage with greater conceptual precision. Research that lacked empirical support, did not adequately address the circumstances of underprivileged groups, or was extremely technical with little bearing on society was disqualified.

In the end, five (5) papers satisfied every requirement and were incorporated into the final synthesis. Despite the small number of included papers, this selectivity reflects the review's strict conceptual emphasis and supports the claim made by Martens & Golub (2019) that thorough inclusion filtering improves analytical depth and policy relevance. This multi-phase, criteria-driven screening process made guaranteed that the final body of evidence was thorough and analytically sound. The final set of studies provides a solid empirical and conceptual foundation for understanding the multifaceted nature of transport disadvantage and its implications for social inclusion and economic mobility.

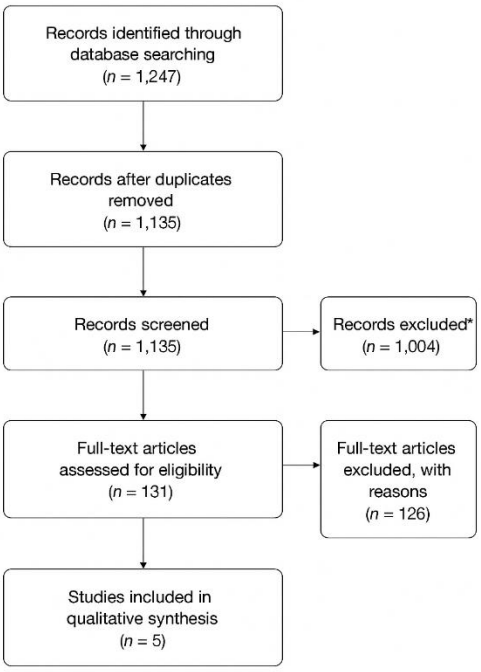

Figure 1: PRISMA Flow Diagram Showing the Study Selection Process

Quality Assessment

A comprehensive quality evaluation procedure was carried out to evaluate the methodological robustness, credibility, and relevance of the papers included in this systematic review. Because the final dataset featured a mix of qualitative, quantitative, mixed-methods, and conceptual contributions, the appraisal process was tailored to reflect the epistemological orientation of each study type. The Critical Appraisal Skills Programme (CASP) checklist, which assesses the clarity of research objectives, suitability of qualitative methodology, suitability of recruitment strategy, transparency of data collection, ethical considerations, depth of analysis, and coherence of findings, was used to evaluate qualitative studies. Both Ward & Walsh (2023) and Jahangir *et al.* (2024) met CASP criteria to a high grade, displaying clear research questions, rigorous analytic techniques, and comprehensive contextual descriptions that increased the credibility and transferability of their findings. While their localized sampling reduces generalizability, this is congruent with the interpretive purposes of qualitative research and does not lessen the significance of their contributions.

For quantitative and modelling-based studies, such as those by Barri *et al.* (2022) and Mittal *et al.* (2023), the Joanna Briggs Institute (JBI) appraisal tools for analytical cross-sectional studies were adapted to assess data validity, transparency of analytic procedures, appropriateness of statistical models, and consideration of confounding factors. The trustworthiness of the results was strengthened by both research' thorough explanations of their data sources, which included everything from mobile-phone mobility datasets to transportation accessibility indexes, as well as their modeling assumptions. However, during interpretation, it was acknowledged that both researches had intrinsic limitations related to secondary datasets, such as limited coverage of communities without mobile devices and possible selection bias.

The conceptual article by Li (2024) required a different evaluative lens focused on conceptual clarity, theoretical contribution, and coherence of argumentation rather than empirical rigour. The study was deemed to provide a coherent, well-organized framework that expanded on current knowledge of transportation disadvantage by including capability theory, according to theoretical appraisal criteria. Li's contribution was considered noteworthy because of its strong theoretical foundation and high relevance to the review's thematic focus on unequal vulnerability, even though conceptual articles cannot be assessed for sample or data quality.

Ultimately, the quality assessment found that the included studies had moderate to high methodological robustness. All five papers indicated a clear alignment of study objectives and methodological choices, as well as transparent reporting and high relevance to the review issue. While some limitations existed, such as localized study settings, reliance on self-reported experiences, and constraints inherent in secondary datasets, none were large enough to undermine the evidence's trustworthiness. However, these constraints were considered during the synthesis to avoid overgeneralization. The thorough, criteria-driven quality evaluation improved the review's dependability by ensuring that the synthesis was based on methodologically sound and conceptually cohesive evidence.

Results

Narrative Synthesis of Results

The narrative synthesis combines findings from the five studies included to provide a comprehensive understanding of how transportation disadvantage affects underserved communities and how it influences social inclusion and economic mobility. Although the studies differ in methodology, setting, and population focus, they all reveal a series of interconnected dynamics that define mobility deprivation. The following sub-sections present the synthesis according to the major meta-themes identified in the review.

Multidimensional Nature of Transport Disadvantage

Across all research included, transportation disadvantage is portrayed as a multi-faceted

phenomena that goes far beyond deficient infrastructure or service availability. Ward & Walsh's (2023) qualitative research demonstrates how low-income Chattanooga residents face interrelated impediments, such as cost, safety concerns, and unreliable services, which collectively impact mobility options. These limits result in behavioral adaptations such as avoiding unnecessary travel, declining invitations, or organizing visits around anticipated delays, illustrating the complicated interplay between structural constraints and individual agency.

Jahangir *et al.* (2024) show that transport disadvantage among older adults in Dhaka is caused by a complex combination of physical barriers (such as overcrowding and inaccessible vehicles), economic challenges (such as high fares), informational deficits (difficulty navigating routes), and psycho-social concerns (fear, stigma, and discomfort). Their mixed-methods findings indicate that these barriers are inextricably linked, with each area increasing the others. The multidimensionality of disadvantage is also conceptually reinforced by Li (2024), whose capabilities-based approach emphasizes how personal resources, functional ability, and contextual constraints interact to shape true accessibility. Taken together, the findings show that transport disadvantage cannot be reduced to a single issue; rather, it is a layered and cumulative set of limitations that interact to limit social and economic inclusion.

Transport-Related Social Exclusion (TRSE)

A second dominant theme is the strong relationship between mobility deprivation and social marginalization. Ward & Walsh (2023) present solid evidence that chronic transportation issues directly limit people's ability to participate in job, healthcare, education, and social activities. Their findings suggest that lower mobility leads to increased retreat from communal activity, which reinforces marginalization and weakens support networks. Similarly, Jahangir *et al.* (2024) show how elderly persons in Dhaka grow increasingly isolated since mobility restrictions hinder them from visiting family, attending social events, and participating in communal and religious activities.

Mittal *et al.* (2023) provide quantitative evidence to support this interpretation, demonstrating significant accessibility gaps in Maputo, where impoverished citizens are consistently disadvantaged in accessing key services. Long travel times, spatial inefficiencies, and a lack of dependable transportation options led to missed appointments, intermittent employment, and decreased participation in public life. Across contexts, the studies demonstrate that transportation is more than just a mobility system; it is a social system that allows people to participate. When mobility is restricted, participation suffers, resulting in both immediate and long-term social marginalization.

Differential Impacts on Vulnerable Populations

A unifying theme throughout the studies is that transport disadvantage disproportionately affects some population groups, notably those already experiencing socioeconomic difficulties. Jahangir *et al.* (2024) highlight how older persons experience specific mobility hurdles due to age-related limits, heightened safety concerns, and socio-cultural views that devalue aging bodies in public areas. Their findings reveal that even when infrastructure is technically accessible, older persons may still suffer owing to cognitive load, fear of falls, or discomfort in crowded surroundings.

Ward & Walsh (2023) also highlight how low-income individuals suffer increased vulnerabilities due to limited financial resources, insecure employment, and less access to private automobiles. These various disadvantages intersect to generate heightened mobility deprivation. According to Li's (2024) capabilities paradigm, those who have fewer personal resources whether because of their age, disability, gendered caregiving responsibilities, or poor income have a harder time turning transportation services into opportunities. In the meanwhile, research by Barri *et al.* (2022) and Mittal *et al.* (2023) demonstrates that people that are geographically marginalized, such as those living in low-income and peripheral neighborhoods, consistently face greater mobility burden and less accessibility. Differential vulnerability appears as a

structural trend that reflects more general injustices in social and economic life across studies.

Economic Mobility Constraints

Economic mobility is shown to be heavily dependent on reliable, efficient, and affordable public access. Barri et al. (2022) show that improving transit accessibility in Toronto's low-income neighborhoods increases transit use, particularly among low-income car owners, which lowers structural barriers to employment. Their findings imply that increasing public transport can meaningfully increase labour market access and disrupt cycles of poverty. Conversely, Mittal et al. (2023) show that in Maputo, impoverished inhabitants travel much longer distances for jobs and critical services, making work costly, time-consuming, and often inaccessible.

According to Ward & Walsh (2023), low-income individuals in Chattanooga sometimes lose their jobs or miss out on financial possibilities as a result of transportation instability. Their interviewees describe being late for work, missing shifts, or rejecting out career possibilities because transport services were not dependable. Li (2024) underlines these tendencies by claiming that transport capability rather than transport provision alone is crucial to economic participation. Limited capacities, whether financial, informational, or physical, impede individuals' capacity to pursue better career or training options. Collectively, these studies suggest that transit disadvantage functions as a systemic economic constraint, reinforcing income traps and lowering opportunities for upward mobility.

Table 3: Thematic Analysis

Themes	Ward & Walsh (2023)	Jahangir *et al.* (2024)	Barri *et al.* (2022)	Mittal et al. (2023)	Li (2024)
Multidimensional Barriers to Mobility	✓	✓	✕	✓	✓
Spatial Concentration of Disadvantage	✓	✕	✓	✓	✓
Transport-Related Social Exclusion (TRSE)	✓	✓	✕	✓	✓
Economic Mobility Constraints	✓	✕	✓	✓	✓

Common Findings Across Included Studies

Across the five analyzed studies, a consistent picture emerges in which transport disadvantage is seen as a multi-faceted phenomenon. Transport disadvantage is not just caused by poor infrastructure or unreliable transportation services; it also results from interconnected financial burdens, navigational and informational difficulties, safety concerns, and attitudes. This layered complexity shows that significant and long-lasting changes are rarely achieved by single-domain interventions. The research further reveals that some population groups, particularly low-income individuals, older folks, those with disabilities, and residents of outlying neighborhoods are disproportionately affected. Their experiences of mobility are determined by interlocking vulnerabilities that compound the repercussions of poor transport provision and amplify the implications of inequality

Spatial mismatch is a key mechanism supporting these disparities. Underserved groups must travel greater distances and rely on ineffective or disjointed transportation lines in a variety of situations, from Toronto to Maputo, in order to access jobs, healthcare, education, and other necessary services. The geographical organization of opportunities thus plays a fundamental role in regulating who can and cannot access the resources necessary for full involvement in society.

Additionally, it is evident from the reviewed studies that transportation disadvantage is strongly associated with more general social exclusion

processes. Restricted mobility diminishes individuals' abilities to maintain social networks, pursue economic opportunities, engage in civic life, and exercise fundamental social and economic rights. Transport therefore appears as a vital enabler of inclusion rather than a neutral backdrop to daily activity.

The research emphasizes the ability of deliberate planning and strategic investment to break long-standing cycles of disadvantage despite these obstacles. Improvements in underprivileged communities can produce quantifiable gains for accessibility and wellbeing, according to data from Barri *et al.* (2022). Achieving such goals, however, needs integrated methods that address both physical infrastructure and the underlying capacity obstacles that determine mobility behaviour. When combined, these results demonstrate how important it is to overcome transportation disadvantage in order to promote social inclusion and improve economic mobility in underserved communities.

Discussion

This systematic review analyzed five contemporary studies addressing transport disadvantage in underserved neighborhoods and synthesized their findings to illustrate the complex links between mobility, social inclusion, and economic opportunity. The discussion interprets these findings in the context of larger theoretical discussions and policy frameworks, emphasizing how the conceptual and empirical data come together to show that transportation disadvantage is a multifaceted condition embedded within larger socio-spatial disparities rather than a single barrier. The results emphasize that transportation serves as a structure that facilitates people's access to social connections, economic possibilities, and civic life in addition to being a means of physical mobility. When transportation systems malfunction, it disproportionately affects groups that are already marginalized in society, perpetuating cycles of poverty.

A major implication of the review is that transport disadvantage should be seen as both a cause and consequence of social exclusion. Ward & Walsh (2023) show that mobility restrictions create behavioural changes that restrict participation and perpetuate isolation. These results are consistent with more comprehensive theoretical conceptions of transportation-related social exclusion, which view mobility as a prerequisite for engagement in important spheres of life. In a similar vein, Jahangir *et al*. (2024) show that older persons' incapacity to use public transportation reduces social interaction, emotional health, and autonomy in addition to restricting access to necessary services. These studies confirm that mobility is a type of social capital; people's ability to sustain relationships, seize opportunities, and participate in their communities is consistently hampered by its absence.

Another key implication is the impact of geographical inequality in affecting mobility outcomes. The quantitative findings by Barri *et al.* (2022) and Mittal *et al.* (2023) illustrate that underserved areas often suffer from a structural mismatch between where people reside and where opportunities are concentrated. This spatial mismatch forces individuals in poor communities to travel longer distances and incur greater time and financial burdens to access employment, education, and healthcare. These situations promote what sociologists define as "time poverty," when individuals with little means spend disproportionate time seeking essential services, thereby further reducing prospects for personal development, income creation, and social involvement. The geographical concentration of disadvantage seen in Toronto and Maputo corresponds with broader urban planning research indicating that disinvestment in impoverished districts has long-term ramifications for mobility fairness and community well-being.

When the findings are interpreted, it becomes evident that infrastructure upgrades alone will not overcome the transportation deficit. Li's (2024) capabilities framework is a useful tool for understanding why infrastructure availability does not always convert into accessible. Physical ability, financial capacity, internet knowledge, and confidence all influence whether individuals can transform transportation provision into genuine

mobility opportunities. Jahangir *et al.* (2024) provide empirical evidence for this conceptual understanding, demonstrating that older persons' discomfort, fear, and physical limits considerably inhibit mobility even in the presence of operational transportation services. These findings call on policymakers to realize the limitations of narrowly defined transportation solutions and instead adopt ways that take into account user capabilities, intersectional vulnerabilities, and socio-cultural constraints.

The review also emphasizes the need for effective treatments that take into account the cumulative nature of transportation disadvantage. For example, the repercussions of mobility deprivation extend beyond work outcomes and access to healthcare; they affect various aspects of life, determining long-term social and economic trajectories. Ward & Walsh's (2023) findings show that people who adjust by retreating from social life have increased isolation, worse self-esteem, and less possibilities to form supportive networks. Meanwhile, Mittal et al. (2023) show that structural impediments limit people's access to the means of economic mobility, creating persistent disparities. These cumulative effects indicate that transportation disadvantage works as a social determinant of well-being, with consequences equivalent to housing, health, and education.

Finally, the findings highlight the possibility for targeted transportation investment to break the cycle of disadvantage. Barri *et al.* (2022) demonstrate that improvements in underserved areas can lower commute burdens while increasing transit utilization, particularly among low-income households. This suggests that equitable transportation design has great potential to improve mobility, reduce inequality, and increase opportunity, particularly when directed at communities who have traditionally been excluded from investment. However, the analysis emphasizes the importance of complete interventions that are sensitive to user demands. Without addressing communication hurdles, safety concerns, price, and capability restrictions, infrastructure upgrades risk benefiting more privileged groups while leaving vulnerable populations behind.

In summary, the findings indicate a growing understanding that transportation disadvantage is a complex, intersecting, and deeply structural issue that necessitates coordinated policy responses. Addressing it effectively entails not only improving physical infrastructure but also addressing social, spatial, and economic disparities that limit people's ability to move and hence fully participate in society.

Research Gaps

Despite the rich insights provided by the five studies included in this review, several research gaps remain, limiting our understanding of transportation disadvantage and its consequences for social inclusion and economic mobility in underserved regions. One of the most significant gaps is the prevalence of cross-sectional and locality-specific studies. Much of the previous research, including studies by Ward & Walsh (2023), Jahangir *et al.* (2024), and Mittal *et al.* (2023), focuses on mobility issues at a single point in time. These designs, however detailed, fail to depict how transportation disadvantage evolves or accumulates over time. As a result, there is little longitudinal research to show how changes in transportation policy, infrastructure investment, or neighborhood circumstances affect people's mobility trajectories, social involvement patterns, and long-term economic outcomes. This absence of temporal analysis limits our knowledge of whether changes in transportation accessibility provide long-term advantages or if initial gains fade due to underlying structural issues.

Another gap is the inadequate investigation of intersectionality in transportation disadvantage studies. Although several studies acknowledge that certain groups, such as older adults or low-income populations, face disproportionate mobility constraints, few investigate how intersecting identities such as gender, disability status, race, and household composition influence the severity or nature of transportation disadvantage. For example, whereas Jahangir *et al.* (2024) emphasize age-related constraints, they do not fully examine how age interacts with gender or wealth to shape mobility deprivation. This omission reflects a broader trend in transportation equity research, in which intersectional vulnerabilities are frequently

identified but not analytically disentangled. More inter-sectionally grounded empirical research is required to develop sophisticated transportation policies that prioritize the needs of people most at risk of exclusion.

Furthermore, there is a significant gap in the evidence base for causal links between transportation improvements and social or economic results. Barri *et al.* (2022) found promising correlations between targeted transit investment and increased mobility among low-income households, but causal evidence remains limited. Without strong experimental or quasi-experimental designs, it is impossible to determine whether transportation reforms directly boost employment, education access, income mobility, or social involvement. This limitation makes it difficult for policymakers to justify significant infrastructure or service reforms based on anticipated social outcomes. There is a pressing need for research that use natural experiments, longitudinal tracking, or mixed-methods causal inference methodologies to assess the real-world effects of transportation improvements.

Furthermore, the research evaluated show major gaps in understanding the function of emerging technologies in mitigating or worsening transportation disadvantage. While Li (2024) mentions digital capabilities as a component of accessibility, there is still a lack of empirical study on how digital platforms, cashless payments, real-time navigation apps, and on-demand transportation services affect mobility patterns across socioeconomic classes. As transportation systems become more digitized, there is a concern that technology developments will exacerbate existing disparities for people with little digital literacy or access. Research into the digital divide within transportation networks is therefore critically required, particularly among low-income and elderly people.

Finally, there is a lack of comparative and cross-national research examining how transport disadvantage manifests across diverse global contexts. The geographic spread of the reviewed studies is informative spanning the United States, Bangladesh, Canada, Mozambique, and conceptual global applications but the methodological and contextual differences make direct comparison difficult. There is a need for harmonized frameworks, shared indicators, and cross-context analysis to understand how transport disadvantage functions within different political, economic, and cultural systems. Such comparative research would allow scholars to determine whether certain forms of disadvantage are universal or context-specific and would help guide global best practices.

In conclusion, future research should fill these deficiencies by using longitudinal designs, combining intersectional analysis, increasing causal evidence for transportation solutions, investigating the influence of digital technologies, and undertaking cross-national comparative studies. Addressing these constraints will improve our understanding of transportation disadvantage and enable more equal and effective policy responses.

Conclusion

This systematic analysis combined evidence from five research on the transportation issues that underprivileged areas confront, as well as the consequences for social inclusion and economic mobility. The review shows that transportation disadvantage is a complex, multifaceted problem that severely limits people's access to basic services, job possibilities, social networks, and civic life. The studies, which range from Chattanooga to Dhaka, Toronto, and Maputo, show that mobility is essential for well-being and involvement, and that its absence consistently reproduces social and economic inequities.

One important result is that transportation disadvantage is intrinsically multifaceted. It includes not just physical infrastructure deficiencies, but also cost limits, safety issues, information shortages, and attitudinal hurdles. These barriers interact in ways that disproportionately harm vulnerable groups, such as older persons, low-income households, people with disabilities, and inhabitants of underserved or historically disinvested neighborhoods. When mobility constraints are combined with other types of

disadvantage, they result in significant and long-term forms of social exclusion.

The review also suggests that spatial inequality remains a major cause of transportation disadvantage. Poor and marginalised populations sometimes live in locations with insufficient or inefficient transportation, causing them to make long, expensive treks to access basic opportunities. This perpetuates poverty cycles and adds to the pressures of people who already suffer considerable economic limits. However, the research demonstrates that focused and equitable transportation investment has a significant potential to break these cycles and enhance mobility outcomes.

Another significant finding is that accessibility cannot be equated with infrastructure alone. Instead, it must be viewed as a function of human capacities, which are influenced by personal resources, functional talents, and sociocultural settings. Policy interventions must consequently target not simply the availability of transportation services, but also individuals' ability to use them effectively.

The entirety of the research emphasizes the crucial need for integrated, equity-focused transportation policies that address infrastructural deficiencies, intersectional vulnerabilities, and improve the broader socio-spatial contexts under which mobility occurs. Improving transportation in marginalized places is a social justice obligation as well as a technical undertaking. When transportation barriers are removed, the benefits go far beyond mobility, allowing for greater social participation, more economic opportunity, and an improved quality of life.

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