
POTENTIAL BENEFITS AND CHALLENGES OF THE COLLABORATIVE TRANSPORT ECONOMY FOR PERSONS WITH DISABILITIES

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DOI: <https://doi.org/10.35782/JCPP.2025.4.05>

Abstract: *This study explores the potential benefits and challenges of the Collaborative Transport Economy (CTE) for Persons with Disabilities (PWD). The research is grounded in the growing role of ridesharing, carpooling, and similar digital mobility platforms in improving accessibility and convenience in urban transportation. However, while these systems are seen as inclusive, concerns remain about their actual accessibility and usability for disadvantaged groups such as PWD. The main aim of this study is to identify the barriers and facilitators that affect the participation of PWD in the CTE and to understand how these platforms can support equitable and inclusive mobility. Guided by Social Exchange Theory, the study interprets interactions between users and service providers as exchanges of costs and benefits that influence participation and satisfaction. A Systematic Literature Review (SLR) was conducted using Scopus and Web of Science databases. Using the PRISMA 2020 flow process, nine peer-reviewed studies were selected based on inclusion and exclusion criteria that focused on accessibility, inclusivity, and transport design for PWD. The*

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findings reveal that while CTE services can promote independence, flexibility, and inclusion through innovations like Mobility as a Service (MaaS) and Shared Autonomous Vehicles (SAVs), barriers persist. These include infrastructural, digital, social, economic, and institutional challenges. The study concludes that without inclusive design and effective policy implementation, the benefits of CTE will remain limited for PWD. Strengthening accessibility standards and integrating inclusive technology are essential to make mobility truly equitable.

Keywords: *persons with disabilities, transport economy, accessibility, mobility*

Introduction

Collaborative Transport Economy (CTE) has redefined the way people access and experience mobility especially in urban areas (Arcidiacono and Duggan, 2020). The CTE includes services like ridesharing, carpooling, and bike-sharing. With the use of technology, these CTE platforms connect people and provide flexible and sometimes more affordable means of transportation (Saxena et al., 2020; Arcidiacono and Duggan, 2020; Marushchak et al. 2024). These innovations are often regarded as inclusive solutions to mobility challenges (Yuana et. al, 2019), particularly in urban areas where traffic congestion and limited public transportation create constraint to mobility. However, while collaborative transport offers alternative transportation options (Standing et al., 2018), there are still questions about who really benefits from these services.

Disadvantaged populations, which includes Persons with Disabilities (PWD), elderly, and low-income individuals, often face challenges in the transportation systems. These challenges may translate to expensive transportation costs, physical limitations, safety issues, and limited technology access (Lucas, 2012). As CTE models promote fair access to transportation (Dillahun and Malone, 2015; Shaheen and Chan, 2016), these platforms may not always be effective in serving the disadvantaged populations.

As policymakers continue to consider collaborative transport economy as part of inclusive and efficient transport strategy, it is necessary to critically look at how these systems impact access to mobility for disadvantaged groups, especially PWD. Therefore, a comprehensive understanding of both barriers and enabling factors affecting CTE participation of PWD is

essential - especially in developing policies, platform or application designs, and future research. In view thereof, this study aims to systematically review existing literature on the impacts of the CTE in relation to access to mobility for the PWD. It aims to identify the barriers and facilitators to equitable access, highlighting the social outcomes of CTE participation for the PWD. This study was guided by the following questions: (1) How does the collaborative transport economy potentially benefit or challenge the access to mobility for the Persons with Disabilities? and (2) What barriers do Persons with Disabilities face in accessing and benefiting from collaborative transport services? This paper proceeds by framing the study within social exchange theory, then defines CTE and its advantages and disadvantages, explains the research methods used, presents and analyzes the data, and concludes with key insights and implications.

Social exchange theory

Social Exchange Theory (SET) was adopted as the framework of this study in exploring how Persons with Disabilities (PWD) experience and navigate through Collaborative Transport Economy (CTE). Social exchange theory analyzes how people trade costs and benefits during interactions where individuals maximize rewards and minimize costs (Blau 1964). This theory views social life as a network built on these exchanges, where perceived fairness, trust and mutual benefit factors in determining participation. People form relationships based on benefits and costs during interactions. Contextualizing this theory in CTE, interactions occur during ridesharing, carpooling, bike-sharing and similar mobility platforms. These interactions are participated by service providers such as drivers, car owners, bike owners, or operators and by the users such as commuters or passengers. It treats transport interactions as exchanges between actors with competing and shared interests. Riders expect savings, comfort, or speed. Drivers seek income, safety, or flexible schedules. Each party acts when rewards exceed effort or risk. Trust, reputation, and convenience reinforce repeated exchanges. Through Social Exchange Theory, the study explains how service providers and users, specifically the PWD, interact in CTE platforms.

This theory is beneficial in understanding the impact, barriers and needs that affect the participation of PWD with CTE services. Collaborative Transport Economy affects PWD differently from able-bodied commuters or passengers. Many PWD weigh not just fare cost, but also comfort,

safety, and accessibility. Drivers may weigh time and income when deciding to accept a booking from PWD. Platforms may set rules that shape how drivers and PWD engage in transport services. When benefits are unequal, participation may drop. If accommodating a PWD requires more time or effort, drivers may perceive a net cost. Platforms influence these decisions by offering incentives or penalties. This mirrors how social exchange theory sees power: those who control resources shape interactions. When platforms design features that favor inclusivity, like accessible ride options, PWD receive more value, and drivers may feel their time is better rewarded. Repeated positive exchanges build long-term access for disadvantaged users.

Collaborative Transport Economy

The Collaborative Transport Economy (CTE) is part of the broader collaborative economy, specifically applied within the transportation sector. The collaborative or sharing economy is an umbrella term for business models in which goods and services are shared collaboratively between individuals and groups (Lovick, 2024). Through digitalization, the value of the collaborative economy has been captured by many corporations and entrepreneurs, allowing them to enter into the informal economy (Márton, 2022; Lovick, 2024). The CTE, in particular, has emerged as a practical and increasingly adopted approach to addressing mobility issues by leveraging ridesharing platforms and digital transport services (Standing et al., 2018). Standing et al. (2018) argue that digital platforms have revolutionized transportation by introducing peer-to-peer systems that optimize vehicle usage, reduce travel costs, and enhance commuter convenience.

Sharing mobility is a significant component of the CTE. Sharing mobility are the diverse types and modes of transport operators and solutions that have become significant in creating livable cities (Arcidiacono and Duggan, 2020). In 2019, Heineke et al. (2021) states that the sharing mobility market accounted for approximately \$130-140 billion in overall global consumer spending. The recent rise of sharing mobility may be attributed to the concept of Mobility as a Service (MaaS). MaaS is a user-centric model for intelligent mobility distribution where all mobility services are accumulated by a single mobility provider and supplied to users via a single digital platform (Kamargianni and Matyas, 2017; Arcidiacono and Duggan, 2020). As stated by Arcidiacono and Duggan (2020), these transport

services may be categorized according to 1) their types of use such as *one-way sharing*, *roundtrip vehicle sharing*, or *fractional ownership*; or 2) their mode of deposit, whether *station-based* or *free-floating*.

One-way sharing involves public sharing modes (e.g. *bike-sharing*) for trips from one point to another. *Roundtrip vehicle sharing* typically involves vehicles used for round trips compensated by the hours used. *Fractional ownership*, introduced by automobile companies like Ford and Mercedes, are car leasing services facilitated by such automobile companies. *Station based sharing* involves vehicles being picked up and deposited in predefined points in an urban area, while *free floating sharing* involves vehicles picked up and dropped off anywhere within the area where the service is active (Arcidiacono and Duggan, 2020).

Specific types of sharing mobility include *peer-to-peer car sharing*, *ridesharing*, and *e-hailing*. According to Arcidiacono and Duggan (2020), *peer-to-peer car sharing* usually operates on the basis of one-time trips without fixed time schedules and is distinct from car renting, since it involves relations between users or *peers* who collaborate by dividing the costs (money and time) of trips. *Ridesharing*, which is associated with the terms carpooling and hitchhiking, is a hybrid of *peer-to-peer* and *one-way sharing*. With digitalization, pre-arranged carpooling has been overtaken by flexible ridesharing platforms (e.g. BlaBlaCar and UberPOOL), allowing algorithmic ride-matching processes for both short and long distance trips. *E-hailing*, an innovation from traditional taxi services, collective transport (e.g. shuttle services), and micro-transit (e.g. vans), allows riders to order or book transport services mainly through digital platforms (e.g. Hailo in the UK and Goehail in New York) (Arcidiacono and Duggan, 2020).

Shared mobility has unique qualities that allow the transport economy to fill in the gaps between the access provided by public transport without having to own private vehicles. Collaborative transport services offer more flexible ways of travelling and this has become clear to authorities and transport operators who increasingly turn to such solutions (International Association of Public Transport, 2023).

Advantages and Disadvantages of CTE

Numerous research has been explored in the area of Collaborative Transport in relation to its potential in addressing problems in mobility

and transportation (Frenken and Schor, 2017; Shaheen et al., 2017; Kim et al., 2019), especially in urban areas. Some advantages of CTE include both economic and environmental benefits (Chen and Kockelman 2016; Clewlow and Mishra, 2017), while disadvantages include regulatory issues and socio-economic implications.

Shaheen et al. (2017) emphasize that shared mobility services improve accessibility and affordability while reducing transport-related environmental impacts. Another study by Frenken and Schor (2017) highlights that collaborative transport platforms like ride-sharing services reduce transportation costs and make mobility more accessible for low-income individuals by lowering the need for private vehicle ownership. Additionally, Kim et al. (2019) conducted a study in South Korea showing that colleague systematically based carpooling services helped reduce traffic and commuting expenses, making transportation more efficient and socially beneficial. Chen and Kockelman (2016) conducted a life-cycle analysis of carsharing in the U.S., reporting that users decreased their VMT by 30-70% and cut greenhouse gas emissions by nearly 50%. Supporting these findings, Clewlow and Mishra (2017) found that shared mobility services reduce private car ownership and vehicle miles traveled (VMT), resulting in lower greenhouse gas emissions. While collaborative transport offers several advantages to the communities, some studies argue that there are consequences and challenges associated with its implementation (Schaller, 2018; Frayer, 2018).

The complete adoption of the Collaborative Transport Economy faces considerable challenges arising from existing regulations and market dynamics (Standing et al., 2018). Wu et al. (2019) discuss how gig economy drivers often face unstable incomes and lack of labor rights, which raises concerns about worker exploitation. Likewise, Frayer (2018) reported on China's bike-sharing crisis, where rapid expansion led to oversupply, financial losses, and environmental waste, showing how unregulated growth in collaborative transport can result in economic and logistical failures. On the other hand, Schaller (2018) argued that ride-hailing may worsen congestion by pulling commuters away from walking, biking, or public transport. In support, Henao and Marshall (2019) observed that ride-sourcing services increase VMT by 83.5% due to "deadheading" - when drivers cruise without passengers between trips.

Research Gap

Several studies on the Collaborative Transport Economy (CTE) and Mobility as a Service (MaaS) have explored how technology-based transport systems can improve accessibility for Vulnerable Social Groups such as the elderly, low-income users, and Persons with Disabilities (PWD) (Dadashzadeh et al., 2022; Dadashzadeh et al., 2024). Etminani-Ghasrodashti et al., (2021), highlighted that the new Shared Autonomous Vehicles (SAVs) should prioritize and focus on providing mobility for the elderly particularly those in less dense areas, which would be heavily dependent on the implementation of the shared services. However, PWD raised their concerns regarding the potential new SAV systems, specifically related to the physical accessibility of the vehicles, their safety, and the ultimate cost of the service (Etminani-Ghasrodashti et al., 2021).

Handayani and Romadhon (2025) emphasized that integrating different transport modes can benefit low-income and elderly users by improving connectivity and affordability. However, barriers such as digital exclusion and limited infrastructure still hinder accessibility. Meanwhile, Simonovits et al. (2023) revealed that individuals with disabilities continue to face subtle forms of discrimination when using ride-sharing platforms, limiting their mobility and participation in the digital transport economy. In addition, Fink et al. (2023) highlight that most ride-sharing systems lack inclusive features for visually impaired users, making them feel unsafe and dependent during travel.

While these studies show efforts to make Collaborative Transport more inclusive for vulnerable groups, there remains a clear gap in the literature. Only few studies specifically focus on how CTE can enhance the mobility and accessibility of PWD and perceptions of PWD regarding MaaS in general are not well documented (Dadashzadeh et al., 2022; Nanchen et al., 2022). This gap highlights the need for further research that examines how CTE platforms can be designed and implemented to ensure equitable, safe, and inclusive mobility for PWD.

Methodology

Systematic Literature Review was employed in this study to review existing literature on the impacts of the Collaborative Transport Economy (CTE) in relation to access to mobility for Persons with Disabilities. Two

databases were systematically searched in collecting the literature that served as the main data for this research. These databases are Scopus, and Web of Science. Scopus database was chosen since it is the most extensive multidisciplinary database available (Carrera-Rivera et al., 2022). Web of Science provides a multidisciplinary database with wide ranging content (Carrera-Rivera et al., 2022). Hence, these two databases are crucial in collecting significant data for the study. The PRISMA 2020 Flow Diagram was used to guide the screening of the data used for the analysis.

Keyword combinations were chosen from three main categories to guide the literature search for this study. The Boolean operators (AND, OR) will be used to enable precise inclusion of studies (Hollier, 2020) relevant to the intersection of disability, mobility access, and shared transportation systems. These keyword combinations are presented in Table 1.

Table 1. Keyword Combination - applied in identifying relevant literature on mobility access for PWD within the CTE.

Keyword Combination	Purpose
"collaborative transport" or "sharing mobility*" or "gig mobility economy" or "ride sharing" or "ridesharing" or "car sharing" or "bike sharing" or "peer-to-peer transport" or "mobility as a service" or "maas" or "carpool*" or "car-pool*"	To limit literature focusing on collaborative transport economy
"person with disabilities" or "people with disabilities" or "disabled person" or "disabled people" or "pwd" or "differently abled" or "physically challenged" or "intellectually disabled" or "mobility impaired" or "hearing impaired" or "visually impaired" or "impaired" or "disabled" or "disabilit*"	To limit literature focusing on Persons with Disabilities
"access" or "accessible mobility" or "mobility accessibility" or "wheelchair access" or "barrier-free access" or "physical accessibility" or "accessible transportation" or "mobility-impaired access" or "ada compliant" or "universal design" or "barrier" or "inclusion"	To limit literature focusing on accessibility

At the time of the writing, there were 38 documents found in the Scopus database using article, abstract, and keywords search categories. In Web of Science, there were 26 documents found using the topic (search for title,

abstract and author keywords). After searching the two databases for literature, the screening process followed. To guide this step, this study employed inclusion and exclusion criteria to ensure that only the most relevant studies are included in the analysis. Establishing inclusion and exclusion criteria aided this study in ensuring that literature included aligns with the research topic. The inclusion and exclusion criteria are presented in Tables 2 and 3 respectively.

Table 2. Inclusion Criteria.

Criterion	Description
Topic relevance	Studies must focus on mobility access for Persons with Disabilities within the context of the collaborative transport economy
Disability focus	Must explicitly address the mobility needs, experiences, or access challenges of Persons with Disabilities (physical, sensory, cognitive, or intellectual)
Transport model	Must explicitly address the mobility needs, experiences, or access challenges of Persons with Disabilities (physical, sensory, cognitive, or intellectual)
Publication type	Peer-reviewed journal articles, book chapters, or conference papers
Language	Published in English
Availability	Full-text must be accessible through institutional or open-access platforms

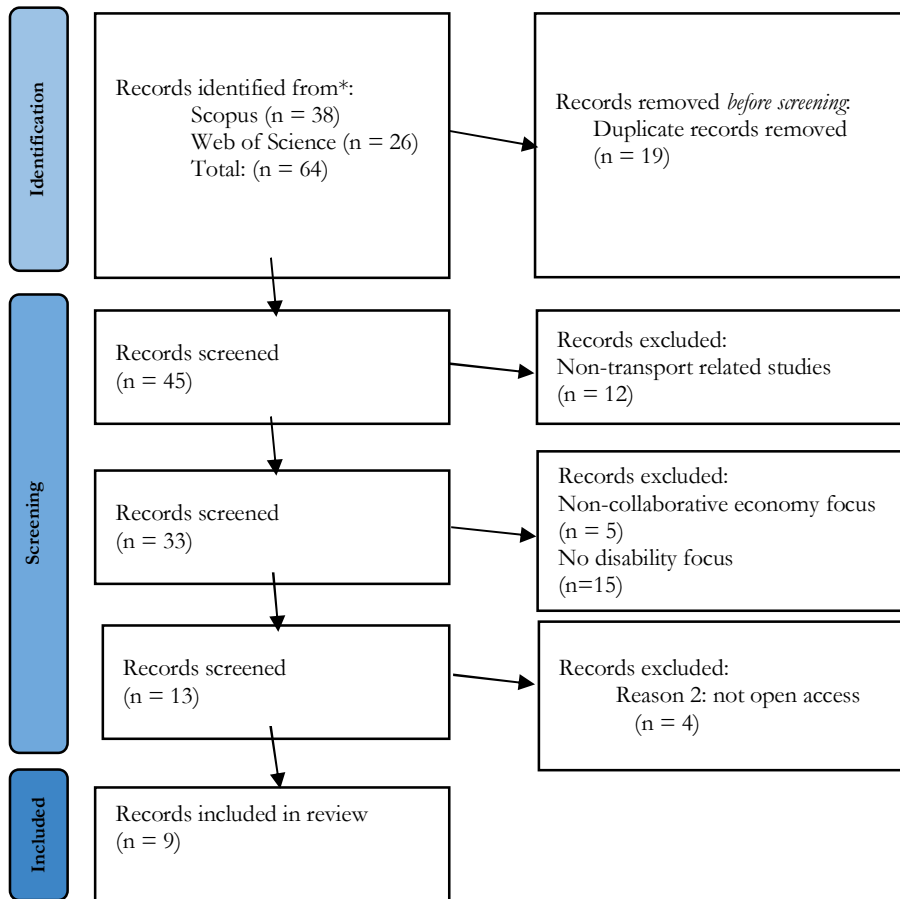
Table 3. Exclusion Criteria.

Criterion	Description
Non-transport sectors	Studies that do not address transportation or mobility services (e.g., focus only on healthcare, education, or housing)
Non-collaborative economy focus	Studies that do not examine shared, on-demand, or platform-based transport models (e.g., only cover traditional public transport systems)
No disability focus	Studies that do not include or mention Persons with Disabilities or their mobility/access needs
Non-peer reviewed sources	Opinion pieces, blogs, news articles, theses, or non-scholarly publications
Language	Publications in languages other than English
Duplicate studies	Multiple reports of the same study - only the most comprehensive and recent version is included

Prisma 2020 Flow Diagram

This study employed PRISMA 2020 Flow Diagram to ensure a transparent and systematic review process. The PRISMA 2020 was applied to document each stage of the literature selection process, including identification, screening, eligibility assessment, and final inclusion of studies (Nalen, 2023).

Figure 1. PRISMA 2020 Flow Diagram for identification of studies to be included in systematic review.



The diagram started with the initial number of studies identified through database searches. It then outlined the number of studies that remained after the duplicates were eliminated and the number of studies that were

excluded at each stage based on predefined eligibility criteria (Nalen, 2023). The PRISMA Flow Diagram provided a clear overview of the study selection procedure, making it an important component of a systematic review (Sohrabi et al., 2021).

Presentation, Analysis and Discussion of Data

After the identification and screening of literature using PRISMA 2020, this study proceeded with nine (9) papers included in the research analysis.

Table 4. Reviewed Studies on Collaborative Transport and PWD Access.

Author(s)	Year	Key Findings Related to Mobility / PWD Access
Goralzik et al.	2022	The results presented authorities’ advice regarding accelerating the development of sustainable transport options and emphasized the need of enhancing either automobile and industry structures to comply with the accessibility necessities of people with impairments.
Handayeni & Romadhon	2025	The results showed a MaaSINI (Mobility as a Service Inclusive Index) of public transportation based on MaaS targeting the vulnerable groups. The data required accessibility on physical services and platform awareness.
Simonovits	2023	The findings highlighted that observed patterns are most readily explained by intergroup emotions. Contempt toward Roma passengers likely engenders both passive and active harm, whereas pity toward disabled passengers likely engenders passive harm and active facilitation.
Fink et al.	2023	The study provided much-needed guidance for future design of humanlike, anthropomorphized, fully autonomous vehicle AIs with important implications for social autonomous agents more generally. This study also speaks to the ways in which inclusive and accessible user interfaces should best support user needs across the range of vision loss in future transportation networks.

Author(s)	Year	Key Findings Related to Mobility / PWD Access
Etminani-Ghasrodashti et al.	2021	The findings highlighted technological improvements to be important to increasing the reliability of SAV service. Enhancing the SAV app to integrate multiple destinations in one trip and improving the mapping system are among the technological advances that may influence university people.
Dadashzadeh et al.	2022	The findings concluded that MaaS has a strong potential to enhance sustainable transport services for all users. Yet such aspirations can only be achieved if all transport users benefit through an inclusive mobility service, regardless of their socio-economic status, such as gender, age, or disability.
Nanchen et al.	2022	Based on the findings, the proponents developed an integrative model to accompany and orchestrate such Autonomous Vehicle (AV) design developments. This integrative model seeks to help policymakers and public transport companies rethink mobility concepts while incorporating AVs and make them accessible to ensure the social inclusion of PWD.
Dadashzadeh et al.	2024	The results of multi-criteria decision-making (MCDM) analysis show that accessible transport services, accessible MaaS platforms, and accessibility data collection have a share of 51 %, 29 %, and 20 %, respectively. The functionality of the proposed framework has been illustrated on a real-world multi-city MaaS implementation within the Solent area, in particular Portsmouth city located in Southeast England.
Chane-Haï et al.	2024	They developed a matheuristic, iteration route selection algorithm (IRS) which combines a LNS and a MILP solver. The LNS generates a pool of routes, and the MILP solver chooses the best combination of these routes.

Potential Benefits of Collaborative Transport Economy on PWD

Recent studies on Collaborative Transport Economy reveal that collaboration and flexibility can make transportation more efficient for Persons with Disabilities (PWD). According to Etminani-Ghasrodashti et al. (2021), collaborative transport helps PWD have an accessible and user-

friendly transport system. Enhancements to MaaS that prioritize customers and support the independence of PWD include online planning systems, variable navigation features, and mutual cost frameworks (Nanchen et al., 2022; Etminani-Ghasrodashti et al., 2021). Also, Nanchen et al. (2022) discussed that AV systems and infrastructure have to necessarily consider the safety and inclusivity for PWD. In addition, Dadashzadeh et al. (2024) highlighted that it would strengthen the accountability of the government through policy making and strong integration of safeguarding the PWD. Dadashzadeh et al. (2024) reviewed MaaSINI and other inclusive accessibility indicators as significant for making urban transport networks more inclusive as a tribute to shared use of resources.

Potential Challenges of Collaborative Transport Economy on PWD

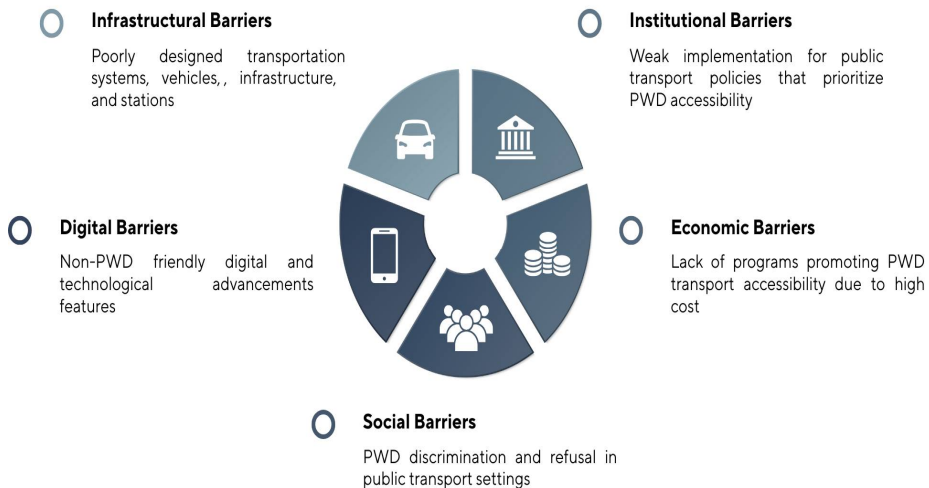
Notwithstanding the potential benefits of the Collaborative Transport Economy (CTE) on PWD, vocational and professional mobility opportunities continue to be limited. Goralszik et al. (2022) highlight that shared mobility services such as ride-pooling, microtransit, and bike-sharing still lack adequate accessibility features, including user-friendly interfaces, audio feedback, and vehicle designs suitable for individuals with visual or locomotor impairments. Similarly, a 2024 scoping review on barriers and facilitators of public transport use among PWD reveals that ambiguous information systems, negative driver attitudes, and insufficient assistive infrastructure persistently hinder full participation and independence in mobility settings. These forms of mechanical discrimination perpetuate exclusion despite technological advances intended to promote inclusiveness. Vocational and Professional Training continues to be unobtainable. Goralszik et al. (2022) and Fink et al. (2023) illustrate that mechanical discrimination, that includes ambiguous interfaces, inadequate aural input, and mediocre aesthetic development, persists in marginalizing people who have visual or locomotor disabilities. Simonovits (2023) asserts that perceived disadvantage and subconscious prejudice are two variables that impede PWD from fully engaging in accommodating transport scenarios. The consequences are exacerbated by inadequate regulatory oversight, as shown by Handayeni and Romadhon (2025), where integration measures are either ineffective or poorly managed, particularly in rapidly growing metropolitan areas.

The investigation's findings suggest that while innovation is widely employed to overcome commuter challenges, it can inadvertently reinforce usability gaps and inequality if accessibility is not integrated from the earliest stages of design and development. Dadashzadeh et al. (2022) and Chane-Häi et al. (2024) suggest that technologically advanced travel systems have to strike an appropriate equilibrium amid socioeconomic fairness as well as efficacy while making sure that innovations do not adversely impact those demanding customized service.

Barriers to Accessing Collaborative Transport

The barriers to accessing collaborative transport for Persons with Disabilities (PWD) are complex and interconnected, often preventing them from fully benefiting from technologically improved modes like Mobility as a Service (MaaS) and Shared Autonomous Vehicles (SAVs) (Dadashzadeh et al., 2024; Goralzik et al., 2022). Research has shown that without fair planning and coordinated rules, these systems frequently exclude vulnerable users (Dadashzadeh et al., 2022). This section showcases the various barriers that limit or reduce PWD participation in the CTE and are summarized in this model.

Figure 2. Barriers to Access and Participation.



Infrastructural Barriers. The current transportation systems and vehicles are designed in accordance with universal transportation infrastructures and features. Therefore, the mass transportation system lacks accessibility for PWD. The onboarding, stations, and mobility options are poorly designed that may cause limited accessibility for PWD (Goralzik et al., 2022; Dadashzadeh et al., 2024). Reinforcing public transportation that is structured in accordance with mobility assistance of PWD would help the transportation system to become accessible for all passengers. Standards should be proposed and implemented in order for the transportation system to follow it accordingly and strictly. It would also promote equality because it allows passengers with disabilities to access comfortably and safely the transportation that is also sufficient for them.

Digital Barriers. The digital or technological advancements that have been made such as mobility cars and rides are not intended for PWD. The features such as screen reader and voice command are not fully integrated in digital platforms; therefore, it has become inconvenient for people with complications to use it. It only favors people that have no disability (Fink et al., 2023; Nanchen et al., 2022). This deficiency limits the passengers especially those who have impaired problems and mobility difficulties to use it. Platforms that are intended to provide service for passengers should also advocate for accessibility and rides for all passengers to promote inclusivity. Platforms should also include multi-sensory and user friendly applications that fill the gap in terms of inefficiency of these features.

Social Barriers. PWD often experience discrimination in public transportation because of their motor skills. Many passengers with disabilities encounter refusal from drivers because they are seen as inconvenient. This act shows that the social culture lacks sensitivity when it comes to collaborative transportation (Simonovits et al., 2023). Authorities should implement programs that prioritize safe and equal acts in order for the drivers to become socially sensitive and aware for the safeguard and protection of the passengers, especially PWD. Mandatory training is needed to establish a positive behavior for the drivers to learn how to give good and standard service for passengers with disabilities.

Economic Barriers. There are little to no programs that encourage and promote accessibility for public transportation for people with disabilities. There are numerous infrastructures that are not user friendly due to its high maintenance facilities (Dadashzadeh et al., 2022). Public and private collaboration is needed to provide standardized programs and infrastructures that prioritize PWD accessibility and mobility.

Institutional Barriers. There is a lack of strong implementation of public transportation that prioritizes the mobility and accessibility of PWD. Government institutions, private sector, and public organizations should prioritize vehicles that are equally accessible and user friendly for all passengers rather than prioritizing their speed and aesthetic features (Dadashzadeh et al., 2022; Etminani-Ghasrodashti et al., 2021). Legislation should prioritize and implement policies and regulations that allow performance metrics for drivers to enhance the overall experience of PWD in mass transportation. Also, the government officials and other organizations should strengthen their integration for fair and inclusive promotion in safeguarding PWD.

Contextualizing Social Exchange Theory

In the context of Social Exchange Theory (SET), the study shows the interactions between PWD and service providers of the CTE as exchanges within a cost-benefit network. Within the CTE, it is evident that the involved people seek to maximize convenience while minimizing costs. For PWD, developments such as inclusive MaaS platforms and accessible AV systems are benefits gained from the CTE, providing them with independence, accessible transportation, and user-friendly encounters. In contrast, the lack of accessible features in transport systems, negative attitudes from drivers, and discrimination represent the costs or barriers. These barriers lead to potentially lower participation in the network. From the service providers' and government's point of view, the investments, resources and regulation oversight necessary to develop accessible transport constitute costs. Their associated costs are expected to be reciprocated by the longevity of access as well as reinforced accountability and relationship. In the event that drivers experience a net cost (where they offer more time or effort) in accommodating PWD, or a platform is unable to offer incen-

tives, exchange between actors breaks down, highlighting exclusion instead of reciprocity. Thus, it correlates with the dynamic explained in the SET, where power or the control of resources shapes interaction.

Conclusions

The Collaborative Transport Economy (CTE), with technologies that involve Mobility as a Service (MaaS) as well as Shared Autonomous Vehicles (SAVs), offers opportunities as well as challenges in making it easier to mobilize Persons with Disabilities (PWD). The use of the platforms, if proper, has the potential to enhance independence, flexibility, and inclusion, as per research findings. However, if the platforms lack connectivity, then it becomes the opposite, making things harder for the already deprived individuals.

This study contributes to the academic discourse on the CTE by addressing a significant research gap, specifically the limited focus on PWD within CTE literature. While most existing studies concentrate on general users or economic and technological aspects, this research uniquely highlights the mobility experiences and challenges of PWD in collaborative transport systems. Moreover, it is the first study to employ a Systematic Literature Review (SLR) as a methodological approach in examining CTE from the perspective of PWD. By systematically analyzing and synthesizing existing works, this study provides a structured foundation for future research and strengthens the academic understanding of inclusivity and accessibility in the evolving field of CTE.

By synthesizing the barriers and identifying the possible advantages and difficulties of the CTE for PWD, this study serves essential guidance to policymakers, system designers, and transport operators. This shows the necessity of a comprehensive strategy to make CTE and the larger public transportation system more accessible, inclusive, and secure for all users, encompassing vulnerable groups like PWD. Moreover, in order to address the barriers that PWD are currently experiencing, this practical implication is achieved by emphasizing the need for strong policy implementation, mandatory driver training, accessible digital interfaces, and encouraging public-private cooperation to address the expensive costs of user-friendly infrastructure.

Based on the reviewed evidence, future studies on the experiences of CTE and PWD should focus on conducting more disability-specific, platform-specific, and location-sensitive analyses. Most of the studies reviewed collapsed "PWD" into a single category. This obscures the needs of blind/low-vision users, wheelchair users, people with hearing disabilities, and people with cognitive or intellectual disabilities, which are largely differentiated. Therefore, future research should examine one type of disability at a time to develop appropriate accessibility benchmarks. Additionally, researchers should conduct comparative studies across the major CTE platforms (e-hailing vs. microtransit vs. SAV-integrated MaaS apps) to examine design failures and best practices at the platform level. Finally, because much of the research has been conducted in a high-income context, it is important to conduct research in developing countries, specifically in the context of Southeast Asia and developing archipelagos like the Philippines, where digital exclusion, cultures of informal transport, and infrastructure may be additional barriers to CTE mobility.

Acknowledgements

N/A

Funding

The authors did not receive any funding for this study.

Declaration of conflicting interests

The authors declare no conflicting interests.

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