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RESEARCH ARTICLE

HOW COULD THE ESTABLISHMENT OF A PROVINCIAL LICENSING AND EDUCATION FRAMEWORK BENEFIT MICROMOBILITY USERS IN ONTARIO?

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ABSTRACT

Over the past 5 to 6 years, there has been a noticeably rapid increase in the number of micromobility users in Ontario, and with that, there are regulatory gaps around privately owned e-scooters and e-bikes. All this without mandatory licensing, training, and registration. Now that we are in the post-COVID 19 era, micromobility has become the bedrock for many urban transportation systems and the gig economy, which continues to operate within a fragmented and uneven regulatory framework. Using a qualitative case study of Toronto, this research draws on interviews, focus groups, and document analysis to examine uninsured usage and stakeholder perspectives. The findings point not to individual non-compliance, but to systemic shortcomings, including legislative gaps, gig economy structures, infrastructure constraints, and limited access to insurance. The prerogative of this paper is to advance advocacy in the need for equity-centered policy responses to include income-sensitive measures and platform accountability. In furtherance of this, the research findings highlight how micro mobility is now a normal way of life while remaining structurally under regulated and does require a coordinated provincial response.

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INTRODUCTION

The purpose of this research proposal is to argue for the establishment of a mandatory insurance and vehicle registration policy for micro-mobility users in the city of Toronto. This policy would serve as a complement to the existing Ride Safe TO effort of the City. Since the COVID-19 epidemic, the city has seen a big increase in the use of micro-mobility vehicles, which the City of Toronto (2024)[1] as "small, low-speed, lightweight modes of transport" including e-scooters and e-bikes. These vehicles are becoming more common, but they are still in a legal gray area, especially when it comes to insurance and responsibility. This idea points out a big problem: without mandated insurance and a method for getting a license or ID, all road users are at a high risk of losing money if there is an accident (Yang *et al*., 2020)[2] and doesn't give police any way to hold people who break traffic laws responsible. Existing research frequently addresses regulatory frameworks for commercial shared micro-mobility fleets; however, a substantial gap persists on the regulation of privately owned devices. The objective of this project is to establish an evidence-based framework for a fair, enforceable, and efficient policy that improves safety, accountability, and enforceability for all, particularly addressing the problems and opportunities associated with the regulation of personal micro-mobility equipment.

The Background of the Study: The quick growth of micro-mobility options, especially for gig-economy distribution and fun, is a sign that Toronto's Ride Safe TO initiative is making transportation more environmentally friendly. But this adoption has moved faster than the creation of important safety rules. Research continuously illustrates the inherent safety hazards; examinations of e-scooter accidents indicate considerable injury consequences (Yang *et al*., 2020), and research on rider behavior shows that gaps in infrastructure often lead to risky behaviors including riding on sidewalks and more conflicts with pedestrians(Anke *et al*., 2023). A critical component of addressing these unsafe practices is the ability to identify vehicles and their owners, a feature absent from the current system. For all intents and purposes, jurisdictional reviews of micro-mobility regulations, such as those analyzed by Zhang *et al*. (2023),looked at, often set rules for commercial operators but don't require personal devices to be licensed or registered. This means that s micro-mobility ecosystems are unregulated.

Problem Statement: Post-COVID urban planning has sped up the integration of micro-mobility devices into Toronto's urban fabric. This has revealed a major flaw in the city's transportation safety system: there is no mandated insurance mechanism. These vehicles share roads with automobiles and people walking, but their users do not have to have insurance, which means that they do not have as much financial security as they should. This gap is visible when accidents with uninsured bikers or e-scooter riders do a lot of damage and there is no clear way to obtain paid for it. These kinds of things showed that there is systemic unfairness. The current system does not make it obvious how to settle liabilities, which puts victims at risk. So, the main problem is that there was not a fair, enforced, and effective policy in place to make sure that all road users are financially responsible for the hazards they pose. This study was be guided by four research questions:

- What are the factors that give rise to gig-micro mobility riders using the road without an insurance policy?
- To what extent have the infrastructural development and practices of micro-mobilityusers since COVID-19 highlighted the need for the introduction of new insurance regulations?
- How do micro-mobility users perceive the implementation of such a policy proposal?
- What accommodation could be given to micro-mobility users to fulfill their monetary obligation under such policies? For example, a low-income household that uses micromobility services may need to provide proof of their income. The household falls below the low-income cut-offs (LICO)bothbefore and after tax.

Proposed Methods: This study utilized a qualitative research approach, specifically employing a singular instrumental case study design centered on Toronto. This method exceeds exploring complex questions regarding the implementation policies perceptionby individuals. To make sure of triangulation, data was gathered in three main ways:

- Semi-structured interviews with about 15 to 20 important people, like legislators, industry representatives, and heads of advocacy groups.
- Focus groups with 18 to 24 people split into three groups: gigeconomy riders, leisureusers, and low-income commuters.
- An analysis of documents, such as City of Toronto records, scholarly literature, and thematic analysis was used to look at transcripts and documents to identify patterns and themes that come up repeatedly that are related to the research questions.

The primary limitation of this qualitative methodology is that the results are not statistically generalizable, yet they offer transferable insights. Subsequent research may utilize mixed approaches to estimate the prevalence of the barriers highlighted in this study, such as surveys or quantitative data collection methods, to provide a more comprehensive understanding of these issues.

Significance of Study: This research is important because it immediately fills a policy gap that the City of Toronto (2024) [1] found regarding the need for improved safety measures for cyclists and pedestrians. The findings were immediately useful to Toronto City Council and Transportation Services in making the Ride Safe TO project stronger by giving them framework based on evidence. A licensing and registration system run by Service Ontario could also give the police a way to enforce the law and provided a source of income. City budgets might reinvest licensing fees in the construction and maintenance of bike lanes and other safety infrastructure, resulting in cumulative safety benefits. This study was significant to enhance academic literature on transportation equity and regulatory policy for emerging technologies by examining the inadequately explored domain of regulating privately owned micro-mobility, thereby transcending the prevailing emphasis on shared services in current research(Rollandi *et al*., 2025); (Calli & Calli, 2024). In practice, it sought to improve public safety for all road users by making sure there is a clear way to get paid after an accident and a way to enforce traffic regulations. It also focused on the idea of fairness to make sure that safety measures don't leave out vulnerable group'saccident (Yang *et al*., 2020)**.**

LITERATURE REVIEW

Over the last 10 years, micromobility has risen as a transforming element of transportation systems in urban areas. However, micromobility has continued to challenge the existing assumptions that relate to vehicular classification, the responsibility of road users, and regulatory governance, which, put together, form key areas of concern for micromobility devices and the overall structure of micromobility initiatives. Devices such as electric scooters and electric bicycles have become more a part of everyday transport for members of the citizenry, particularly in urban areas that are densely populated and for those who look for more flexible and affordable mobility options. The regulatory scenery concerning micromobility in Ontario is characterized by continuous experimentation, limited accountability, and decentralization of services. The literature examined in this chapter analyzes the rapid normalization of micromobility and the outpaced development of inclusive insurance, safety, and public education frameworks and how such crossovers have created novel forms of inequity, risk, and legal ambiguity.Thematically, the literature in the chapter is organized to explore the evolution of regulations concerning micromobility, the absence of a structured insurance and licensing framework for personal micromobility devices, and the implications of micromobility policy and practice for transportation equity and the built environment.

The Emergence of Micromobility Regulatory Framework: The rise of micromobility globally has been regarded as both a technological innovation and a governance challenge. Mehranfar *et al*. (2024) emphasize in their systematic review of e-scooter safety practices that most jurisdictions initially utilized permission-based approaches to micromobility regulation with the intention of fostering innovation and limiting the barriers that may potentially hinder the adoption of micromobility in these jurisdictions. The earlier frameworks often focused on pilot programs, municipal discretion, and voluntary compliance while not confronting or dealing with more contentious policy concerns such as insurance for micro-mobility, rider competency, and long-term safety oversight. The Electric Kick-Scooter Pilot Regulation (O. Reg. 389/19) in Ontario is an example of this, where municipalities are given the latitude to permit e-scooter use, but there are no explicit requirements for licensing, registration, or insurance of micromobility devices (Ontario Ministry of Transportation

[MTO], 2024). In breaking down the regulatory framework's feasibility and lax oversight, the rapid uptake of micromobility devices has institutionalized a type of minimalism that has proven increasingly untenable. The OECD and International Transport Forum (2024) argue that micromobility occupies a significant position in transportation architecture, which would warrant micromobility devices having a comparable level of regulatory oversight to that given to other classifications of vehicles. The absence of clear mechanisms of accountability no longer remains a peripheral policy issue but has become a main safety concern as micromobility devices interact routinely with cyclists, motorists, and pedestrians, leading to increased risks of accidents and injuries that necessitate urgent regulatory attention.

Empirical studies on rider behavior support this conclusion. Anke *et al*. (2023) highlighted the fact that e-scooter operators in Germany do in fact break the rules, such as riding on sidewalks despite legal restrictions, in opposition to such practices. Anke *et al*. (2023) explained that the deviant behavior of e-scooter operators is not due to willful ignorance or disregard for the law; rather, it is a response to the perceived danger of interacting with regular vehicular traffic and the insufficient cycling infrastructure available for their commutes.This finding resonates strongly with the Ontario context, where networks that are protected and reserved for cycling are unevenly distributed across the province, and as such, micromobility users must commute on roadways that were designed primarily to accommodate automobiles. The critical insight on which the literature converges is that micromobility safety cannot be understood solely through the lens of individual compliance, but it is shaped by intentional infrastructural design, clarity of regulations, and an establishment of the degree to which micromobility users are formally integrated into the transportation framework and mechanisms for the area. Additionally, the literature demonstrates that where micromobility users are permitted to operate, but they are not fully recognized as a part of the overall transportation architecture in the licensing, education, or insurance frameworks as the recognition given to other vehicular classifications, the ambiguity that is derived from such partiality fosters risk-compensatory behaviors that undermine public safety and security.

Trends of Injury and the Limitation of Voluntary Governance: Health and injury data provide some of the most compelling evidence that the frameworks of governance that exist concerning micromobility are insufficient. In Canada, national and regional health institutions have recorded a marked increase in injuries that are connected to e-scooters and e-bikes. The Canadian Institute for Health Information (CIHI, 2025) reports a significant increase in emergency department visits and hospitalizations linked to e-scooter usage. The trending increase in emergency department hospitalizations has been then characterized as a growing public health concern. SickKids (2024) and Unity Health Toronto (2025) corroborated the trend through hospital-based research done, which both highlight a disproportion in injury rates among children, youth, and young adults Put together, these reports challenge the widely held assumption that micromobility incidents are insignificant, minor, or self-limiting. However, they present a diametrical position as they reveal trends of serious trauma inclusive of head injuries and bone fractures, which often occur in environments that lack the physical separation of micromobility devices from regular vehicular traffic. Noteworthily, these trends of injury are not accompanied by corresponding insurance disbursements or insurance mechanisms that would guarantee fair and adequate coverage for victims or third parties. As a result of such systemic disparities, the financial burden of micromobility injuries is effectively transferred to and borne by individuals and the public healthcare system. This leads to raised questions about the distribution and guarantee of justice to victims and the responsibility of the system to provide safeguards for individuals involved in these circumstances. What this policy perspective driven by data underscores is the limitation of policy interventions that are purely educational and awareness based. While municipal strategies emphasize public education and infrastructure investment, such measures are unlikely to achieve and maintain the safety of micromobility users and other road users given that there is a lack of enforceable regulatory standards. The City of Toronto (2024) implemented Toronto's Micromobility Strategy, in which it emphasized and put into action public education campaigns and awareness initiatives and invested in infrastructural improvements across the province. However, the lack of enforceable regulations continued to threaten the safety of micromobility users. As evidenced by the persistence of rising injury rates despite continuous and increased public awareness and infrastructural modifications, the simple request of the citizenry to comply voluntarily with a lax regulatory framework is not sufficient in a rapidly expanding and increasingly complex transportation environment.

Insurance, Registration and Regulatory Asymmetry: A common theme recurring in the literature is the regulatory asymmetry or the disparity in regulations between micromobility users and other road users. Motor vehicle operators in Ontario are subject to mandatory licensing, registration, insurance, and graduated education requirements. Juxtaposed to this, micromobility operators may operate on public thoroughfares and roadways without any demonstrable competency in their ability to operate the device or be a party to any scheme that would cause a micromobility operator to bear financial responsibility and/or liability in the event of undesirable road activities such as accidents or casualties. National policy organizations have identified this disparity as a fundamental weakness that exists in current Canadian governance models. The Canadian Automobile Association (CAA, 2025)contends that micromobility operators exist within a regulatory "grey zone" wherein micromobility users benefit from similar access to public transportation infrastructure as othermotor vehicle operators in other vehicular classifications without bearing similar responsibilityto contribute proportionately to collective risk mitigation.

The Transportation Association of Canada (TAC, 2025) extends this position of the Canadian Automobile Association by highlighting that while shared micromobility operators are typically required to carry corporate insurance and comply with the permitting regimes of the municipality, personal device users remain unregulated to a larger extent. This distinction has become increasingly problematic as ownership of personal micromobility devices has grown significantly since the COVID-19 pandemic. The literature suggests that the focus of the policy on shared micromobility services is reflective of an out-of-date comprehension and interpretation

of micromobility usage patterns, which fails to address the major origin of uninsured road interactions. Perspectives from other Canadian jurisdictions reinforce this critique. The Société De l'assurance automobile du Québec (SAAQ, 2024) has adopted and implemented a more restrictive approach that prohibits non-compliant scooters from operating on roadways and does not permit certain other categories of micromobility devices on public roads. While the model of the SAAQ promotes clarity in the enforcement of regulations and the avoidance of risk, it also illustrates the inherent trade-offs in exclusionary regulations. This is particularly for users who rely on micromobility as an affordable option for transportation.

From a legal commentary standpoint, the repercussions of the permissive framework that governs micromobility in Ontario, Bergel Law (2025) note that micromobility operators who are uninsured and become involved in collisions with other vehicles, pedestrians, or other instances involving other micromobility devices can face substantial personal liability, which, quite frankly, can occur without prior awareness of their own exposures. This lack of informed consent represents a crucial failure of the regulatory frameworks, allowing micromobility operators to engage in legal activities that pose a financial risk without adequate protection or disclosure.

COVID-19, Gig Work, and the Normalization of Uninsured Use of Micromobility Devices: The COVID-19 pandemic represents a significant era in the emergence of micromobility and its users. Mehranfar *et al*. (2024) document widespread shifts from the uptake of public transit during the pandemic, which correlates with an increased uptake and reliance on micromobility for commuting and delivery work. These shifts are particularly pronounced within the gig economy, where workers frequently supply their personal micromobility to conduct various small jobs, which yield additional income, outside of traditional employment relationships. The labor transformation that has occurred in Ontario has had significant implications and ramifications for micromobility regulation. Gig-based jobs performed by micromobility operators often extend beyond normal acceptable working hours, under time pressure and in high-risk environments where there is high vehicular traffic. However, these operators remain outside of the scope and parameters of a formal insurance scheme and training framework.

There is, admittedly, the Ontario Association of Chiefs of Police (OCAP) identification of this micromobility concept as a growing challenge for law enforcement. OCAP argues that the existing traffic laws were never designed to accommodate the overwhelmingly fast-growing and commercially motivated usage by road users, which has led to increased safety concerns and challenges for law enforcement in managing these new forms of transportation. The literature further suggests that the pandemic was a driving force behind the normalization of uninsured road participation as a necessary economic means for micromobility operators. As such, the absence of insurance requirements for micromobility devices and operators can no longer be understood as a temporary gap in the policy framework of the municipality; it is an ever-evolving feature of the transportation structure that shapes the behavior of operators, their exposure to risks, and the results of enforcement as law enforcement officers administer their functions.

The Built Environment, Infrastructure and Equity The relationship between the built environment and micromobility is another correlation that appears frequently in literature. Zhang *et al*. (2023) in their systematic review and meta-analysis, demonstrates that there is a strong correlation between the uptake of micromobility and the outcomes of safety and urban design features such as protected bike lanes, measures for traffic calming, and land use density. Where there was an absence of these key urban design accommodation features, micromobility operators experienced more dangerous exposure to motor vehicular traffic, which increased both the real risk faced by operators of micromobility devices and the perceived risk associated with the operation of micromobility devices. The disparities associated with the transportation infrastructure in Ontario commonly intersect with socioeconomic inequality. The Toronto Micromobility Strategy (City of Toronto,2024) acknowledges that access to safe infrastructure for the operation of micromobility devices is unevenly and inequitably distributed across neighborhoods, with lower-income and suburban areas often lacking these facilities of protection. This inequity has direct implications for the regulatory compliance that is expected from micromobility operators, as users in these infrastructure-poor environments may possess a greater inclination to participate in prohibited behaviors such as sidewalk riding as a means of protecting oneself and individuals.

The consideration for equity also extends to the financial dimensions of regulation. Even though micromobility is frequently framed as an alternative that is inexpensive in comparison to car ownership, the introduction of insurance and licensing requirements raises concerns about its affordability for low-income operators, given that they may have opted to use micromobility out of affordability. Health data from SickKids (2024) and Unity Health Toronto (2025) suggest that young adults and youth groups, which have a greater likelihood of limited financial resources, are disproportionately represented in statistics that report on injury trends. This underscores the need for an intentional approach to policy design that is income-sensitive and non-exclusionary of the various demographics that use micromobility devices.

User Perceptions and Policy Acceptability: Although the literature contains limited direct evidence on the attitudes of micromobility operators toward insurance and licensing, indirect feedback can be derived from policy consultations, enforcement analysis, and legal discourse that pertained to the public domain on the regularization of micromobility. The Toronto Micromobility Strategy emphasizes the importance of public acceptance and education, which suggests that operators value the improvements that guaranteed their safety whilst operating on public roadways; however, operators of micromobility devices remain wary of the punitive and/or exclusionary measures that was implemented to regularize micromobility as it becomes part of the regular transportation framework. (City of Toronto, 2024). In comparison, legal analysts postulate that several operators of this equipment are oblivious of their exposure to potential liability associated with the operation of their device/s, which is indicative of an existential gap found between the perceived or actual risk related to the operation of their micromobility devices in non-regulated or under-regulated environments (Bergel Law, 2025). These findings suggest that the acceptability of the policy will depend on the substance of the regulatory reform as well as the way the regulation will be implemented and

communicated to the citizenry. The implementation of a provincial framework that has at its core the emphasis of education, legitimacy, and proportionality of risks and risk-bearing mitigation may have a greater inclination to gain support from micromobility operators than a policy implementation that is framed primarily around the enforcement of the regulation.

Accommodation and Income-Sensitive Policy Design: The literature points to several mechanisms through which insurance and licensing requirements could be implemented without exacerbating pre-existing inequalities or introducing new issues to create inequalities and/or inequities. Based on discussions about national policy, which are regularly articulated by the Canadian Automobile Association (2025) and the Transportation Association of Canada (2025), there is indeed potential for implementing sliding-scale insurance premiums and integrating social benefit verification systems that include exemptions or subsidies aligned with Low Income Cut-Offs (LICO).Such postulations are perceived as exemptions from responsibility and can serve as tools to ensure inclusive compliance. In theory, these proposals tend to align with the broader principle of equity in transportation that seeks to balance affordability, accessibility, and, not least, safety. This proposal addresses and responds to the observations raised by enforcement agencies about the disproportionate impacts on marginalized populations (OCAP, 2024).

Methods and Sources of Information

The review of empirical literature relevant to this study revealed that micromobility in Ontario has reached a stage of functional normalization while its framework remains under regulated structurally. The findings highlight the inadequacy of the pilot-based nature of the municipally fragmented regulation and point to the need for a more coordinated policy response in the province of Ontario, which could include comprehensive regulations that address safety, accessibility, and integration with existing transportation systems. Imminently, this chapter presents the research methodology that collected data. The study adopted a qualitative research design to investigate the regulatory, infrastructural, and socioeconomic conditions that contribute to the increase in uninsured micromobility usage and assess the perceptions of various stakeholders that will affect/influence potential policy reform. This was done guided by the research questions: (1) what are the factors that give rise to gig-micromobility riders using the road without an insurance policy? (2) to what extent have the infrastructural development and practices of micromobility users since COVID-19 highlighted the need for the introduction of new insurance regulations? (3) How do micromobility users perceive the implementation of such a policy proposal? (4) what accommodations could be given to micromobility users to fulfil their monetary obligation under such policies.

Research Design

The design of research constitutes logical architecture through which the research questions, data collection strategies, and analytical procedures of said research are aligned (Creswell, 2009; Denscombe, 2009). In social research with a policy-oriented emphasis, the decision of the use of a specific type of research design must be in response to the complexity, contestation, and embeddedness of the policy within the lived realities of individuals as situated in a specific social context. As such, this study employed a qualitative research design to facilitate a beyond-the-surface examination of micromobility regulation as a socially negotiated and institutionally situated phenomenon.

Qualitative Research Design: A qualitative approach was used as the study sought to generate an interpretive understanding, which in the context of this study is particularly appropriate as the objective is to explore how various actors perceive the gaps existent in the regulation surrounding micromobility, navigate the ambiguity that exists in the policy, and assign meaning to potential interventions (Thyer, 2001Creswell (2009) emphasized that a qualitative approach is suitable when the phenomenon being investigated is not sufficiently theorized or existing quantitative indicators do not provide experiential and contextual evidence of the phenomenon. The use of a qualitative approach is justified in this instance of micromobility regulation in Ontario, as the current data that exists only quantifies injuries and micromobility usage but does not provide an in-depth contextual understanding into the social rationales underpinning uninsured road use, consequences experienced due to the deficiencies of existing infrastructure, or the perceived legitimacy of regulatory reform. A qualitative approach will enable the study to gather the perspectives of participants while putting those perspectives into context in relation to broader policy and governance structures, consistent with best practices in transportation and public policy research

Case Study Design: This study employed a specific type of qualitative research method, namely a qualitative case study design.Case study research is shaped by its emphasis on a bounded system examined holistically and in situ with special attention to the dynamics of the processes undertaken in the system and contextual contingencies (Creswell, 2009), which allowed for a deep understanding of the specific phenomena being studied within the unique context of the province of Ontario.This case represents a jurisdiction where micromobility has been legalized through provincial regulation, but its implementation has been delegated to the municipal level, resulting in governance and regulatory inconsistencies. Denscombe (2009) notes that case studies are most appropriate where the boundaries between the phenomenon and the context are porous and where analytical depth is a priority over statistical generalization. The case study design is suited to this research as regulations governing micromobility in Ontario are shaped by intersecting levels of governmental authority, including provincial legislation, municipal by-laws, enforcement practices, and informal user norms. With these factors, the case study design allowed for the research to generate transferable analytical insights that would become relevant to other jurisdictions experiencing regulatory challenges of a similar nature.

Case Study Process: The case study progressed through a structured process encompassing the delineation of the case, data collection, analysis, and interpretation. The initial stages of the process involved defining the scope of the case and identifying relevant participant groups as informed by the issues of regulation and equity identified in the review of literature. The collection of data l integrated the use of interviews, focus groups interviews, and documentary analysis, which enabled proper triangulation across the sources of information influenced by experiences and institutional association.

Documentary materials, which include policy reports, legislative instruments, and documentation on regulatory guidance, was analyzed to contextualize the perspective of participants was obtained to trace the discursive framing of the governance of micromobility. With these factors, the case study design allowed for the research to generate transferable analytical insights that would become relevant to other jurisdictions experiencing regulatory challenges of a similar nature.

Instrumentation: Instrumentation refers to the methodological tools used to generate and operationalize data in relation to the research questions (Johns Hopkins University & Medicine, 2025). To ensure proper triangulation and balance data collection flexibility with systematic rigor, interviews, focus groups, and documentary analysis were used to collect data for analysis.

Comparative Research Analysis: For context, the methodological approach applied for this study encompasses reviews of peer-reviewed articles that form the basis of micromobility data. Štefancová *et al*. (2022), in postulating the impact of the COVID-19 pandemic on micromobility usage by users, investigated statistical methods, which spoke to independence tests and correspondence analysis, the use of questionnaire data to identify different needs in modes of transportation, and explanations for usage.The critical question of research in this body of work focused on quantifying how both bicycle and micromobility usage changed in response to the pandemic and what motivated essentially user preferences. Identifying this shift in practices as sources of quantitative data validated insights into the rise in use of micromobility during the pandemic crisis. By achieving significant macro-level patterns, this quantitative approach did not consider the regulatory implications of uninsured road use. Therefore, a qualitative approach is justified as it aims to address the gap by clarifying stakeholder perceptions, meanings, and institutional interpretations of regulatory deficiencies.The transferability of such insights from Štefancová *et al*. was not replicated in theory; instead, it was highlighted by complementary qualitative investigation that builds statistically identifiable trends and complements the heart of research.

Interviews: George (2022) calls an interview a purposive and interactive exchange designed to elicit a participant's subjective account and interpretive framework. In this study, semi-structured interviews constituted the primary data collection instruments. Semi-structured formats are advantageous in this context of policy research, as they provided a consistent thematic structure while allowing participants to articulate unanticipated concerns and priorities. Interviews are a justified instrument, as they were able to collect data on individual decision-making processes, which included the rationales underlying uninsured micromobility used and the perceptions of regulatory responsibility.

These semi-structured interviews were conducted with 15 to 20 authoritative figures and technocrats with expertise and insight on micromobility and regulations in Ontario, including legislators, industry representatives, and heads of advocacy groups. The interview sessions with the various participants were audio-recorded and transcribed verbatim. The accuracy of the transcription was verified using digital tools, manual verifications, and a review of the transcription by the participant to confirm its content and the accuracy of content in the transcription. This process is to ensure that the participants are not misinterpreted, and their thoughts are communicated in the clearest possible manner.

Focus Groups: Thyer (2001) describes a focus group as a facilitated group discussion that leverages the interaction of participants to surface social norms, consensus, and contestation. Focus groups were employed to complement individual interviews by capturing collective meanings and shared interpretations. The use of focus groups is well-suited for its purpose to explore the perceptions of policy acceptability and equity, examine how micromobility users collectively interpret the prospect of provincial licensing and insurance requirements, and explore the perception of fairness of potential accommodations to be made for low-income riders. The dialogic nature of the focus groups enhanced the analysis of data, as it revealed how individual experiences are negotiated with the context of a group. The focus groups consisted of 18 to 24 individuals, which was be split into three groups: (1) gig economy riders; (2) leisure users; (3) low-income commuters, with about 6 to 8 participants per group.

Documentary Research: Documentary research, or documentary analysis, is defined as the systematic examination and interpretation of written, institutional, and archival materials to elicit meaning, develop knowledge of an empirical nature, and contextualize social phenomena with their official structures of governance (American Educational Research Association, 2025; Dziak, 2024).In this study, documentary analysis was a core component and served as one of the data collection instruments.In this type of research, documentary research is useful because it lets the researcher investigate the intentions, assumptions, and normative frameworks that are built into official texts, rather than just relying on what people say about themselves.This study analyzed a corpus of relevant documents, including City of Toronto records, scholarly literature, news stories, provincial regulations governing micromobility, municipal micromobility strategies, national and international policy reports, and enforcement guidance documents. These documents were purposively selected based on their relevance to licensing, insurance, education, policy, equity, and other relevant considerations.

Thematic Analysis: The study employed thematic analysis as its principal strategy for analyzing the collected data.Nowell *et al*. (2017) defines thematic analysis as a method of identifying, analyzing, and reporting patterns observed across qualitative datasets whilst maintaining flexibility and methodological transparency. The thematic analysis conducted in this study followed the six-phase procedure outlined by Nowell *et al*. (2017), which included the researcher familiarizing themselves with the collected data, performing initial coding, developing themes based on major ideas that emerged from the initial coding, refining the themes as further analysis is conducted, defining the themes based on the data attributed to them, and reporting the themes along with the corresponding data. Thematic analysis was used to extensively review transcripts and documents to identify patterns and themes that come up repeatedly that are related to the research questions. Coding was iterative, allowing it to evolve as data analysis progresses. The data was coded using widely established, accepted, and used coding approaches to ensure the coherence and rigor of the analysis of the data that was done.

Triangulation: Carter *et al*. (2014) define triangulation as the use of multiple data sources or methods to corroborate the findings of research. We l used multiple data collection instruments ensured the credibility and dependability of the data collected for each research question. Table 3.1 illustrates this study's triangulation matrix corroboration of data.

Research Question Interview Focus Group Documentary Analysis

Table 3.1 Triangulation Matrix

Triangulation Matrix

Research Question	Interview	Focus Group	Documentary Analysis
RQ1. What are the factors that give rise to gig-micromobility riders using the road without an insurance policy?	☒	☐	☒
RQ2. To what extend have the infrastructural development and practices of micromobility users since COVID-19 highlighted the need for the introduction of new insurance regulations?	☒	☐	☒
RQ3. How do micromobility users perceive the implementation of such a policy proposal?	☒	☒	☐
RQ4. What accommodations could be given to micromobility users to fulfil their monetary obligation under such policies?	☒	☒	☐

Trustworthiness: The trustworthiness of any study is concerned with ensuring credibility, validity, and dependability of the findings of the study (Nowell *et al*., 2017). This study ensured its credibility by triangulating findings from various data collection instruments. The dependability of the study was accounted for by completing and keeping detailed documentation of methodological procedures, which enabled research transparency and enhance the auditability of the study and its findings. The validity of the study was supported by explicitly aligning the research questions, data collection instruments, and analytical strategies, ensuring that the data collection instruments are suitable for the research questions to obtain the intended data and that the application of analytical procedures is appropriate for their purpose in making valid inferences that are firmly grounded in the empirical material.

Ethical Considerations: Qualitative research involving human participants necessitates careful attention to informed consent, confidentiality, and the mitigation of potential harm (Mirza *et al*., 2023). These are ethical concerns that are considered to protect the participants who were engaged in theresearch process. In this study, informed consent was pursued by fully disclosing to participants the purpose of the research, the procedures, and their right to withdraw from the study at any time with no consequence attached to their withdrawal. Given the potential vulnerability of gig-economy workers and low-income micromobility users, particular care was taken to protect the identities of participants by using code names or pseudonyms to refer to them through the study.This is to maintain the anonymity of participants and encourage participants to engage fully in the process without fear of retaliation or retribution and to reduce any potential harm to participants. Confidentiality will be practiced by securely storing data collected from participants and data sources and meticulously removing all information that identified any participant during the transcription process.

Table 4.1. Multi-layered accommodation framework

Tiers	Description
Tier 1 – Full Exemption	Users with household income below the applicable after-tax LICO threshold are exempt from all licensing and insurance fees. Verification is through annual declaration with random audit, or through documented receipt of means-tested benefits (Ontario Works, ODSP, CCB).
Tier 2 – Reduced fee	Users with household income between 100% and 200% of the applicable after-tax LICO threshold pay a reduced fee, set at 25% of the standard rate.
Tier 3 – Work credit programme	Any user may earn premium reductions through completion of an approved safety education course (25% reduction) and/or maintenance of a safe riding record as documented through telematics (additional 25% reduction).
Tier 4 – Platform contribution mandate	For gig workers using personal devices for commercial delivery, platforms are required to either: (a) provide insurance coverage directly, (b) contribute to a pooled insurance fund on a per-delivery basis, or (c) pay a minimum wage sufficient to enable workers to purchase insurance individually.

Limitations: The primary limitation of this qualitative methodology is that the results are not statistically generalizable and, as such, cannot provide a quantifiable perspective on the issue of investigation. However, the research provides transferable insights on micromobility that can help understand the quality of the issue and its occurrence in different geographical areas or social contexts. Subsequent research may utilize a mixed methods approach to balance the qualification and quantification of the prevalence of the barriers demonstrated in this study, which could include both qualitative interviews and quantitative surveys to provide a more comprehensive understanding of the barriers to micromobility.

CONCLUSION

This methodological chapter has articulated a qualitative research framework purposefully designed to examine micromobility regulation in Ontario as a socially embedded, institutionally negotiated, and policy-relevant phenomenon. His study recognizes that micromobility has achieved functional normalization while remaining structurally underregulated, it responded to the limitations of existing pilot-based and municipally fragmented regulatory approaches by advancing an inquiry that is attentive to experience, governance dynamics, and questions of equity.The alignment of the research design, data collection instruments, and analytical strategy ensured that the study can generate empirically grounded insights into the regulatory, infrastructural, and socioeconomic conditions that contribute to uninsured micromobility use. The integration of semi-structured interviews, focus groups, and documentary analysis enabled the triangulation of stakeholder perspectives with institutional and legislative frameworks, thereby strengthening the credibility and trustworthiness of the findings. The use of thematic analysis further provided a systematic yet flexible approach for identifying patterns of meaning across data sources, allowing the study to surface not only regulatory gaps but also perceptions of legitimacy, responsibility, and fairness associated with potential policy reform. Importantly, the

methodological orientation of this study allows it to function as more than an exploratory academic exercise.

The findings generated through this research are positioned to inform subsequent stages of inquiry, including mixed-methods research that may quantify the prevalence of identified barriers and test policy interventions empirically. Moreover, the study offered a structured evidentiary basis upon which future policy development may be grounded. By centering stakeholder perceptions and examining accommodations necessary to mitigate disproportionate burdens on gig-economy workers and low-income users, the research provided ethically informed insights that are directly relevant to provincial-level policy deliberation. This research study proposal could very well act as a foundation for the Province of Ontario to consider a collaborative approach of micromobility insurance, licensing, and regulatory harmonizations with all municipalities. Whilst this proposal does not seek to flout policy outcomes, its purpose is to establish a methodologically rigorous, ethically prudent pathway through which the province can better understand the implications of a non-existing regulatory framework, which may be achieved based on facts, legitimacy, equity, and the public good. Contributing to the broader discourse, accident statistics, and changes in road practices and governance offered transferable analytical insights for jurisdictions confronted with similar regulatory challenges within the growing micromobility landscape.

DISCUSSION

This chapter critically examines the policy framework overseeing micromobility in Ontario, positioning the analysis within the wider scope of social research policy. The research is thematically and structurally organized around four major questions. This chapter analyzed the literature presented in the literature review, along with public health data, contemporary legal analysis, and evolving policy developments from other jurisdictions. This chapter aims to highlight the multifaceted relationship between transportation equity, safety regulation, and insurance frameworks, as well as the experiences of micromobility users. This analysis builds on the principle that transportation policy is innately a social policy. Martens (2016) conveyed that in the transportation equity literature, transportation influences the quality of life, as transportation affects employment, education, social, and housing opportunities a person can access. Lucas (2012) postulates that people who face transportation obstacles are more prone to face material deprivation, poor health outcomes, and social exclusion. Subsequently, emerging mobility modes from regulatory frameworks carry profound consequences for social justice, especially for newcomers to Canada, low-income households, and persons who engage in gig economy work, as these groups struggled to access reliable transportation options that are essential for improving their quality of life and reducing social exclusion. Shelnutt (2025) articulates that the Province of Ontario currently operates under a mixed regulatory administration depicted by what legal spectators have portrayed as an intricate and growing set of rules that are easy to get wrong. According to the Government of Ontario (2014), Regulation 389/19, established in 2019, created a five-year pilot project that was subsequently extended to ten years, allowing municipalities to permit e-scooters on public roads under specified conditions. However, this chapter demonstrated that the regulatory framework suffers from gaps in insurance coverage, equity considerations, and enforcement capacity.While ignoring the unique susceptibilities of gig economy workers who depend on micromobility devices for their living.

Factors Giving Rise to Uninsured Gig Micromobility Riding: The first research question needs an examination of systematic and structural factors that compel or incentivize gig economy workers to operate micromobility devices without insurance coverage. The evidence suggests a fundamental ambiguity in Ontario's legal classification of micromobility devices, but the primary factor is not willful non-compliance or individual risk tolerance. The *Compulsory Automobile Insurance Act* in Ontario states that without insurance, it is illegal to use a motor vehicle on public roads. Shellnutt (2025) posits that the Insurance Act rules that the right to sue for damages is forfeited by people that are injured while operating an uninsured motor vehicle. The critical legal debate is if under the law, a micromobility device is considered a "motor vehicle." "The Government of Ontario (2014) states that Regulation 389/19 offers an exception for electric kick scooters, which are not considered motor vehicles; thus, it does not need insurance if it meets four measures: a standing platform between the wheels, a steering handlebar, two wheels aligned longitudinally, and an electric motor not exceeding 500 watts providing a maximum speed of 24 kilometers per hour. The City of Toronto (2023) argues that the disjointed nature of municipal participation creates perplexing guidelines for riders. Despite the City of Toronto, the province's largest economic hub and the epicenter of food delivery gig work did not opt, cities including Pickering, Hamilton, Ottawa, Mississauga, Brampton, Waterloo Region, Cambridge, London, Oshawa, and Durham Region have. Casaletto (2025) states that situations exist where an activity that is legal in neighboring Mississauga is illegal just by crossing the municipal boundary as in Toronto, as e-scooters remain technically prohibited on sidewalks, public roads, and bike lanes.

The challenges of device modification deepen this jurisdictional division. Woodbury (2025) conducted a journalistic investigation that revealed many of these vehicles exceed the Highway Traffic Act's mandated speed of 32 km/h Second-hand devices may have undergone modifications without the riders' knowledge, putting them in jeopardy. The Government of Ontario (2014) published that the Ministry of Transportation has declared that unless the micromobility vehicle complies with the requirements of the motor vehicle class, it is classified as illegal if it exceeds the prescribed speed limit. Additionally, the Government of Ontario (2014) articulates that to legally operate a modified micromobility vehicle, the driver must possess a valid M-class drivers' license, they must be properly insured and registered. Shellnutt (2025) noted that the regulatory grey zone is terrifying, as the law is unclear, enforcement is inconsistent, and riders face potential catastrophic financial consequences without any practical pathway to compliance.

The Gig Economy Business Model: Economic Coercion and Risk Externalization: The gig economy itself is a primary factor driving uninsured riding, in addition to the existing legal ambiguity. Food delivery platforms, including DoorDash, Smitheries, and Uber Eats, have created economic incentives for unsafe practices while methodically externalizing the risk onto workers. According to Woodbury (2025), low wages

compel gig economy workers to work overtime, with some earning less than $10 per hour. The president of the advocacy group Gig Workers United, food courier Jennifer Scott, states that workers have received messages telling them they took too long to get to the restaurant, and if it repeats, they were deactivated, despite the app providing real-time information on why the order is being delayed. This algorithmic management creates relentless time pressure that directly leads to traffic violations and incentivizes speeding and risky riding behaviors.

Furthermore, the gig economy simultaneously makes it nearly impossible for them to obtain appropriate coverage as the economic model externalizes insurance costs onto workers, which can lead to financial instability and lack of access to necessary healthcare services. The Legislative Assembly of British Columbia (2019) published that British Columbia is the first jurisdiction in Canada to offer basic protections for gig workers in September 2020, such as expense allowances, Workers Compensation Board coverage and minimum wages; Ontario has not passed similar protections. Robertson *et al*. (2025) postulated that the insurance gap is specifically dire for gig workers utilizing personal devices. The Insurance Bureau of Canada announced that the only probable source of liability coverage for micromobility riders is if they have a condominium or tenant home insurance policy. Still, there are provinces like Ontario, where many landlords of houses where immigrants live do not require tenant insurance. This may create situations where the most susceptible workers, who have limited English proficiency and are recent immigrants in hazardous living conditions, are concurrently the least able to obtain financial assistance from an accident because they may lack insurance coverage.

The gig platforms' own insurance provisions are insufficient. In Ontario, Uber Canada (2026) states that delivery workers are protected by the Workplace Safety and Insurance Board (WSIB) only from the moment they accept a delivery until it is completed, which limits their coverage.In Ontario, Uber Canada (2026) states that delivery workers are protected by the Workplace Safety and Insurance Board (WSIB) only from the moment they accept a delivery until it is completed, which limits their coverage.

Enforcement Asymmetry and Perceived Impunity: The final contributing factor for uninsured drivers is the insufficiency and asymmetry of enforcement.The City of Mississauga (2024) stated that counselors have expressed concerns that police may lack the capacity to enforce rules on private devices. The Ontario Association of Chiefs of Police (2025) posits that under the Highway Traffic Act, the municipal police may not issue violations for moving vehicles, resulting in a gap between provisional traffic enforcement and municipal by-laws. City News Toronto (2025) published that the Toronto police organized a three-week micromobility safety blitz in 2025, issuing 1138 tickets related to e-scooters, e-bikes, and bicycle users. However, RideFair (2025) argues that this type of enforcement is resource-intensive, highly ineffective, and allows platforms to evade responsibility. City News Toronto (2025) claims that these delivery apps have created business models where the responsibility is forced on everyone else, as acknowledged by a superintendent. Anke *et al*. (2023) posits that the perception of enforcement as erratic and doubtful to produce meaningful penalties, paired with the economic compulsion of continued work, results in rational calculus for gig workers with the projected cost of an accident or ticket being lower than the cost of taking time to secure non-existent insurance products or reduced income from driving more slowly. This is a predictable response to perverse systemic incentives, not a failure of individual morality.

Synthesis: A Multi-Factorial Explanation: The Government of Ontario (2014) and the City of Toronto (2023) claim that the evidence supports a multifactorial explanation for uninsured gig micromobility riding. Confusion about the need for insurance arises from legal ambiguity regarding municipal participation and device classification. The gig economy business structure enacts force through low wages and algorithmic management, offers only partial, conditional coverage through platform policies, and externalizes insurance costs onto workers (Woodbury, 2025; Uber Canada, 2026; DoorDash, 2024).The enforcement is resource-intensive and inconsistent and does not fix drivers' risky behavior, which contributes to ongoing safety concerns and liability issues for both drivers and companies (Ontario Association of Chiefs of Police, 2025; Casaletto, 2025).Finally, Robertson *et al*. (2025) published that fundamentally, no practical insurance product exists for gig employees to purchase for personal micromobility devices used for commercial use, a market failure that makes compliance impossible, regardless of individual intention.

Infrastructural Development and Insurance Regulation Needs Post-COVID

The Post-COVID Micromobility Surge: Quantifying Growth

Zhang *et al*. (2023) posits that the Covid-19 pandemic was a catalyst for micromobility in Ontario, specifically in the Greater Toronto region. Numerous factors combined: supply chain disruptions and economic dislocation pushed workers into the gig economy; the relative affordability of e-bikes and e-scooters and public health concerns reduced ridership on conventional public transit, causing alternative automobile ownership to be more attractive during a period of economic uncertainty. Furthermore, Lee (2025) claimed that the St. Michael's Hospital in Toronto electric bike-related hospitalizations rose by 240 percent annually between 2020 and 2024 despite the data being fragmented. Additionally, Peel Public Health (2018) reported that e-scooter falls led to 346 visits during the 2017 period. Because these reports exclude minor non-emergency visits, they might understate the true extent of these visits and accidents that happen outside the region. The shared micromobility sector has increased significantly. The City of Mississauga (2024) claims postulates that Mississauga's programme, functioned in partnership with Bird Canada and Lime Technology, recorded a seven percent increase as trips covered 335, 313 kilometers as they offered 900 e-scooters and 300 e-bikes. The City of Mississauga (2025) reported a significant growth in e-bikes, as shown in 10600 trips in 2024 compared to 23,196 in 2025, while e-scooter shared trips declined slightly, resulting from residents and staff purchasing their vehicles. Consequently, as shared devices are covered by commercial operator policies while personal devices exist in a regulatory void, the shift from shared to personally owned devices have profound implications for insurance regulation.

Infrastructural Development: Progress and Persistent Gaps: The post-COVID period has seen significant investment in

cycling and micromobility infrastructure across Ontario municipalities, though the pace and quality of development vary substantially. The City of Toronto's Micromobility Strategy (2024) articulates a vision for integrating micromobility into the transportation network, but implementation has lagged adoption. The critical infrastructure gap concerns the distinction between protected cycling infrastructure and mixed-traffic environments. Research consistently demonstrates that perceived safety is a primary determinant of mode choice and that inadequate infrastructure pushes riders onto sidewalks, which is a finding confirmed by Anke *et al*. (2023) in the German context and echoed in Toronto. As Cycle Toronto executive director Michael Longfield observes, bike lanes have become chaotic environments where e-bikes whizzing by cyclists is a daily sight, and he reports having been knocked to the ground by one (Woodbury, 2025).

Longfield attributes this chaos to failure at the federal and provincial levels to regulate thetypes of vehicles allowed for import into this country and produce consistently clear rules.Most e-bikes are either imported from Asia or assembled in Canada using imported parts. The lack of clear federal import standards or provincial classification criteria leaves the city of Toronto with the challenge of managing this within the limited space we all compete for (Woodbury, 2025). The infrastructure deficit is particularly acute for e-scooters. Toronto's transportation services head, Barbara Gray, told city council that the gauge of tires on e-scooters is very problematic in terms of getting those tires caught on streetcar tracks, and that e-scooters travel quickly, they are a little unstable and they are challenging on our roads (City of Toronto, 2024). However, these legitimate safety concerns have resulted in outright prohibition rather than infrastructure adaptation, which is a policy response that has driven e-scooter use underground rather than eliminated it, leading to increased safety risks for both riders and pedestrians.

The Disability Rights Critique: Competing Access Needs: Conversations about post-COVID infrastructural development must address the valid concerns raised by disability advocacy organizations. David Lepofsky, chairman of the Accessibility for Ontarians with Disabilities Act Alliance, has been unequivocal in his opposition to e-scooter legalization, characterizing the provincial government's extensions of the pilot program to 10 years as a complete slap in the face to vulnerable people with disabilities and seniors (Woodbury, 2025). Lepofsky, who is blind, argues that the debate is over; the evidence is overwhelming: electric scooters are hazardous to vulnerable people with disabilities and elderly pedestrians He notes that the City of Toronto studied e-scooters carefully and decided against them on two occasions, largely due to concerns raised by people with disabilities and seniors.This critique highlights a fundamental tension in micromobility policy: the competing access needs of different vulnerable populations. Micromobility devices offer transportation options for low-income individuals and those in transit deserts, potentially advancing equity goals (City of Toronto, 2024). However, sidewalk riding, which is often driven by the absence of safe street infrastructure, creates hazards for pedestrians with visual impairments, mobility limitations, or other disabilities (Lepofsky, 2024). A practical framework must address both concerns simultaneously rather than pitting vulnerable groups against one another.

The Insurance Gap as a Post-COVID Policy Priority: The post-COVID surge in micromobility usage has brought the insurance gap from a theoretical concern to an urgent policy problem. The existing framework provides no-fault accident benefits when a micromobility device collides with an automobile but leaves riders vulnerable in single-vehicle incidents or pedestrian collisions. It is accurate to say that the framework is inadequate when taking into consideration the scale of current usage. Personal injury lawyer David Shellnutt explains the complexity: if a car collides with an e-bike or e-scooter, the rider of the micromobility vehicle is covered by the no-fault insurance system, and this is true even though e-scooters are illegal to ride home on Toronto city roads (Shellnutt, 2025). However, riders of modified e-bikes may not be able to file a civil claim, and Shellnutt has seen cases in which individuals riding uninsured motorized vehicles were needed income replacement as part of their accident benefits (Shellnutt, 2025). The pedestrian liability gap is even more shocking. As Councillor Dianne Saxe noted, there are a lot of people being injured by these vehicles, and they get no coverage; she recounted knowing a woman who was knocked down by an Uber rider and was seriously injured, and two years later she still has not recovered and has received no compensation andno assistance (City of Toronto, 2024).

This situation is untenable from both a social welfare perspective and an insurance risk pooling perspective. The lack of mandatory insurance for personal micromobility devices means that accident costs are either entirely by victims (in pedestrian or single-vehicle incidents) or socialized through the healthcare system (for emergency treatment) without any corresponding premium base (Canadian Institute for Health Information, 2025). A properly functioning insurance system distributes risk among all users, establishing a funding mechanism for compensation and a price signal that internalizes safety externalities (Chester, 2024).

Comparative Analysis: British Columbia's Gig Worker Protection

British Columbia's recent legislative reforms provide a compelling comparative model. September 2024 received royal assent in November 2023 with regulations effective September 2024, amending the *Employment Standards Act and Workers Compensation Act* to extend protections to online platform workers (Legislative Assembly of British Columbia, 2023). Key provisions include an hourly minimum wage set at 120% of the general minimum wage ($20.88 versus $17.40), expense allowances ($0.45 per kilometer for ride-hail vehicles, $0.35 for delivery vehicles including e-bikes), Work Safe BC coverage; tip protection; pay transparency; destination transparency before trip acceptance; and fair process for suspensions and terminations (Legislative Assembly of British Columbia, 2023). While British Columbia's framework does not directly address insurance for personal micromobility devices used in gig work, it establishes an important precedent: Provincial governments can and should regulate to protect gig workers, including those using micromobility devices. Ontario's failure to enact comparable protections represents a policy gap that increasingly appears anomalous among Canadian provinces (Ride Fair, 2025.The connection to insurance regulation is not direct, but it is important. If gig workers received a minimum wage and expense allowance that realistically reflected the costs of safe operation and if insurance were included, then they would be better positioned

to comply with insurance requirements. Conversely, in the absence of such protections, mandating insurance without providing the economic means to afford it would constitute regressive policy that penalizes poverty (Pathirana, 2024).

User Perceptions of Proposed Policy Interventions

The Diversity of Micromobility User Personas: Before analyzing user perceptions, it is important to recognize that micromobility users constitute a heterogeneous category encompassing unique personas with different relationships to regulation. The literature and reporting identify at least four distinct user types (Mehranfar & Jones, 2024; Zhang *et al*., 2023). Firstly, gig economy workers and delivery riders rely on micromobility devices as essential capital equipment for their livelihood. This group is migrant, low-income, and precariously employed. They are highly price-sensitive and face time pressure from algorithmic management (Woodbury, 2025), which affects their ability to make efficient delivery schedules and impacts their overall earnings. Secondly, there are commuting users who use personally owned devices for regular transportation to work, school, or errands. This group may have higher incomes and more stable employment than gig workers Thirdly, there are recreational users who use shared or personal devices for fun, usually in parks, along waterfront trails, or other places where people go to have fun. Insurance costs may have the least impact on this group. Fourth, shared device users who use rental e-scooters or e-bikes from providers like Bird or Lime are already covered by the operator's commercial insurance and would be unaffected by personal insurance mandates (City of Mississauga, 2025. Each person will perceive proposed licensing and insurance policies differently, and policy design must account for this diversity, particularly considering how factors like insurance coverage and cost may influence their views on these policies.

Gig Worker Perception: Fear of Exclusion and Economic Harm: The available evidence suggests that gig workers perceive licensing and insurance mandates primarily as threats to their economic survival. Armaan Singh, an Indian immigrant delivering for Uber Eats, expressed looming fears that could cause a struggle for many recent immigrants who rely on the low-barrier line of work (Woodbury, 2025). His primary concern is that immigrants who might have difficulty obtaining the necessary documentation to prove their eligibility, such as proof of residence, could be excluded from the licensing process. This perception is merely anecdotal. Food courier Mezanur Rahman, who works 84-hour weeks to support family in Bangladesh, articulated the economic calculus: there are rush hours forcing you to move fast to try and make money (Woodbury, 2025). Any policy that increases costs or imposes administrative burdens on gig workers perceived as a direct wage reduction, regardless of its equity rationales. Crucially, gig workers' resistance to licensing and insurance mandates is not necessarily opposition to regulation *per se,* but rather opposition to regulation that imposes costs on workers without addressing the structural drivers of risk. As Thorben Wieditz of RideFair Toronto argues, we need regulations that force platforms to obey the rules; otherwise, we end up playing a whack-a-mole game (RideFair, 2025).

Differing Perspectives: Safety Advocates, Disability Advocates, and the General Public: Beyond gig workers, other stakeholders hold divergent perceptions of proposed policies Disability advocates like David Lepofsky have been clear that they perceive the current regulatory framework and its extension as fundamentally unsafe (Lepofsky, 2024). While Lepofsky's critique focuses on the devices themselves rather than licensing and insurance, his organization would support any policy that reduces sidewalk riding and pedestrian conflicts. Safety advocates and public health officials have documented the rising injury toll and would support insurance mandates as a mechanism to internalize safety externalities. The Canadian Institute for Health Information (2025) and Unity Health Toronto (2025) reports provide the evidentiary foundation for this position, with CIHI characterizing the rise in e-scooter injuries as a "deadly impact" requiring policy intervention. The general public's perception is more difficult to assess systematically, but media reports suggest growing frustration with unsafe riding behaviors, sidewalk usage, and the perception that gig workers are notorious for going on the sidewalk (Casaletto, 2025). This frustration may translate into support for licensing and insurance as mechanisms to improve accountability.

The Perception Gap: What Users Do Not Know: A significant finding from the legal and insurance literature is the widespread lack of awareness among micromobility users about their legal and financial exposure. As Shellnutt emphasizes, riders are often unaware that their e-bikes have been modified to go faster than 32 km/h and thus do not know they are operating illegal motor vehicles (Shelnutt, 202This knowledge gap has profound implications for policy implementation. Even the most well-designed licensing and insurance framework failed if potential users are unaware of their obligations or the consequences of non-compliance. Any policy proposal must therefore include a robust public education component, potentially delivered through platforms (Uber, Door Dash), point-of-sale (retailers of micromobility devices), and community organizations serving immigrant and low-income populations (Transportation Association of Canada, 2025).

Policy Design Principles Derived from User Perceptions: Synthesizing the available evidence on user perceptions, several policy design principles emerge (Mehranfar & Jones, 2024; Chester, 2024). Firstly, proportionality: the cost and administrative burden of licensing and insurance must be proportionate to the risk posed and the economic means of users. A flat fee that is trivial for a recreational user may be prohibitive for a gig worker. Secondly, targeting policies should distinguish between user personas. Commercial use (gig work) may warrant different requirements than personal use, as commercial use involves higher exposure (more hours on the road) and different risk profiles. Thirdly, platform accountability: gig workers' resistance to regulation is partly a response to the absence of platform accountability. Policies that impose requirements on platforms such as contributing to insurance pools, providing transparent earnings information, or limiting algorithmic pressure may be more acceptable to workers than policies that penalize individuals (RideFair, 2025). Fourthly, education and grace periods given the widespread lack of awareness, any new regulatory framework must include substantial public education and a reasonable grace period before enforcement begins.

Accommodation for Low-Income Users

The Equity Imperative: Why Accommodations Are Necessary

The necessity of accommodation for low-income users flows directly from the equity analysis presented in the literature review. The City of Toronto's Micromobility Strategy (2024) explicitly recognizes micromobility's role in connecting residents to opportunity and filling first/last-mile gaps in the transit network. Imposing insurance costs without accommodation would directly contradict these equity goals. The equity implications are not merely theoretical. A study on shared e-scooter use in Brampton found that neighborhoods with more unstable households and more racialized and immigrant populations had more people using shared e-scooters (City of Brampton, 2026).The study further found that the benefits of shared e-scooters may not be different in neighborhoods with a high concentration of economically marginalized populations or low labor force participation (City of Brampton, 2026). This suggests that micromobility is already serving equity-deserving populations and that policy interventions must be designed to avoid disrupting this beneficial usage pattern.

The conceptual framework for transportation equity distinguishes between horizontal equity (treating similar users similarly) and vertical equity (recognizing diverse needs and capacities across social and economic groups) (Litman, 2025). A vertically equitable policy should be designed with particular attention to those who are more in need of alternative transportation options, such as those who are facing various forms of economic and social marginalization (Martens, 2016). This principle directly supports the implementation of income-based accommodations.

Income Verification Mechanisms: LICO and Alternative Approaches: The Low-Income Cut-Off (LICO) is a well-established statistical measure developed by Statistics Canada to identify households that spend a larger share of their income on necessities than the average household (Statistics Canada, 2023). The thresholds, a part of the LICO metric, differ by community size and household size and are available both before-tax and after-tax. The use of LICO as a threshold for verification offers several advantages: it is a recognized standard, it is regularly updated, and it is already used for program eligibility in other policy domains such as housing and tax credits. However, relying solely on LICO presents practical challenges, as many gig workers have variable and undocumented income, thereby making the verification of the annual income of gig workers a difficulty (Woodbury, 2025). Some of these workers may display reluctance in the disclosure of their income to government authorities due to issues and concerns associated with immigration or taxation. Others may have income that is above the LICO threshold; however, spending on high expenses such as medical costs, housing, family remittances, or other expenses may leave a small portion of disposable income for insurance. One or a combination of proven alternative or complementary verification mechanisms could be used to mitigate or eliminate some of the practical challenges associated with LICO, such as a means-tested benefit receipt, audited self-declaration, verification done by a community organization, and presumptive eligibility for gig workers. Firstly, means-tested benefit receipt is one of the mechanisms that could be used to address the issue of income verification, as eligibility for programs such as the Ontario Disability Support Programme (ODSP), the Canada Child Benefit (CCB) or Ontario Works could serve as a proxy or proof of low income for low-income gig workers. Secondly, the use of a self-declaration is another method of verification that could be integrated, as it would serve as a sworn declaration of an individual's income and such a declaration would be subject to an audit to verify the authenticity of the individual's circumstance. However, this method would be embedded with a mechanism to apply penalties for individuals who make false and misleading statements.This strategy provides a structure that reduces administrative burden experienced by gig worker applicants while maintaining the integrity of the program. Thirdly, verification of an individual's low-income status and eligibility for such a designation could also be provided by community organizations, such as settlement agencies, community health centers, or legal clinics.This approach could help workers in the gig economy significantly, especially those who may not be able to provide standard documentation as a statement of such earnings.

Subsidy Models: Fee Waivers, Reduced Rates, and Income-Scaled Premiums

Several accommodation models are theoretically available (Chester, 2024; Mehranfar & Jones, 2024). Full fee waiver for LICO households represents the simplest accommodation, involving a complete exemption from licensing and insurance fees for households below the applicable LICO threshold. This approach maximizes equity but may create administrative complexity in verifying eligibility and may reduce the insurance pool's premium base. A reduced flat fee for low-income households, where households between 100% and 200% of LICO pay a discounted flat fee (e.g., 25% or 50% of the standard rate), preserves some revenue while reducing the burden on low-income users. Income-scaled premiums, calculated as a percentage of declared income similar to income-driven repayment plans for student loans, are most precisely targeted but also most administratively complexwork credit programs, where low-income users could get discounts on their premiums by taking safety courses or logging safe riding hours through app-based telematics, encourage safety while also meeting financial needs. Platform subsidies for gig workers would mean that instead of each gig worker having to buy their own insurance, platforms would have to pay into a pooled insurance fund for each delivery or hour worked. This would shift costs from workers to platforms, address the commercial use case, and make it less necessary to check each worker's income.

Jurisdictional Precedents and Analogous Programs: While no Canadian jurisdiction has yet implemented income-based accommodations for micromobility insurance, analogous programs exist in other policy domains that provide useful models. British Columbia's gig worker legislation, discussed above, establishes a minimum wage of 120% of the general minimum wage for engaged time, effectively a subsidy to low-income gig workers that could be used to purchase insurance if it were available (Legislative Assembly of British Columbia, 2023). This suggests a policy pathway: mandate that platforms pay a wage sufficient to cover insurance costs, rather than subsidizing insurance directly. In the health insurance domain, the Canadian health system is universally accessible without income verification, funded through progressive taxation. While a direct analogy is imperfect, it suggests that risk pooling can be designed to be universal and equitable without means-testing at the point of service (Martin *et al*., 2018). In the transportation domain, some transit agencies offer discounted passes for low-income riders using LICO or benefit

receipt verification. The TTC's Fair Pass program provides a model: eligible riders receive a discount on single fares and monthly passes upon verification of Ontario Works or ODSP receipt, or throCugh self-declaration of low income with third-party verification (Toronto Transit Commission, 2023).

Recommended Accommodation Framework

Based on the analysis above, this thesis recommends a multi-layered accommodation framework. This framework balances equity, administrative feasibility, and the policy goals of improving safety and ensuring compensation for accident victims (Chester, 2024; Transportation Association of Canada, 2025).

Thematic Synthesis: Toward a Coherent Policy Framework

Limitations of the Current Pilot Program: The preceding analysis reveals fundamental limitations in Ontario's current approach to micromobility regulation. The pilot program framework, established by Regulation 389/19 and extended to 10 years, suffers from several critical defects. Firstly, municipal fragmentation creates confusing patchwork where the legality of e-scooter operation depends on arbitrary municipal boundaries. A rider traveling from Mississauga (opted in) to Toronto (not opted in) commits a regulatory violation simply by crossing the municipal border (Government of Ontario, 2014; City of Toronto, 2023). Secondly, the exclusion of personal devices from insurance requirements creates a massive liability gap. While shared devices are covered by operator commercial policies, personal devices, which constitute most devices in use, particularly for gig work, operate in a legal void. Thirdly, the absence of a provincial framework leaves municipalities to develop their own approaches, resulting in inconsistent enforcement, variable data collection, and limited capacity to address cross-boundary issues (Ontario Association of Chiefs of Police, 2025), which ultimately undermines the effectiveness of local policies and fails to provide a cohesive strategy for managing the challenges posed by the gig economy. Fourth, the failure to address gig economy structures means that the policy response focuses on individual rider behavior while ignoring the platform business models that incentivize unsafe riding, such as the pressure to complete more rides in less time, which can lead to reckless driving practices (RideFair, 2025).
Fifth, the disregard for equity considerations in the pilot's design means that low-income users and gig workers bear the costs of regulatory ambiguity without any of the protections that insurance would provide (City of Toronto, 2023; Woodbury, 2025).

The Case for Provincial Leadership: The evidence overwhelmingly supports a shift from municipal pilot programs to a coherent provincial framework. The Province of Ontario is uniquely positioned to establish uniform definitions and classification criteria for micromobility devices; mandate insurance requirements with appropriate exemptions and accommodations; create a provincial licensing system; regulate gig platforms to ensure worker protections; and provide funding for infrastructure improvements that separate micromobility from pedestrians and automobiles (Chester, 2024; Transportation Association of Canada, 2025).The absence of provincial leadership has resulted in what Councillor Dianne Saxe describes as an untenable and unwise regulatory landscape (City of Toronto, 2023). The Ministry of Transportation's analysis and regulatory work with the Insurance Bureau of Canada, which does not include e-scooters, is insufficient to the scale of the problem.

Balancing Safety, Equity, and Feasibility: The central challenge of micromobility policy is balancing three sometimes-competing objectives: improving safety for riders, pedestrians, and other road users; advancing equity by preserving affordable transportation options for low-income and marginalized populations; and ensuring feasibility of implementation and enforcement (Mehranfar & Jones, 2024; Zhang *et al*., 2023). The analysis in this chapter demonstrates that these objectives are not inherently contradictory. A well-designed framework can achieve all three by establishing clear rules that are easy to understand and comply with, providing income-based accommodations that prevent the pricing-out of vulnerable users, shifting costs onto gig platforms rather than individual workers, investing in infrastructure that separates modes, and coupling enforcement with education (Chester, 2024; Transportation Association of Canada, 2025; City of Toronto, 2023).The alternative, continuing with the current patchwork of pilot programs, ambiguous legal classifications, and uninsured personal devices, inevitably resulted in continued growth in injuries, uncompensated victims, and unsafe riding behaviors (Canada Institute of Health Information, 2025; Lee, 2025; The Hospital for Sick Kids, 2025). The question is not whether Ontario should regulate micromobility, but how.

Limitations and Directions for Future Research: This discussion chapter has synthesized available evidence from legal analysis, public health data, investigative reporting, and academic research. However, several limitations must be acknowledged. Firstly, there is a notable absence of systematic survey data on micromobility user attitudes toward licensing and insurance proposals. While media reporting provides rich qualitative evidence from individual riders, representative data on the prevalence of different perceptions is lacking. Future research should conduct a structured survey of micromobility users across Ontario, stratified by user persona (gig worker, commuter, recreational, shared device), to provide empirical grounding for policy design (Mehranfar & Jones, 2024). Secondly, the insurance industry's perspective is underrepresented in the available sources. The Ministry of Transportation Ontario has talked to the Insurance Bureau of Canada, but it is still not clear what insurers think about micromobility coverage, such as whether they are willing to offer products, what the right premium levels are, and what the underwriting criteria are. Future research should include interviews with insurance industry representatives. Thirdly, the fiscal implications of proposed accommodation (fee waivers, subsidies, platform contributions) have not been modeled. Future research should develop cost estimates for different accommodation models, including administrative costs, foregone revenue, and potential offsets from reduced uncompensated healthcare costs (Canada Institute of Health Information, 2025). Fourth, the infrastructure needs are implied by a provincial framework; specifically, the capital costs of separating micromobility from pedestrian and automobile traffic require detailed analysis. The Transportation Association of Canada (2025) report provides a foundation, but municipal-level implementation planning is needed to address specific local challenges, allocate resources effectively, and ensure community engagement in the development of

micromobility infrastructure. Finally, the experience of other jurisdictions that have implemented comprehensive micromobility regulation, particularly European cities with mature regulatory frameworks, should be systematically compared to Ontario's context. While this chapter has referenced British Columbia's gig worker legislation, a broader international comparison would strengthen the evidence base (Chester, 2024).

Chapter Summary: This chapter has provided a comprehensive analysis of the policy framework governing micromobility in Ontario, organized around the four research questions guiding this thesis. For the factors giving rise to uninsured riding, the analysis identified legal ambiguity regarding device classification, the gig economy business model's externalization of risk, enforcement asymmetries, and the fundamental unavailability of insurance products for personal micromobility devices used commercially. The analysis showed that e-bike hospitalizations at one Toronto hospital rose by 240% between 2020 and 2024. It also looked at the shift from shared to personal devices, the disability rights critique, and the fact that the insurance gap has become an urgent policy priority for post-COVID infrastructure development and insurance needs. For user perceptions, the analysis distinguished between user personas, documented gig workers' fear of exclusion, examined differing stakeholder perspectives, identified widespread lack of awareness, and derived policy design principles including proportionality, targeting, platform accountability, and education.

The analysis suggested a multi-layered framework for accommodating low-income users. This would include full exemption for LICO households, lower fees for near-poor households, work credits for safety compliance, and platform contribution mandates for gig work. Income verification could be done through means-tested benefit receipt or self-declaration with audit. The chapter concluded by arguing for provincial leadership to replace the fragmented municipal pilot program framework and by identifying directions for future research, including systematic user surveys, insurance industry interviews, fiscal modeling, infrastructure costing, and international comparison. The evidence presented in this chapter supports the conclusion that Ontario requires a coherent provincial framework for micromobility licensing and insurance, which is a structure that balances safety, equity, and feasibility and that addresses the structural drivers of unsafe riding rather than simply penalizing individual riders.

Conclusions and Recommendations

Ontario stands at a critical juncture in the governance of micromobility. The rapid expansion of e-bikes and e-scooters has outpaced the province's regulatory capacity, producing a fragmented and inequitable system that exposes users, pedestrians, and gig workers to unacceptable levels of risk. The evidence presented demonstrates that the current patchwork approach is not only insufficient but actively harmful, exacerbating injury rates, leaving victims uncompensated, and disproportionately burdening those who rely most heavily on micromobility for their livelihoods and daily mobility. At the same time, this research has indicated that the solution is not a simple extension of automobile-centric regulatory models. Rather, an effective provincial framework must reconcile safety, equity, and feasibility through thoughtful design. This includes establishing clear and consistent rules, implementing accessible licensing and insurance systems, embedding income-based accommodations, and reassigning responsibility toward gig platforms that currently externalize risk. In doing so, the framework must also account for competing access needs, particularly those of individuals with disabilities, through infrastructure investments that prioritize inclusive design. The contributions of this work lie in its synthesis of legal, policy, and public health perspectives, its centering of gig workers as key stakeholders, and its development of a practical accommodation framework grounded in equity principles. By conceptualizing Ontario's "regulatory grey zone," it provides a lens through which policymakers can better understand the structural roots of current failures. Importantly, it moves beyond diagnosis to offer actionable policy directions that are both evidence-based and adaptable, such as recommendations for improving labor protections and access to healthcare for gig workers.

Nevertheless, important gaps remain. Future research is needed to incorporate user perspectives through systematic data collection, engage more directly with the insurance industry, and quantify the fiscal implications of proposed reforms. Comparative analyses with other jurisdictions and detailed infrastructure costing further strengthened the case for reform and support effective implementation. The central insight is straightforward. Micromobility is no longer peripheral. It is an integral component of Ontario's transportation ecosystem. The question facing policymakers is not whether to regulate, but how. A coherent, equity-oriented provincial framework offers the opportunity to harness the benefits of micromobility, including affordability, flexibility, and sustainability, while mitigating its risks. Failure to act entrenched existing harms and deepen inequities, particularly affecting marginalized communities who may rely on micromobility for essential transportation needs. The path forward is neither conceptually complex nor without precedent. What remains is the exercise of political will. By adopting the roadmap outlined here, Ontario can transition from reactive, fragmented governance to a proactive and just regulatory model, one that ensures micromobility serves not only as a mode of transport but also as a vehicle for safer, fairer, and more inclusive cities.

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